

INTERSECTIONS:
TRANSIT INVESTMENT AND MULTI-SCALAR POLITICS

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Regional transportation plans describe comprehensive planning processes and visions, but long-range transportation planning is only one among many decision sites for transit investment. As most plans are only partially implemented, this research aims to illuminate the factors that determine *which* transit projects are implemented. It combines case study research (Miami, Orlando, and Boston), with quantitative analysis of federal transit funding. The work addresses three broad questions about metropolitan decision making and action: how does significant action happen across jurisdictions? What is the state and federal role in metropolitan governance? How does equity fare in implementation? In each of three papers, I start at a different government scale: metropolitan planning organization (MPO), state, and nation.

The first paper describes critical decision making processes external to MPO planning. Case studies of Boston and Miami demonstrate that MPO planning responded to, rather than determined, transit implementation choices. Due to the influence of external decisions or bypasses, I argue federal directives for equity in regional transportation planning were insufficient to advance equity in Miami and Boston. Community mobilization in Boston was sustained and moderately successful; advocacy groups advanced two projects toward implementation.

Next, I examine the sub-national state's role in transit implementation, based

on projects proposed in Miami and Orlando. The Florida Department of Transportation adopted a leadership role for projects that had greater economic significance and regional consensus behind them. By selectively contributing capacity, “power to,” state actors exerted “power over” regional outcomes in Orlando and Miami.

The third paper presents a quantitative analysis of the federal New Starts program, which funds transit expansion. Local financial commitment most correlates with federal funding, according to statistical results. All funded projects met a minimum threshold of benefits. Yet, the Federal Transit Administration was not more likely to fund projects with higher benefits ratings.

Findings suggest regionally significant action happens not simply nor easily through planning, but instead through established government entities and through the mobilization of capacity. Altshuler and Luberoff’s “bottom-up” federalism is a useful concept to describe how powerful federal actors respond to and enable action at smaller scales. In this conceptual frame, local initiative and mobilization are pivotal, aligning with increasing interest in governance. At the same time, however, findings indicate the need to further develop governance as an analytic category that incorporates multiple types of power and spheres of action. In addition, this research shows that equity advocates can sometimes affect outcomes. Due to existing constraints for metropolitan planning organizations, the conclusion describes options to strengthen or alter their role. I conclude with reflections on the ideal rail deal. Political will behind infrastructure investment can be an opportunity to enable other critical environmental and equity interventions.

BIOGRAPHICAL SKETCH

Catherine Lowe was born in Minot, North Dakota, where she attended primary and secondary school. She received her bachelor's degree (Cultural Anthropology) from Bard College in 2000. At Clark University, she earned a Master of Arts in Community Development & Planning (2006). Her professional experience includes working for 1199/SEIU, Community Catalyst and TransitWorks.

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TABLE OF CONTENTS

Chapter 1: Introduction	p. 1
Chapter 2: Bypassing Equity	p. 25
Chapter 3: Sub-national states, Power and Transit Implementation	p. 59
Chapter 4: Federal Transit Funding, Politics and Local Factors	p.101
Chapter 5: Conclusion	p. 137
Appendix I: Interviewees	p. 158
Appendix II: Mann-Whitney U Scores	p. 162

LIST OF FIGURES

Figure 2.1: Boston rail infrastructure and black population	p. 41
Figure 2.2: Miami rail infrastructure and black population	p. 46
Figure 3.1: Metrorail proposals	p. 73
Figure 3.2: Orlando-area proposals	p. 79
Figure 3.3: Diagram of projects with state sponsorship	p. 90
Figure 4.1: New Starts application process	p. 105

LIST OF TABLES

Table 1.1: Types of transportation equity	p. 13
Table 2.1: Metropolitan profiles	p. 37
Table 2.2: Boston timeline	p. 39
Table 2.3: Miami timeline	p. 47
Table 3.1: Project profiles	p. 67
Table 3.2: Demographic profiles	p. 70
Table 3.3: Case summaries	p. 91
Table 4.1: Dependent variables and methods	p. 111
Table 4.2: Independent variables and anticipated effects	p. 112
Table 4.3: Independent variables by outcome	p. 117
Table 4.4: Model 1 predictions	p. 118
Table 4.5 Coefficient results for binomial models	p. 119
Table 4.6: Model 2 predictions	p. 120
Table 4.7: Sample predicted project outcome	p. 120
Table 4.8: Last ratings by outcomes	p. 121
Table 4.9: Spearman's correlation	p. 122
Table 4.10: Models 3 & 4 goodness of fit scores	p. 123
Table 4.11: Linear regression coefficients	p. 124
Table 4.12: Sample project application	p. 124
Table 4.13: Statistical findings of significance	p. 129

LIST OF ABBREVIATIONS

CBO	Community-based organization
CLF	Conservation Law Foundation
DOT	Department of Transportation
FDOT	Florida Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HSR	High-speed rail
ISTEA	Intermodal Surface Transportation Act (1991)
LRT	Light-rail transit
MBTA	Massachusetts Bay Transportation Authority
MDT	Miami-Dade Transit
MPO	Metropolitan planning organization
NR	New regionalism
NS	New Starts program
RTP	Regional transportation plan (usually refers to long-range plan)
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TEA-21	Transportation Equity Act for the 21st Century (1998)

CHAPTER 1: Introduction

Orlando conjures up images of Walt Disney World and Floridian auto-oriented sprawl, but local elected officials, business leaders, and civic organizations have voiced support for a regional vision of contained growth and increased transit use. In fact, within a few years, metropolitan Orlando will have its first intrametropolitan rail service. The project has so much support that a republican county mayor and a democratic city mayor lobbied together in the state capital for it. The professional basketball team even promoted it during game-time announcements. However, the region has seen numerous failed rail attempts over the last twenty years, and its long-range plan has contained other rail proposals. In this regard, the region is similar to others, where many of the rail investments in official plans have not materialized. This research explores what factors and government interventions lead to the implementation of some regional rail projects, while other projects fail to attract sufficient support and funding.

For many planners, support for alternatives to automobile-dependency translates into enthusiasm for transit expansions. Yet, the logic of this project could seem dubious to outside observers, even to planners promoting alternative transportation modes. The Federal Transit Administration's review shows the commuter rail costs more but delivers fewer benefits than many other projects seeking funds (FTA, 2008). The project does not do well on equity criteria. The project's riders will include a disproportionately *low* share of transit dependent riders, compared to the metropolitan population (FTA, 2008). Is this the best investment for federal

dollars? Or even the best investment within the region?

Planning literature explains that rail investment decisions are not based solely on “rational” criteria (Cohen-Blankshain & Feitelson, 2010; Sager & Ravlum, 2005; Taylor, Kim, & Gahbauer, 2009), but what I found surprising about this project was its widespread support and connection to regional hopes. In interviews, stakeholders asserted the need for regional unity and dismissed the main critic of the commuter rail project as motivated by a personal vendetta. How then did regional support coalesce around this project and spur multi-sector action for implementation? Why initiate rail along this corridor, where density is not especially high? Why was this project likely to be implemented, whereas so many previous efforts had failed in the region? What relationship did this project’s prioritization have to the official metropolitan transportation planning process? The battles to advance this project appeared to be happening at the state level, where the county and city mayors lobbied in support. A staunch, republican supporter sat on a key congressional committee in Washington, DC. What role did these levels of government have in the project’s selection and implementation? These questions are applicable not only to Orlando’s planned commuter rail, but to transit investment decision making and implementation across metropolitan areas.

This research grew from an interest in the potential of federally mandated, long-range planning to encourage beneficial and equitable transportation investments within regions. However, early observations in Orlando, Miami and Boston demonstrated that the transit components of regional plans are far from fully implemented. Long-range planning is only one among many decision sites and

probably not the most important for implementation. Thus, this research explores the complex processes that result in actual implementation—or not. Given the partial implementation of plans, the empirical focus of this research is to understand the factors that determine *which* projects are implemented. I combine case study research from metropolitan Miami, Orlando, and Boston, with quantitative analysis of federal funding. I present results in three papers. Each paper begins analysis from a different level: the metropolitan planning organization (MPO), the (sub-national) state, and the Federal Transit Administration’s funding.

Situating the Research

This empirical analysis contributes to broader questions on metropolitan decision making and action. As seen in the Orlando commuter rail example, rail implementation raises several broader questions: how does significant action happen across jurisdictions? What is the relationship among different tiers of government? How does equity fare in the implementation? These questions share a common thread of plan implementation, an area in need of further research (Laurian et al., 2004; Talen, 1996). In this introductory chapter, I discuss existing perspectives on these three questions, the topical area of research, and the three papers that follow.

How Does Significant Actions Happen across Jurisdictions?

Much of the discussion of metropolitan governance has been normative, describing how significant metropolitan action could or should happen. The first and second waves of United States-based regionalism built on the idea that local government boundaries should match the geographic reach of metropolitan areas. Stephens and Wikstrom (2000) suggest ideals for metropolitan government began with

the annexations and city-county consolidations of the 19th century. Post-war metropolitan regionalism aimed more ambitiously to shape the spatial configuration of population and industry and had a greater connection to the federal arena (Brenner, 2002). Local attempts to reorganize government regionally from 1950-1970, however, had limited success at restructuring formal government. Yet councils of government still formed in most metropolitan areas.

After the limited success of regional reorganization, new regionalism (NR) emerged in the 1990s. It typically adopts a comprehensive approach with environmental, economic and equity goals (Wheeler, 2002). “Social new regionalists” (Kipfer & Wirsig, 2004) argue for increased coordination based on the inequities of current metropolitan government arrangements and to some extent on environmental and economic concerns. Dreier, Mollenkopf and Swanstrom (2004) argue that the current system of metropolitan fragmentation contributes to social inequities and sprawl, with negative effects for multiple constituents, especially for low-income residents. Like Orfield (1997), they identify the shared interests between central cities and inner-ring suburbs. Pastor, Dreier, Gribsby and López -Garza (2000) argue central city and suburban futures are tied, as are regional economic prosperity and decreasing poverty. Despite such multi-pronged approaches, Brenner (2002) claims economic development has become the most prominent rationale for regional coordination.

New regionalists commonly seek to increase regional coordination and capacity through *governance* rather than a reorganization of *government* structure. Governance differs from government, because it includes private sector stakeholders, such as businesses and civic actors, and functions partly through informal and

cooperative methods of coordination. Some argue informal and collaborative governance is a more effective method for regionalism than a hierarchical approach, since informal arrangements provide flexible or innovative solutions for regional challenges (Hendriks, 2006; Salet, 2006). Governance can be a normative idea—that it is a desirable or effective strategy—or an analytic category, referring to urban political processes beyond formal government (Pierre, 2005). Savitch and Vogel’s (2000) explanation of the term’s use reflects at least some normative aspect: “*governance* conveys the notion that existing institutions can be harnessed in new ways, that cooperation can be carried out on a fluid and voluntary basis among localities, and that people can best regulate themselves through horizontally linked organizations” (p. 161, emphasis original). In governance discussions, horizontal refers to the intrametropolitan arena, often treated as a network of equal partners. Vertical refers to hierarchy, such as the local, state and federal relationship.

Much of the new regionalism research has made the case for increased coordination, but recent empirical research demonstrates the limitations of the horizontal, cooperative governance ideal. Such recent research has more directly answered how regionally significant action happens. Here, I overview empirical studies that show equity goals require substantial mobilization, find business interests wield special influence, and demonstrate the limited impact of intraregional cooperation. These empirical studies demonstrate the need to take a more critical view of the assumptions behind capacity building and the cooperative model of multi-jurisdictional governance.

First, the equity aims of “social new regionalists” have not materialized.

Orfield (1997) proposed central city and inner-ring suburban alliances would advance intrametropolitan equity, but such coalitions have failed to come to fruition (Swanstrom & Banks, 2009). In practice, new regionalism has often failed to prioritize environmental justice and equity (Rast, 2006; Scott, 2007), although Bollens (2003) observes that regional efforts have sometimes addressed disparities, frequently through state or federal programs. Pastor, Benner and Matsuoka (2009) describe great potential for community-based regionalism (CBR) to promote equity and regional problem solving. Swanstrom and Banks' (2009) describe instead the need for policy change, based on their analysis of community benefits agreements related to construction workforce development. Without policy change, they conclude "local hiring agreements...will depend on extraordinarily entrepreneurial CBOs [community based organizations]. Without vertical relations that empower CBOs in regional governance networks, CBR will falter" (p. 364). Thus, the equity goals articulated by new regionalists are highly contingent on local capacity.

Second, case studies that document a central role for business suggest imbalanced influence in horizontal relationships. For example, Alpert, Gainsborough and Wallis' (2006) network analysis shows that business actors, the regional planning agency, and county and municipal governments were all important nodes of connection to other stakeholders in a transportation reform effort. Business organizations, however, were the critical policy entrepreneurs. Gainsborough (2003) concludes from her case studies of Houston and Los Angeles that business actors may promote regionalism to enhance place-based economic well-being. Business-led regionalism may often support center cities, but "this vision of center city health

embedded in regionalism is likely to reflect the traditional biases of business-centered urban policy” (p. 555). In a study of Los Angeles and Chicago, Weir, Rongerude and Ansell (2009) found that LA’s sustainability groups working on transportation lacked power. On the other hand, regional institutional reform was possible in Chicago, because business organizations engaged in transportation issues and wielded power in the state legislature. The need for connection to vertical power may limit the ability of less powerful players to make impact through regional coordination. Business actors in these studies are disproportionately influential in and critical for significant action.

Finally, research demonstrates that informal and semi-formal cooperative mechanisms have limited impact while, formal *government* is still pivotal for action. Actualizing partnerships is challenging (Innes & Gruber, 2005; Visser, 2004) and government remains a critical player (Scott, 2007). Weir, Rongerude and Ansell (2009) explain simply enough through their title that “collaboration is not enough,” despite its appeal. Studies on the role of metropolitan planning organizations (MPOs) supplement these NR case studies, as researchers have found that envisioned, MPO-led collaborations have largely not materialized (Goldman & Deakin, 2000; Innes & Gruber, 2005). In one example, federal policies for regional coordination facilitated “a consensus plan to build two bridges...However, the MPO process did not lead to the development of a metropolitan-wide interest or perspective” (Vogel and Nezelkewicz, 2002, p. 107).

In addition to case studies that show the complexities of governance, NR literature could benefit from urban regime debates. Like urban regime theory, new regionalism—as a normative or analytic concept—emphasizes the need to build

capacity to take significant action across sectors. In other words, both urban regime and NR literature examine how sufficient capacity for action is mobilized, “recognize the role of non-government actors” (Hamilton, 2004, p. 457), and emphasize informal means for building collaboration around shared interests. Stone, who popularized urban regime theory, adopts a “social production” model of power (1989, 2006). In his social production model, power is assembling the capacities necessary to take significant action. In the United States, where the theory originates, the local state lacks sufficient resources to govern and thus enters into coalitions with other players through a regime or a “set of arrangements whereby this division of labour is combined. This is achieved not through formal hierarchies but by networking in which actors co-operate because they recognize their mutual dependency” (Thornely, Rydin, Scalon, & West, 2005, p. 1950).

Critiques of urban regime theory, or urban governance more broadly, may also apply to new regionalism. Mossberger and Stoker (2001) assert that urban regime theory links to political economic context in its recognition that regimes depend on business participation. Nonetheless, Imbroscio (2003) and Davies (2002) criticize urban regime analyses’ disconnect from economic structures. The focus on shared capacity that some regime literature presents can obscure the unequal power between local actors and potential fundamental conflicts of interest (Gendron & Domhoff, 2009). Likewise, discussions of governance more broadly have neglected conflict (Davies, 2005; Minnery, 2007). New regionalism has touched on the influence of business and other actors in case studies, described above, but has not developed a framework for understanding differential power and conflict.

In sum, much of the new regionalism literature has articulated the need for and potential mechanisms of regional action—that regional action *should* happen. Some empirical case studies have shown the complications of regional efforts in practice. NR has promoted a cooperative, cross-sector model of governance to build capacity for regional action to address issues from inequities to enhanced regional competitiveness. Insightful case study research has demonstrated that regional action sometimes happens, but that the equity aims of regionalism may be difficult in practice, business stakeholders may wield special influence, and government still matters in governance. Research has not centrally focused on a model of governance capacity that accounts for power differentials, although these case studies have provided insights and challenged the focus on *horizontal* cooperation.

What Is the Role of State and Federal Governments in Metropolitan Action?

Inattention to a larger landscape of political economic realities and the continued influence of the nation-state has been one of the central limitations of new regionalism, according to critiques in geography (Lovering, 1999; MacLeod, 2001). Clark and Christopherson (2009) argue that the fixation on regional characteristics and action can imply regions are responsible for economic stagnation and other problems. This attribution of responsibility ignores the critical effects of uneven development and larger trends.

Indeed, new regionalism's focus has typically been on the horizontal arena—action within a region—rather than a region's relationships to state and federal actors and policies. Some regional research may be making a needed shift of attention, exemplified by the two case studies above that explicitly tackle vertical relationships

and policies (Swanstrom & Banks, 2009; Weir, Rongerude & Ansell, 2009). In the remainder of this section, I describe existing literature, including but not limited to NR, on how cities and regions relate to state and federal governments.

State legislatures and legislation critically affect cities. State laws create cities and their potential powers. In other words, state laws carve out a realm for municipal action; they create and constrain cities (Frug & Barron, 2008). State legislatures may also directly limit municipal efforts. For example, the New York Legislature stymied New York City's plan for a congestion pricing zone in Manhattan (Frug & Barron, 2008).

The state legislature may be an important forum for actors seeking to reorganize quasigovernmental institutions to strengthen regional capacity. For example, in Miami a business-county coalition had to win state legislative approval to reorganize its commuter rail agency but could not win state authorization to levy a rental car surcharge (Alpert, Gainsborough & Wallis, 2006). Likewise, Chicago leaders had to go to the state legislature to reorganize their metropolitan agencies (Weir, Rongerude & Ansell, 2009). In these examples, state legislatures allowed for some quasigovernmental institutional restructuring. Johnson (2006), however, claims that states will be unlikely to allow for strong metropolitan governments that could challenge state powers.

In addition to legislative authority, state-level actors can be direct participants in metropolitan action and conflict. Johnson (2009) sees the San Francisco highway revolt as a conflict between the City of San Francisco and the State of California. Indeed, the highway era provides an interesting example of direct conflict between

states and cities. State highway departments controlled interstate development and construction, but cities were at times able to win concessions (Johnson, 2006; Luberoff & Altshuler, 1996). On the other hand, state actors can collaborate with city leaders, enabling urban initiatives. Knudson's (2009) case study of the Hiawatha rail line in Minneapolis shows a vital role for governors in implementation. Likewise, in an expansion of urban regime theory, Burns and Thomas (2004) provide instances in which state-level actors were important urban regime participants, thereby contributing capacity to urban initiatives.

The federal role in transportation has been more direct than in other arenas. The federal government's interstate highway program helped create powerful, roadway-focused state departments of transportation (Lewis & McGee, 2001; Taylor & Schweitzer, 2005). Altshuler and Luberoff (2003) use "bottom-up federalism" to describe the complex relationship between local leaders and the federal government. In the construction of mega-projects, Altshuler and Luberoff explain federal funds were important, but local actors were typically the initiators of projects and actively fought for funding. Another example is the active lobbying efforts by local governments on transportation issues in the early 1990s (Lewis & McGee, 2001). The subsequent transportation legislation partially devolved transportation decisions from states to metropolitan planning organizations.

To limit the scope of this study and due to its focus on implementation, I examine how higher levels of government directly participate in regional action. Of course, higher level governments merit more attention, including efforts to place regional action within a larger historic, political, and economic context. In this

research, I assume that the relationship between levels of government is neither equal nor unilateral, adopting a “bottom-up federalism” approach. Even though federal programs provide funding, the federal level leaves much of implementation to sub-national entities. Furthermore, local actors may act back upon new policies, as in the lobbying example above.

How Does Equity Fare in Implementation?

A concern for social justice motivates my third major area of inquiry. How does equity fare in reality, not plan rhetoric? In other words, to what extent do actual implementation efforts advance the social justice or equity goals articulated in planning and policy? Initial research suggested investments might not be as equitable as the comprehensive sets of investments that appear in plans.

Planning literature offers different concepts of equity or fair distribution. Beatley (1994) describes multiple concepts of distributional justice in land use policy but favors a definition he derives from Rawls. From this perspective, Beatley argues the following criterion for distributive justice: “Land-use policy can and should be evaluated by the extent to which it *improves* the conditions of the least-advantaged members of society” (p. 101, emphasis original). Like Beatley, Krumholz (1982) has a redistributive angle and concern for the least-advantaged. Krumholz implies a focus on opportunities, not conditions, by advancing equity planning as seeking to provide *more choices for those who have few*.

Taylor (2004) and Taylor and Tassiello Norton (2009) provide a useful typology of equity concepts in transportation. They present three types of equity: market, opportunity, and outcome. Further complicating the concept of equity, units of

analysis can include geographic entities (states, counties, cities), groups (race, class), or individuals (citizens, riders), as depicted in Table 1.1. In a market equity framework, benefits should be proportional to inputs and payments; for example a state would receive federal gas tax funds equal to its contribution. Market equity might allow for disparate spending, if the subsidies align with tax contributions. Opportunity equity means that funds are spread proportionately. Opportunity equity would result in even per capita spending at the individual scale, or alternatively, proportional spending among groups or across jurisdictions.¹ Outcome equity for transportation funding would call for equal levels of service across jurisdictions or equal accessibility among groups and individuals.

Unit of Analysis	Type of Equity		
	Market Equity	Opportunity Equity	Outcome Equity
<i>Geographic:</i> States, counties, legislative districts, etc.	Transportation spending in each jurisdiction matches revenue collections in that jurisdiction	Transportation spending is proportionally equal across jurisdictions	Spending in each jurisdiction produces equal levels of transportation capacity or service
<i>Group:</i> Modal interests, racial/ethnic groups, etc.	Each group receives transportation spending or benefits in proportion to taxes paid	Each group receives a proportionally equal share of transportation resources	Transportation spending produces equal levels of access or mobility across groups
<i>Individual:</i> Residents, voters, travelers, etc.	The prices or taxes paid by individuals for transportation should be proportional to the costs imposed	Transportation spending per person is equal	Transportation spending equalizes individual levels of access or mobility

Table 1.1: Types of transportation equity (Reproduced from Taylor & Tassiello Norton, 2009, p. 27).

Planning generally operates outside a market equity framework, as public intervention has goals beyond equal market transactions. This research’s focus is the implementation stage of planning, not the actual accessibility effects and results of

¹ Taylor and Tassiello Norton place Rawls in the opportunity equity category, due to Rawls’ concern about equal opportunity. Alternatively, Beatley’s deployment of Rawls might fall under the outcome equity category, as it seeks to improve conditions for the disadvantaged. Their different uses and interpretation of Rawls are outside the scope of this section.

public intervention. Thus, I assess transit in terms of opportunity equity. This approach considers if spending is equivalent across groups. It roughly aligns with Sanchez and Brenman's (2007) definition of transportation equity: "The term *transportation equity* refers to a range of strategies and policies that aim to address inequities in the nation's transportation planning and project delivery system" (p. 7). While Beatley's criterion of improving conditions for the least advantaged provides a basis for a more stringent definition, the former position is likely to be more widely accepted. Furthermore, actual investments appear to fail the more moderate opportunity test for equity, making a more stringent criterion unnecessary. Thus, I consider whether the public sector *implements* transit infrastructure investment proportionately to serve communities of color and low-income neighborhoods.

Research Subject and Structure

Before discussing the unique context for the study of transit, I return to the concept of governance. As discussed above, governance can be a normative or analytical category (Nuissl and Heinrichs, 2011; Pierre, 2005). I avoid a normative use. Instead, I use governance as a broad lens of study that places planning in relationship to broader, multi-sectoral processes. In other words, I use governance "as a comprehensive analytical category pertaining to the regulation of publicly relevant affairs at the interface of state, market, and civil society" (Nuissl & Heinrichs, 2011, p. 47).

Transit has some advantages as an area of study, as I discuss below. Multiple levels of government are quite apparent in transit, as their roles are especially visible in its implementation. Transportation has greater levers for regional coordination and

equity than other sectors. After describing these advantages, I note unique conditions for transit and transportation.

First, transportation provides an ideal subject area to explore questions of regional and multi-level governance, because of the intense involvement of multiple levels of government. Despite the increasing use of local option taxes for transportation (Goldman & Wachs, 2003), federal and state funds still are critical for much of the sector's infrastructure expansion and operations. For transit specifically, the federal government provides billions annually (\$13.5 billion in FY 2010). Municipalities, counties and special districts often operate transit agencies and interface with metropolitan planning organizations and other players, creating a complex picture for research. States take a variable role.

Second, the contemporary role of government is especially direct and visible for transit in the United States. While cities may zone land owned by others and the federal government shapes the financing tools for home mortgages used in the private sector, government agencies typically build and operate transportation facilities and services themselves. This was not always the case. Real estate developers once built streetcars to facilitate their building activities (Warner, 1978), and private entities built and operated most mass transit services until the mid-twentieth century (Jones, 2008). Following the massive influx of federal funds into highways, big city mayors and other constituents pressured the federal government to fund transit through first loans, then capital grants in 1964 (Jones, 2008), and later operating subsidies.

Third, transportation, in some ways, may offer ideal conditions for *regional* governance and equity. As early as 1962, federal funding rules required "*continuing*,

comprehensive, and cooperative” metropolitan transportation planning (Zoller & Capizzano, 1997). Later legislation required that states designate metropolitan planning organizations to lead these activities. To receive federal funds, transportation projects must be in MPO plans. Major federal legislation in 1991 and subsequent bills strengthened the role of MPOs. They still operate without strong government powers and are directed to work in partnership with other transportation entities. The reality may fall short of the cooperative and comprehensive regional aspirations behind these mandates (Goldman & Deakin, 2000; Innes & Gruber, 2005). Nonetheless, transportation still has federal mandates for regional planning, unlike most sectors. Dreier, Mollenkopf and Swanstrom (2004) even present the federal cooperation mandates as a potential model for federal support of regionalism in other sectors.

Federal rules for MPOs and planning also offer levers for equity. All federal agencies must meet the provisions of Title VI of the Civil Rights Act. The U.S. Department of Transportation issued rules that specified low-income and minority groups must not face disproportionate harms or receive fewer or delayed benefits (US DOT, 1997). Thus, equity advocates in transportation (and sometimes other fields) have used the idea of environmental justice to advance equitable benefits for communities. The Federal Highway and Federal Transit Administrations also direct members of their staffs, who are responsible for overseeing MPOs, to consider if MPO planning processes measure the distribution of benefits and rectify imbalances (FHWA & FTA, 1999).

One interesting challenge for the study of transportation is the range of economic interests that can create a pro-infrastructure expansion bias. Capital will

benefit from public sector investment in infrastructure, according to Marxist analysis (Harvey, 2006; Preteceille, 1976). Growth machine interests (or what others might see as civic boosters) rally behind transit infrastructure investment.² Planning firms also stand to profit from public transit investment, as do engineering firms and railcar makers. Politicians are attracted to the ribbon-cutting opportunities and funds from higher levels of government that infrastructure brings (Taylor, 2004).

Actors support transit infrastructure investment for their direct profit, concern for “regional competitiveness,” hopes for reduced emissions, reformed metropolitan growth patterns, and increased mobility for the poor (Pucher, 2004). Transit’s political popularity is due to its broad base of supporters:

So why has transit enjoyed such political success in recent decades? It appeals to interests across the political spectrum: downtown and construction-related businesses, construction and transit labor unions, environmentalists, good-government organizations, advocates for the poor, and a wide variety of others who perceive transit as a way of reconciling development, equity and amenity goals. (Altshuler & Luberoff, 2003, p.217)

Given the range of goals motivating transit supporters, transit choices can sometimes pit environmental goals against equity goals (Grengs, 2004). While not directly the focus of this research, the potential for a pro-infrastructure bias is important context, as I will return to in my conclusion.

Another important piece of context is the time frame for and project-focus of

² See Whitt (1982) for a detailed look at the business push for rail in San Francisco.

transportation planning. Regional transportation planning adopts the language of and conducts analysis for regional transportation systems, but plan interventions are almost exclusively infrastructure *projects*. These projects take significant time to develop and implement. The implementation of each project may be somewhat distinct, as each project involves different stakeholders. Thus, planning may aspire to a regional and comprehensive focus, but implementation appears to be project-oriented. Given this reality, this research often uses projects as the unit of analysis.

Framework and Roadmap

This research adopts a situated, critical governance approach. This approach allows insight into not just cooperation and action across sectors, but also differing priorities and power as unequal influence. Thus, the following papers use governance as an analytic category that expands the process of urban governing to the intersection of public, business, and civic actors through formal and informal channels. In seeking to understand when these processes build capacity to enable the projects in plans, I study “power to” implement plans, but I also attend to how some priorities or actors may exert more or less influence on what capacity is mobilized for. Like some recent NR literature, I seek to challenge models of regional governance that focus solely on the horizontal. I do this by making interscale relationships central to my analysis. I orient each paper around a different scale: the metropolitan planning organization, the sub-national state, and a federal program. Finally, together these papers expand the study of planning beyond explicit planning processes by examining implementation.

The first paper describes how processes external to MPO planning determine plan content in metropolitan Boston and Miami. As a result, projects for low-income

and minority neighborhoods in these regions depended on activism, not federal directives for equity in regional planning. In the second paper, I describe the role of state actors in transit projects proposed in Miami and Orlando. Among the studied projects, state-level actors chose to provide more institutional sponsorship—or capacity—for projects with greater economic importance and local consensus. The differing project outcomes indicate the potentially critical role that state-level actors can play and the need to explore multiple tiers of action and types of power. The third paper demonstrates the complex interplay between federal investment and local governance, through a primarily quantitative analysis of a federal funding program. Despite a formal, multi-criteria evaluation, local financial commitment most correlates with federal funding outcomes for rail expansion. Together, these papers show a continuing role for government in governance, uneven levels of influence or power, and a complex intergovernmental relationship.

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CHAPTER 2: Bypassing Equity

Abstract

Federal transportation legislation strengthened the role of metropolitan planning organizations (MPOs) in the 1990s. During the same period, new federal rules increased focus on transportation equity for MPOs and other transportation entities. Existing research identifies challenges for regional planning mandates, but the field of planning still has limited knowledge of how MPOs, equity requirements, and regional planning processes influence actual investments. This research examines whether MPO planning can deliver benefits to low-income and minority communities. I describe how intergovernmental context affects official, long-range transportation plans in a comparison of metropolitan Miami and Boston. In these cases, I find that official MPO planning processes have not played a pivotal role in transit choices, because of existing intergovernmental contexts. External processes—highway-related agreements in Boston and a sales tax in Miami-Dade—bypassed MPO planning and determined investments. Each process was linked to action by an established, multi-purpose government. When projects for low-income and minority communities progressed, it was through activism in intergovernmental bypasses to MPO planning. Extensive mobilization in Boston has secured two rail investments for low-income communities. These cases suggest the need for further planning research on intergovernmental context and implementation.

Regional planning has become a popular solution to the interrelated problems of environment, sprawl and equity (Wheeler, 2002). In the United States, federal agencies have recently increased funding for regional cooperation on land use and transportation planning. This growing interest offers promise for multi-jurisdictional problem solving, but the field of planning still knows too little about how regional planning fits into local contexts, with fragmented government capacities. Furthermore, regional efforts have frequently prioritized economic development and quality of life over social equity objectives (Rast, 2006; Scott, 2007).

Federal requirements for metropolitan coordination and equity in transportation planning make the sector unique and instructive for the field. Federal funding requires that metropolitan planning organizations (MPOs) create regional transportation plans and evaluate harms and benefits for low-income and minority populations. Thus, MPO planning has a statutory basis that other regional planning efforts lack in the United States, but research finds that existing patterns of government powers and entrenched planning norms limit MPO influence (Goldman & Deakin, 2000; Katz, Puentes & Bernstein, 2005; Weir, Rongerude & Ansell, 2009; Wolf & Farquhar, 2005). These studies identify the limits to MPO influence, but have not demonstrated how decisions made in intergovernmental contexts relate to MPO planning and plans. Furthermore, the existing MPO analyses have not focused on equity and the link between plans and implementation.

This research examines whether MPO planning can deliver investments for low-income and minorities communities. I seek to understand what mechanisms advance equity goals and how. In Miami and Boston, I focus on the intergovernmental

context of MPOs and find critical bypasses—the term I use to refer to these processes that occur outside of MPO planning but determine transit investment. Despite federal requirements for equity, official regional planning has not been pivotal in advancing rail projects for low-income and minority neighborhoods. In Boston, the Commonwealth of Massachusetts made highway mitigation agreements that determined transit investment, while in Miami, a sales tax campaign promoted its own slate of transit projects. Subsequent MPO planning reflected, rather than directed, such choices. When projects for low-income and minority communities have progressed, as in Boston, it has been through activism in alternatives to MPO planning. Federal directives for equity in *regional planning* seem to have limited impact, since critical decisions on project implementation are made outside of MPO planning. The cases raise challenging questions for equity in transit and regional planning, while also indicating the need for planning to better understand intergovernmental contexts. The findings have utility for practice, because effective changes in MPO design or regional planning require a better understanding of intergovernmental structures.

Regional Transportation Planning & Equity

Metropolitan Planning Organizations

Federal law created and then strengthened metropolitan transportation planning during the last fifty years. It first required *continuing, comprehensive, and cooperative metropolitan transportation planning* in the 1962 Highway Bill (Zoller & Capizzano, 1997). Soon thereafter, federal law mandated the creation of metropolitan planning organizations (MPOs) for large urban areas. The composition of MPO boards and their rules for making decisions vary, as federal regulations allow local and state officials to

structure them (Sanchez, 2006). MPOs conduct required long-range planning, and major transportation projects must be part of their plans in order to receive federal funds. MPOs remained rather weak until the Intermodal Surface Transportation Equity Act (ISTEA) of 1991. Among other changes, federal transportation legislation granted MPOs control over some funds and directed them to produce *fiscally constrained* plans. In other words, MPO plans must be financially realistic; they cannot simply list desired projects.

MPOs do not control a majority or even a plurality of transportation funds expended in their regions. A survey, by the Association of Metropolitan Planning Organizations, found about 40 percent of MPOs rely on federal regional planning programs to fund most of their operations and planning activities (Sciara & Wachs, 2007). Securing the required local match (20%) for these federal planning funds has been challenging for some MPOs, according to a recent survey by the Governmental Accountability Office (2009). Regional planning funds are distinct from the numerous federal programs for actual transportation investments, over which MPOs have limited control. ISTEA did allow for “flexing” of some surface transportation funds across modes. It gave MPOs more control over two federal funding streams, but the two funding streams “are modest compared with other federal transportation dollars” (Sciara & Wachs, 2007, p. 383). Furthermore, decisions on these funds must be made “in consultation” with other agencies. Regional sources of transportation funding vary tremendously by region. Sciara and Wachs (2007) describe several cases in which MPOs were authorized to and able to control locally generated revenue.

Equity and MPOs

Federal rules, based on Title VI of the Civil Rights Act, require that federal agencies consider how they affect low-income and minority communities. With an executive order in 1994, President Clinton directed federal agencies to ensure that their programs do not create disproportionate harms for low-income and minority populations (Sanchez & Brenman, 2007). The U.S. Department of Transportation (US DOT) then identified three components of environmental justice/Title VI: (1) ensuring that low-income communities and communities of color do not face an unfair share of costs or harms, (2) avoiding a delay or *reduction of benefits* for these populations, and (3) enabling their participation in decision making (Deakin, 2007). According to a technical guide, released by the Transportation Research Board (Forkenbrock & Sheeley, 2004), environmental justice is: “the fair treatment of all people in terms of the distribution of benefits and costs arising from transportation projects, programs, and policies” (p. 2). With the inclusion of harms and *benefits* in definitions of Title VI/environmental justice, community advocates have used environmental justice (EJ) as a rationale for increasing transit investments in low-income and minority communities (Deakin, 2007). All agencies that receive federal transportation funds must meet Title VI requirements. Eight Title VI complaints were filed with the FTA between 2000 and 2007, but the FTA found no Title VI violations (one was resolved through a mediated agreement) (TCRP, 2008). According to Sanchez and Brenman (2007), there has been little enforcement of Title VI in transportation generally.

Only MPOs must consider equity across regions, agencies and modes. After the US DOT issued rules, the Federal Highway Administration (FHWA) and the

Federal Transit Administration (FTA) directed their staffs to incorporate Title VI/environmental justice into the oversight of metropolitan planning organizations (FHWA & FTA, 1999). More specifically, federal staff should consider whether MPOs identify the locations and needs of low-income and minority populations, include them in planning, analyze the regional distribution of benefits and burdens, and address potential “imbalances” (FHWA & FTA, 1999). The agencies, however, never released a more developed set of requirements. Thus, despite federal mandates for MPOs to incorporate EJ analysis, there are neither clearly defined steps for meeting the mandates (Forckenbrock & Sheeley, 2004) nor consensus on appropriate conceptual definitions and measures (Robinson, Kuzmyak, Sanchez, Grimshaw & Buckely, 2007).

Metropolitan Planning Organizations and Institutional Contexts

To outside observers, ISTEA’s changes made metropolitan planning organizations appear to be the lead actors in transportation decisions. The reality is more complex due to control of funds and the closely tied division of responsibilities and powers among government actors. The intergovernmental context for MPOs limits their role. Because plans must be fiscally constrained, MPO plans reflect the choices other agencies make for the funds controlled by each agency. Important transportation agencies typically include state departments of transportation, transit agencies and port authorities.

Research has found that current intergovernmental contexts blunt the influence of MPOs. In a review of surveys and previous research, Wolf and Farquhar (2005) explain that state and local entities are more powerful than MPOs. The latter are

unequal partners and traditionally show deference to local decisions. Multiple agencies control funds, and the proliferation of informal and formal processes creates what Weir, Rongerude and Ansell (2009) term “competing arenas” that weaken regional forums. In describing how campaigns to levy sales tax for transportation can “bypass” planning, Goldman (2007, p. 10) presents MPOs as lacking authority: “In general, MPOs act primarily to accommodate the decisions already made by complex constellations of higher- and lower-level governments; they continue to work in the coordination tradition of the postwar era in which they were founded.” In fact, many MPOs are part of the councils of governments that formed in that period. Among the 50 large MPOs that Sanchez (2006) analyzed, a slight majority were part of a council of governments. Federal legislation directs MPOs to work in “cooperation” with state departments of transportation and transit agencies. It fails to specify the mechanisms for these relationships (Goldman & Deakin, 2000) or the final decision site in the iterative process.

Research on MPO decision making and agency partnerships suggests the depth of cooperation is limited, but may be growing. Based on the literature and interviews in twenty-four large metros, Goldman and Deakin (2000) find that most state and MPO relationships are weak. Still some local governments have forged deeper interaction and joint decision making through MPO activities. Innes and Gruber (2005) conducted a five-year study of the San Francisco Bay Area's MPO and the multi-sector advisory partnership it created. One of the original purposes of the study “was to find the degree to which the collaborative planning group...was producing decisions that were regional rather than parochial” (p. 177). They found so much

contention and so little collaboration that they shifted from this focus.

Partnerships may be gaining strength. Goldman and Deakin found that states and MPOs were just beginning to form strong partnerships in their 2000 paper. Gruber and Innes' observations may have been too soon after ISTEA for collaboration to have developed. Furthermore, Taylor and Schweitzer's (2005) more recent study of fourteen states finds that in some instances mandates for collaboration have contributed to greater coordination between states and MPOs.

Some regional contexts may support regional planning. "Regional ethos" contributes to perceptions of success in MPO planning (Goetz, Dempsey, & Larson, 2002). In Chicago and Los Angeles, ISTEA brought new participants and perspectives to transportation planning (Weir, Rongerude & Ansell, 2009), but their impact depended on existing inter-organizational networks and arrangements. More in-depth studies are needed to understand how institutional landscapes—especially intergovernmental contexts—relate to regional transportation planning and implementation, specifically for low-income and minority communities.

Planning and Institutions

The need to understand regional transportation planning in context reflects a larger need to study planning in its intergovernmental and broader institutional landscape. Within the field of planning, dialogue on institutions is fragmented. In line with the "new institutionalisms" (Hall & Taylor, 1996; Teitz, 2007), some planning academics use "institution" to refer to large-scale processes and intangible norms (González & Healey, 2005; Gualini, 2001; Healey, 1999, 2006; Moroni, 2010). Studies of institutions as norms will yield useful insights, but the field lacks even

extensive discussion of the “old” institutionalism—formal government powers (Lewis, 1996). Ganapati (2007, p. 166, emphasis original) provides a useful concept of inter-organizational and inter-agency landscapes as “institutional structures...the *manifest arrangement of relationships between organizations*,” but I focus more narrowly here.

I center this analysis on intergovernmental institutions, but incorporate other stakeholders as they interface with government agencies. In a mixed methods study of metropolitan development and government arrangements, Lewis (1996) provides a useful concept of institution, which “refers to the formal and informal organizations, structures, rules, conventions, and standard operating practices” (p. 24) that structure interactions in political and economic life. Such arrangements matter because they provide the backdrop for potential choices and actions: “These organizational arrangements delimit the set of choices available—and imaginable—to political and economic actors” (Lewis, 1996, p. 24).

Other research has identified the importance of intergovernmental relationships and supra-local structures for local action. Frug and Barron (2008) emphasize the importance of government rules and arrangements, especially how the state creates municipalities, as well as their powers and constraints. On the other hand, Johnson (2006) explores metropolitan regionalism as part of an ongoing struggle over the sovereignty of cities and their relationships to the states and federal government. Both studies demonstrate that intergovernmental context creates the parameters for municipal action.

Study of planning in relationship to intergovernmental context is limited. March (2010) argues institutional context more generally is understudied. In his

comparative case studies, he finds “the institutional framework for planning, at least in Victoria [the site of his cases], appears to be the most influential factor affecting planning’s effectiveness. Accordingly, theory divorced from this institutional context has little meaning.” (p. 121). To improve the utility of plans—regardless of whether evaluated along “performance” or “conformance” criteria (see Laurian et al., 2004)—the field of planning needs greater understanding of the role of intergovernmental context. This research responds to the gap in the literature by examining regional transportation planning in institutional contexts through a lens of equity. Research findings will help inform practice, since effective changes in MPO design or regional planning require more information on planning in context.

Research Design

As stated in the introduction, this research identifies whether and how MPO planning advances equity. I focus on how intergovernmental context influences whether regional transportation plans include transit investments for low-income and minority communities. I identify the decision making processes outside of MPOs—what I call bypasses—that determine plan content. The cases involve recent projects, to allow time for ISTEA to have affected processes. My focus is on rail capital projects for low-income and minority communities, but as Garrett and Taylor (1999) discuss, there are many other dimensions of transit equity.

This research uses qualitative methods and case study design, with metropolitan Boston and Miami as cases. Case studies are appropriate for complex processes (Yin, 2003) and for studying the links between regions and other scales (Harrison, 2006). I conducted all of the semi-structured, twenty-one interviews in

Boston in 2010, and twenty-one of the thirty-five interviews in Miami during 2009.³ Interviewees were stakeholders from public agencies, business associations and civil society organizations, as listed in Appendix I. An extensive document review included MPO plans, organizational materials, FTA reports, and media coverage.

I selected Boston and Miami for their contrasting government structures, as related to transportation. While known for its municipal fragmentation (Frug & Barron, 2008), metro Boston's transportation agencies are unified. The Massachusetts Bay Transportation Authority (MBTA) operates extensive bus, commuter rail (365 miles), subway (38 miles), and light-rail (25 miles) service in Boston and its suburbs. The Boston Region Metropolitan Planning Organization is comprehensive, covering 101 municipalities. On the 14-member MPO board, the Massachusetts Department of Transportation (MassDOT) has three seats, including the chair. The region's planning agency (the Metropolitan Area Planning Council) is vice-chair. The other board members are the transit authority (MBTA), the transit authority's advisory board, the port authority, the City of Boston, and six other municipal representatives. The Federal Highway Administration, the Federal Transit Administration, and the MPO's Regional Transportation Advisory Council are non-voting members.

In metropolitan Miami, government transportation agencies are far more fragmented. Each county oversees its own transit agency. Among the counties, only Miami-Dade County operates rail (the 22-mile Metrorail). The operator, Miami-Dade Transit, is a unit of the county government. A quasigovernmental authority operates

³ Miami fieldwork is part of a research project on regional governance, transportation, and neighborhoods. The author conducted 21 of 35 interviews in Miami, and a senior researcher, Dr. Juliet Gainsborough of Bentley University, conducted the remainder.

the region's one commuter rail line, and some municipalities operate their own circulator services. The Florida Department of Transportation even divides the metropolitan area into two separate administrative districts. Like the transit agencies, each county has its own MPO, and each MPO has a separate long-range transportation plan. In Miami-Dade County, the site of the bypass I examine, the MPO board has the following members: the county's thirteen commissioners; representatives from the Miami-Dade Expressway Authority, the Miami-Dade County School Board, and each municipality (6) with more than 50,000 residents; two gubernatorial appointees; and two non-voting members from the Florida Department of Transportation.

As metropolitan areas, Boston and Miami provide an interesting combination of similarities and contrasts. Both metros are anchors on the Interstate 95 eastern corridor and are among the largest metropolitan statistical areas (MSAs) in the nation, with 4.5 million and 5.4 million residents, respectively (U.S. Census Bureau, 2008b). The Miami MSA has a higher poverty rate and a lower median income than Boston, as well as larger shares of black and Latino residents (see Table 2.1). Cuban émigrés and other Latinos have become important leaders in business and politics in metropolitan Miami. Based on extensive study of immigration and racial relations in Miami, Portes and Stepick (1994, Chapter 8) argue that this Latino rise to power makes black Miamians, who are disproportionately poor, feel subject to "double subordination" under whites and Latinos. In Boston, community and advocacy organizations, many based in black neighborhoods, have a long history and strong networks (Medoff & Sklar, 1994; Mollenkopf, 1983).

Total population		Economic data		Hispanic/Latino	Not Hispanic/Latino		
		Poverty rate	Median household income	Any race	White	Black	Asian
Miami, FL-MSA	5.4 million	13%	\$49,965	39%	38%	19%	2%
Boston, MA-MSA	4.5 million	9%	\$70,344	8%	78%	6%	6%

Table 2.1: Metropolitan profiles.

Case Studies: Bypasses and Mobilization

Boston's Big Dig and Transit

Over the last twenty years, strangely enough, highway mitigation agreements have partially determined transit investment in metropolitan Boston. During the 1990s and 2000s, the Massachusetts Office of Transportation and Construction (now MassDOT) spent \$14.8 billion to build a harbor tunnel and replace Boston's downtown highway system with underground tunnels. These projects are collectively called the Big Dig.

Unlike some environmental groups, the Conservation Law Foundation (CLF) would not accept the Big Dig without a guarantee of mitigation measures. In 1990, the Massachusetts Secretary of Transportation and Construction, Fred Salvucci, entered into negotiations with CLF to avoid litigation that would stall the Big Dig. The Conservation Law Foundation pledged not to pursue litigation, if the state met the conditions of the resulting memorandum of understanding. The agreement promised between \$2 billion and \$4 billion of transit expansion, but the state and CLF reached the agreement without consulting the public (Luberoff & Altshuler, 1996). In the

1990s, the state's failure to implement the agreement led to legal action and new agreements with CLF and environmental agencies. In the 1990s and early 2000s, Massachusetts implemented several of the pledged transit expansions, like the Greenbush Commuter Rail Line. Such capital expansions have led to a large debt for the MBTA; debt payments absorb more than one-quarter of the MBTA's budget (Kladko, 2006, January 22).

Meanwhile, in the early 2000s, community and advocacy organizations raised issues related to the insufficient share of rail investment that benefited Boston's black communities. In 2001, the Washington Street Corridor Coalition filed a complaint with the Federal Transit Administration (FTA). The group argued that the transit agency had failed to adequately replace a dismantled rail line in the heart of Roxbury, a black community, and was thus violating Title VI of the Civil Rights Act. The FTA found no wrongdoing (TCRP, 2008), but community groups continue to push for new rail investment, citing unmet promises and environmental injustice (Marin & Terrell, 2005; Interviewee).

An overlapping set of activists also engaged with the MPO, pressing federal agencies to take action on equity planning requirements. As a result, in 2001, the Federal Highway Administration and the Federal Transit Administration directed the Boston Region MPO to assess the distribution of plan benefits and link this analysis to its selection of projects (Peterson, Rasmussen & Kaplan, 2007). Eventually, however, the advocates came to believe that federal agencies would not force real change: "the feds were really unwilling to really back us on the important issues of equity metrics and a real measurement of whether we were getting a fair share and getting adequate

services” (Interviewee). Thus after more than a year on the MPO committee, the advocates withdrew from the process. They saw other arenas as more promising for pursuing equitable transit investment.

1990	Initial agreement between the Conservation Law Foundation & Mass. Secretary of Transportation and Construction
1990s	Some new CLF/Mass agreements; implementation of some transit commitments, especially suburban commuter rail MPO plans include Big Dig commitments, but with additional transit expansions
1999-2000	(approx.) Four Corners Action Coalition begins advocacy for Fairmount/Indigo Line
2001	Federal agencies direct the MPO to address equity
2002	MBTA pledges half the funds for the Fairmount Commuter Rail improvements Equity groups withdraw from MPO committee
2003	Community groups start pushing for Green Line extension; Somerville Transportation Equity Partnership forms
2004	CDCs form Fairmount/Indigo Coalition
2005	Mobilization by STEP & community groups esp. to meetings State representatives successfully secure state funds for Fairmount Final (?) CLF/Mass. revised agreement includes Fairmount project and Green Line as the only remaining transit expansions
2005-current	Massachusetts DOT begins environmental planning for Green Line extension, community stays involved in planning stations, access points, promoting community path, etc. Refurbishing of stations begins, community-led planning for stations and areas (some led by CDCs) Most recent fiscally constrained MPO plan includes only two major transit capacity expansions: the Green Line extension and the Fairmount Commuter Rail Improvements

Table 2.2: Boston timeline. Blue indicates events related to Fairmount/Indigo Line; green indicates events related to the Green Line extension; and black indicates other events.

During the 1990s and 2000s, Big Dig transit commitments largely determined which projects the state and transit agency implemented. Despite some transit

investment, in 2005, the Conservation Law Foundation threatened legal action because of insufficient implementation, especially in the urban core (CLF, 2005). The state and CLF negotiated a new agreement that in effect determined the only two rail expansions in the MPO's current long-range plan (CTPS, 2009). Because the current MPO plan reflects the increasingly limited fiscal capacity of the Massachusetts Bay Transportation Authority, the only major rail expansion projects it includes are those in the newest agreement, a Green Line extension and the Fairmount Commuter Rail Line improvements.⁴ Community activism has influenced *which* two rail projects were in the agreement and contributed to some progress on equity goals.

Community-based organizations have advanced the Fairmount Commuter Rail Line improvement project, which will increase access to rail in underserved black neighborhoods. In the late nineties, the Greater Four Corners Action Coalition and other advocates argued that residents in the black communities of Dorchester and Mattapan suffered from diesel fumes but could not access service on the 9-mile Fairmount Commuter Rail Line. These neighborhoods are part of a gap in rapid rail service that aligns with a concentration of black residents in southern Boston, as seen in Figure 2.2. The map in Figure 2.2 displays the two pending investments with their planned stations, the existing heavy and light-rail system, and the share of black residents in each census tract.

⁴ The two rail projects that I discuss are the only transit expansion projects costing over \$100 million (see CTPS, 2009 pp. 12-6 to 12-11).

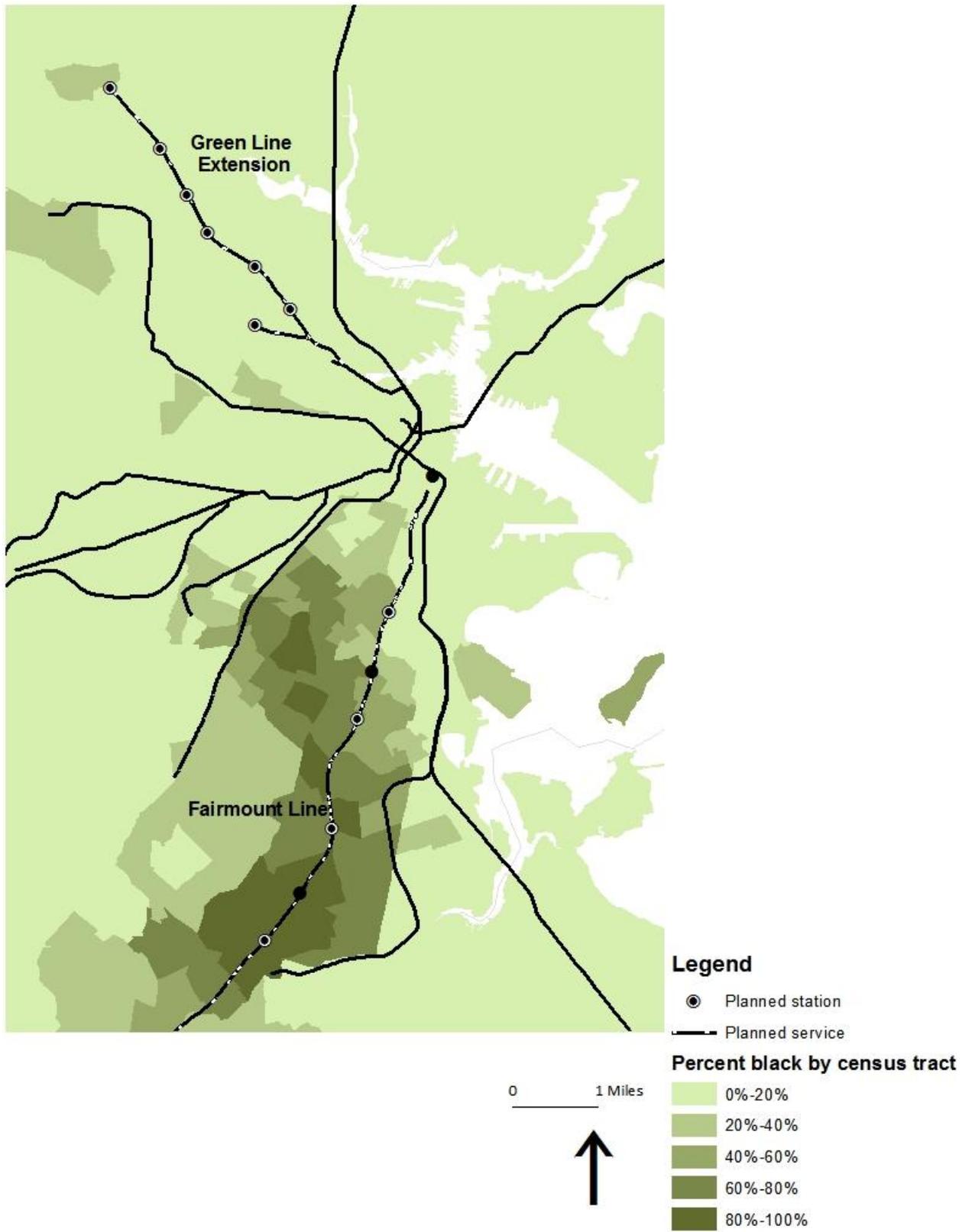


Figure 2.1: Boston rail infrastructure and black population.

Activists proposed a hybrid commuter rail/rapid transit service along the Fairmount corridor, with added stops and increased frequency. The transit agency pledged half of the funds to add stops. Community development corporations (CDCs) then formed the Fairmount/Indigo Corridor Coalition. The coalition worked with state representatives, who secured the remainder of funds for stops in a 2005 state budget. The project subsequently became part of the latest agreement between CLF and the state. One interviewee suggested that the state had proposed adding the Fairmount Corridor to the revised agreement because funds for the project were already reserved in the state budget. The four new stops and other infrastructure improvements, which come at a cost of \$114 million (CTPS, 2009), will bring rail into walking distance for thousands of low-income and minority residents. With infrequent service, however, the benefits—and equity gains—may be modest. CDCs are working with federal agencies and other community partners to promote transit-oriented development, a related greenway, and further study of increased service frequency (Interviewee).

Residents of Somerville, a diverse municipality (pop. 69,662; US Census Bureau, 2008a) that borders Boston, have mobilized to support an extension of the Green Line. The state first promised the rail extension in the 1990 CLF agreement. According to current plans, the light-rail extension will cost \$954 million and add six new stations along 4 miles (with an additional .5 mile spur). The extension will traverse census tracts that the MPO identifies as low-income; these tracts have many minority residents, though not a disproportionate share. Several years ago, municipal leaders, Somerville residents, and a coalition called the Somerville Transportation Equity Partnership increased pressure to implement the extension. One activist

explained the community's efforts:

What we decided to do was raise awareness about the Green Line issue and what was going on and start a campaign to get people to write letters to the MPO...We kept it up with articles in the local papers and stuff like that...We had this meeting at the high school planned...almost 500 people showed up. The MBTA was floored. They were stunned.

The state is moving forward on planning the line, but Somerville residents continue to appear at transportation agency meetings. The community mobilization around the project likely ensured that this project, which will serve mostly low-income census tracts, remained in the latest agreement.

For both projects, the state forum acted as a bypass to the MPO planning process. Decisions made within intergovernmental context—outside of formal MPO planning—in turn determined the content of the MPO's plan. Through sustained mobilization, not simply because of federal requirements for equity in planning, advocates were able to advance rail projects for low-income and minority neighborhoods.

South Florida and the Miami-Dade People's Transportation Plan

A Miami-Dade County sales tax campaign and related county decisions have bypassed the MPO and determined transit investment in metropolitan Miami. Voters had rejected transportation sales tax referenda since the 1970s (Viglucchi, 2002, October 27), but in 2002 they passed a ballot measure to increase sales tax. Through extensive public outreach, County Mayor Penelas and his office created a list of

projects that became the “People’s Transportation Plan” (PTP). According to the PTP, Miami-Dade Transit (MDT) would dramatically expand bus service, provide free passes for seniors, and increase Metrorail service to 24 hours a day. For the longer term, the plan promised up to 88.9 miles of rapid transit. MDT would implement all of this with \$120 million (estimated) from sales tax revenue annually. In 2002, voters passed the half-cent sales tax referendum to support the People’s Transportation Plan (Viglucci, 2002, November 6).

The top rail priority in the PTP was the North Corridor Metrorail extension, which would serve the populous black communities north of Miami (see Figure 2.3). Representing this area, County Commissioner Betty Ferguson negotiated for language stating that the North Corridor was the top priority:

We were convinced as a community that if we supported the half-penny sales tax that that extension would come to pass, that North Corridor, as we’re calling it. Because the half-penny sales tax would support the build-out of that extension. That is what we were told; that is what I was convinced. I was sitting on the commission at the time...I asked them to put that in writing, that the North Corridor extension would be the number-one priority as to how that half-penny sales tax would be used for the Metrorail build-out. They put it in writing. (Commissioner Ferguson at community group meeting.)

County officials had originally promised the North Corridor line in the 1970s (Charite, 2008, May 7). Miami’s one Metrorail line was part of an envisioned network, but securing federal funds for more lines already appeared challenging in 1984, when the

first line opened (Anderson, 1984, May 20). Some black community members believe that Latino leaders orchestrated the decision to route the first—and only existing—line northwest to Hialeah, a largely Latino community.

If the commitment to make the North Corridor the top PTP priority was the end of the story, the bypass would have secured rail investment for an underserved black community; however, county-level decisions have made the North Corridor's implementation unlikely. One problem is that the PTP's estimated costs (2002) were dramatically lower than current implementation prices (Lebowitz, March 18, 2008). Furthermore, the county commission and a trust overseeing the sales tax funds have allowed MDT to use sales tax to fund delayed capital needs, like replacement of Metrorail cars and office facilities. One interviewee explained:

[F]rom the minute it was passed, Miami-Dade Transit was trying to get its hands on that money, because it needed it—because it was running a deficit operation...So there's not enough money really to complete anywhere close to what they said they were going to do.

In 2004, the county commission authorized sales tax funds for the only rail extension that MDT will implement. The "AirportLink" is a two-mile spur connecting Metrorail to the Miami International Airport's intermodal center (see Figure 2.3). The rationale for implementing this project first was that it could advance more quickly than the top priority North Corridor, which needed federal funds. When the commission approved AirportLink, it was to require only \$160 million of sales tax funds, but now will absorb \$426 million in sales tax revenue.

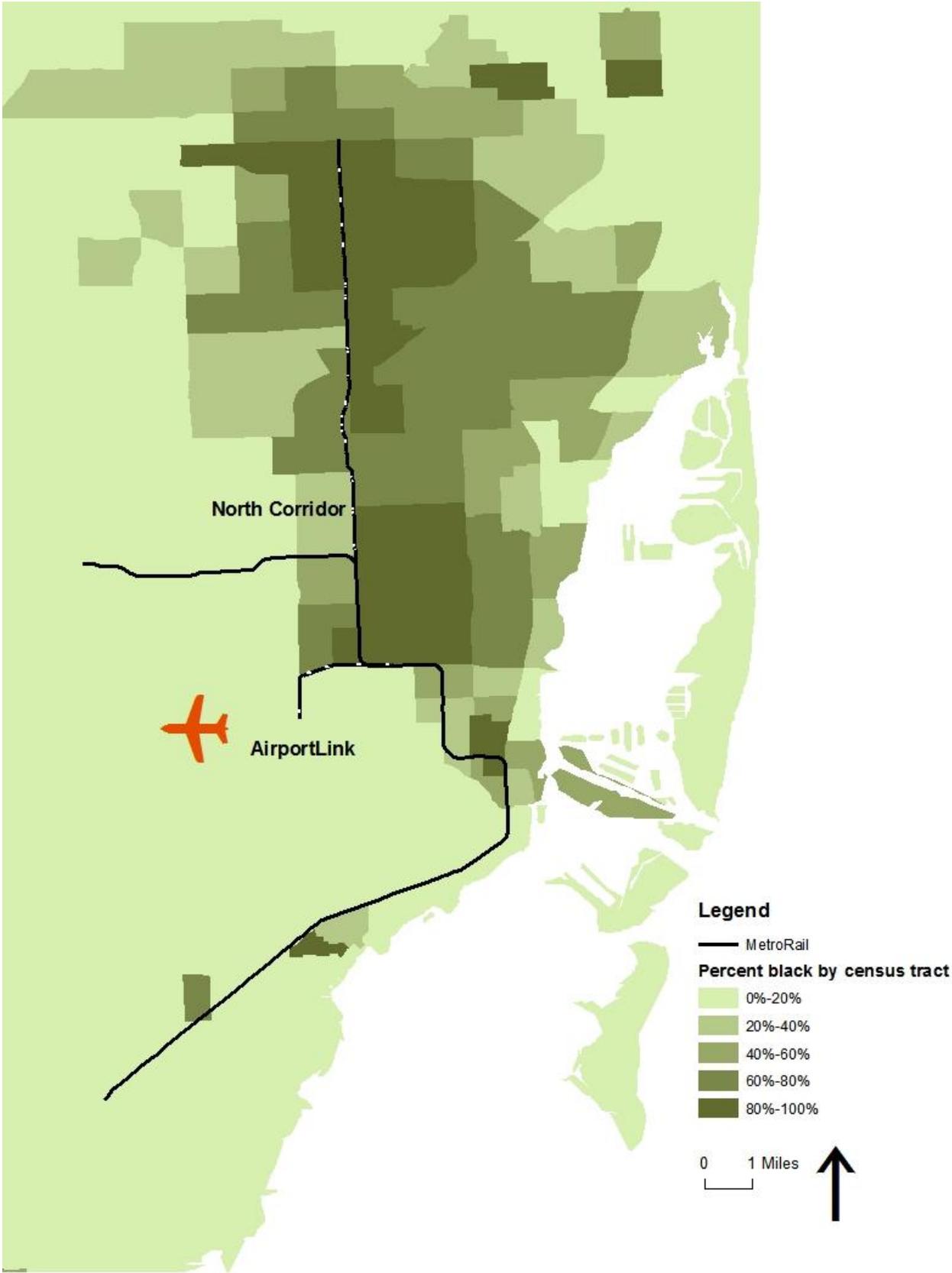


Figure 2.2: Miami rail infrastructure and black population.

1970s	Planning for Metrorail, first line routed to Hialeah, pledge for line to black communities north of Miami
2002	Mayor Penelas leads the development of the People’s Transportation Plan and successful referendum campaign for half-cent sales tax Commissioner Ferguson pushes for North Corridor as top priority in PTP implementation
2004	County commission authorizes funds for AirportLink (\$160 million)
2009	County commission votes to redirect most sales tax funds to Miami-Dade Transit’s (MDT) general funds MDT plan includes no specific investments for North Corridor AirportLink’s budget now uses \$426 million of sales tax revenue

Table 2.3: Miami timeline.

With MDT in poor fiscal condition and unable to implement the promised projects, in March 2009, the Board of County Commissioners voted to redirect most of the sales tax revenue to Miami-Dade Transit’s general fund. MDT’s most recent ten-year plan includes the AirportLink as its only rail expansion and states that it will “pursue incremental and affordable transit improvements [for the North Corridor]...until heavy rail funding options are identified” (MDT, 2009, p. 9-2).

Within this context of campaigns and decisions, MPO planning appears to reflect rather than determine transit choices. The PTP process bypassed MPO planning, even as it prioritized a project for northern Dade black communities. While promising to “consult” with the MPO on a “draft plan” (Ross, 2002, January 31), Mayor Penelas and his team controlled the slate of projects in the People’s Transportation Plan. A social justice group, People Acting for Community Together (PACT), was briefly involved in MPO activities but then shifted its focus to the PTP efforts and did not re-engage with the MPO:

PACT came to a few of the meetings at our [MPO] board and then an

effort was made by the same commissioners to invite them... [to participate in the PTP campaign] and they accepted... I think that was the last we heard from that group. (Interviewee)

PACT successfully fought to include the purchase of more buses in the PTP (PACT, n.d.). As noted above, the other major equity success in the PTP was due to an elected official, not to MPO equity objectives. After the referendum, the MPO's next long-range plan incorporated the new PTP projects and funds (Gannett Fleming, 2005).

The most recent MPO plan also incorporates decisions made outside of its planning process, but now the county will not implement the promised North Corridor. Miami-Dade Transit's current (MDT, 2009) ten-year plan reflects the lack of funds to build the North Corridor. As discussed above, MPO plans must be financially constrained and incorporate external funding decisions. Thus, without funds identified by the implementing agency, the MPO excluded the North Corridor from its current fiscally constrained, long-range year plan (Gannett Fleming, 2009). Like the Boston case, the structure of intergovernmental responsibilities makes plans subject to decisions outside of the MPO arena.

Discussion: Regional Planning and Institutional Context

These two case studies demonstrate four tendencies: the influence of intergovernmental context, decision sites as existing multi-purpose governments, the inadequacy of federal planning directives given the first two observations, and finally that activism can sometimes advance projects.

In Miami and Boston, bypasses in the intergovernmental context for MPO planning have determined transit investment decisions. Government actors—

sometimes influenced by activism in these bypasses—first made funding choices. The MPOs then adapted regional plans to these agencies' decisions. In Boston, the state's Big Dig agreements with an environmental group brought transit investment but bypassed regional decision making. Until recently, the MPO's long-range plan included transit projects beyond the state commitments. Now with limited funds, the MPO plan includes only the state's promised projects. In South Florida, the Miami-Dade County mayor's office created the People's Transportation Plan (PTP) as part of a sales tax campaign in 2002. Because of county commission decisions, the resulting sales tax revenue will fund the AirportLink and Miami-Dade Transit's general expenses, not the PTP's top priority. The most recent MPO plan reflects these county decisions.

The critical bypasses in Miami and Boston extend beyond the formal boundaries of government by including multiple stakeholders, but established, multi-purpose government entities were still the main actors and arenas. The importance of ad hoc processes and community actors could justify urban governance's interest in activity beyond formal structures. Yet action in both regions centered on a formal, multi-purpose government: the Commonwealth of Massachusetts and Miami-Dade County. The government tier targeted by these bypasses also dominates the MPO board membership in each region. Interviewees repeatedly mentioned the state's chairmanship of and multiple seats on the Boston Region MPO board, while Miami-Dade's thirteen county commissioners have the majority of seats on that board. Given the disconnect between the bypasses and MPO processes, it seems unlikely that the MPO boards determined the site of the bypasses. Rather, board membership and

bypasses that align suggest the importance of underlying divisions of power and responsibilities among government agencies, indicating the continuing importance of *government in governance*. The arrangement of powers, funds, and structures among government agencies may determine where critical decisions occur—and perhaps make some decisions more likely than others.

In Miami and Boston, intergovernmental context made federal mandates for equity in MPO planning insufficient for advancing rail in low-income and minority communities. Bypasses in which other government agencies made critical funding decisions—sometimes through engagement with CBOs—determined funding outcomes. Because MPO plans must be fiscally constrained, they must reflect such funding choices. Other agencies that receive federal transportation funds must comply with Title VI provisions, but may lack the multimodal, multi-jurisdictional perspective that MPOs must adopt. When projects for low-income and minority communities moved forward in these cases, their success was due to activism, not federal equity directives for MPO planning. Community mobilization and action by elected officials thus appear to be key variables behind rail implementation in low-income and minority neighborhoods. In Boston, transportation agencies are implementing two rail projects in low-income neighborhoods, due to extensive community mobilization. The smaller investment, the Fairmount Commuter Rail project, will serve a majority black neighborhood. In Somerville, community organizations and elected officials leveraged the agreement between the state and the Conservation Law Foundation. In Miami, some early negotiations by a county commissioner made the North Corridor the top priority in the PTP. While black community leaders support the North Corridor,

community advocates and the county have not made the North Corridor their highest priority for activism.

Directions for Research and Practice

As planners who see the externalities of the current transportation system and the challenges for coordinating across boundaries, we may hold high hopes for equity planning directives and MPO-led regional planning. A critical lesson for practice and future transportation legislation, however, is that directives and hopes for planning must better incorporate the reality of current intergovernmental arrangements, responsibilities and funds. One Boston stakeholder explained this:

[T]he rules and regulations that relate to MPOs from the federal government really need to be reconsidered. It's almost like a system that supports the illusion of choice...I completely appreciate and respect the amount of time and energy that people put into the MPOs...But I think we need to be more thoughtful about what we want the MPOs to be responsible for, what we want the states to be responsible for, and what we want the federal government to be responsible for. And, be more honest about both the resources that are available and the context for which the decisions are being made.

Katz, Puentes & Bernstein (2005) argue that funds need to be more fully devolved to MPOs, whereas Sciara and Wachs (2007) present cases in which MPOs have been able to generate local revenue—presumably both changes would strengthen the MPO role. Alternately, MPOs could play a different role, serving solely as capacity-building and information sharing entities without

engaging in their own planning process.

Case study findings suggest the importance of intergovernmental context for planning. In Miami and Boston, critical decisions bypassed the MPO, but tended to be oriented around established, multi-purpose governments. Because of decisions made elsewhere, federal equity directives did not advance projects for low-income and minority communities. Investment for these communities advanced through activism and more successfully in Boston. Further research could identify the contributions that MPOs can and do make to regional decision making. Research could identify when and how planning *is* a critical forum for advancing equity or other goals.

Another question for the field of planning is what role the federal government can and should play in transit equity. The federal government is deeply involved in transportation through its administration of funds. For community leaders, the finding that mobilization (rather than a set of federal directives) brings benefits may not be surprising. The success in Boston is encouraging for community organizations and provides another rationale for political organizing and capacity building. Nonetheless, it appears that regional planning and federal directives contribute insufficiently to the equity goals they describe. Pursuing the goal of equitable investment has required mobilization in the very communities where other issues are pressing and resources are most limited. Low-income communities can sometimes mobilize effectively, and a federally imposed definition of what is “just” or “good” could disempower them. Nonetheless, the federal government could more actively define equitable investment, at least for the use of its funds. This could prompt further discussion on the equity implications of the federal preference for capital rather than operating subsidies

(Garrett & Taylor, 1999).

The Boston and Miami-Dade cases could provide a rationale for an enhanced federal role in redressing current inequities and past promises. Black community leaders in each region describe a history of disinvestment and inequity. They are frustrated because of government failure to deliver promised infrastructure. In each case study, a promised project, the North Corridor in Miami and the rail line replacement in Boston's Roxbury neighborhood, may not be the most cost-effective project for the region. These projects, however, could serve many more people, at a more reasonable cost, than others in the federal pipeline. Should the federal government help fund promised projects for low-income and minority communities if investments bring real benefits? Should the federal government more actively ensure that its rail capital investments support service to low-income and minority communities?

Plans and some studies assert interdependency among equity, the environment and economic prosperity, but plan implementation may enhance one more than the others. This research has demonstrated that federal equity provisions for regional planning have limited impact because intergovernmental arrangements affect plans and transit choices. In actual implementation, environment, equity, and economic goals may clash. As Grengs (2004) points out, the goals of luring suburbanites from their cars to transit and serving transit-dependent riders may conflict, but they are *not* mutually exclusive. A recent Urban Institute report (Been et al., 2010) explores how federal action on sustainability could have unanticipated negative consequences for equal access to opportunity and vice versa. Planning processes should reflect that in

implementation synergy is not automatic, nor are resources unlimited. This may actually help the field better grapple with multiple priorities to create synergy and enhance regional planning in its existing intergovernmental contexts.

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CHAPTER 3: Sub-National States, Power and Transit Implementation

Abstract

Despite ambitious transportation plans, local agencies fail to implement many proposed rail projects, due to the immense institutional and financial capacity needed to finance and build them. Numerous private actors and government agencies influence rail implementation outcomes, but the role of sub-national states is especially understudied, due in part to the focus on intrametropolitan capacity in new regionalism and urban governance literature. This research examines how state-level actors influence project implementation. I argue that state-level actors contribute capacity—what Stone (1989, 2006) calls “power to”—implement rail proposals, but also exert “power over” regional and local actors by uneven participation across implementation efforts. In case studies from Orlando and Miami, I find the state’s role varied more among projects than between regions. The Florida Department of Transportation pledged millions of dollars for each project, but only sponsored the two projects with a regional consensus behind them and economic significance beyond their service corridors. By choosing where to more greatly enable projects, state-level actors contributed to the termination of two other projects, thereby exerting “power over” regional implementation choices. The pivotal role of the sub-national state in these case studies, as well as the interplay between capacity and influence, indicate the need for future research on multiple types of power and tiers of government in implementation.

Across the United States, regional plans include numerous rail projects, but many fail to materialize. Implementation barriers include the mitigation requirements of our “do no harm” era (Altshuler & Luberoff , 2003), limited funds, and fragmented government responsibilities. To overcome such barriers, multiple actors must assemble sufficient capacity and funding for implementation. To better understand why some projects generate sufficient support and resources, this research examines the variable role of sub-national state actors, an understudied topic in new regionalism and urban governance research. In the cases I study, I find that state-level actors contribute vital capacity, and state-level choices on how much to support specific regional initiatives affect whether projects are actualized or terminated. The uneven implementation of regional transit visions could contribute to outcomes that in effect favor some plan priorities over others.

The challenge of actualizing regional visions and goals, such as increased transit use and infrastructure, has spurred interest in building capacity beyond city boundaries and between government, business and civic society. New regionalism and urban governance research explores and sometimes promotes efforts across sectors that build capacity, frequently through horizontal, cooperative and informal mechanisms. Interest in regional or local cooperation is understandable due to devolution, jurisdictional fragmentation, and challenges for metropolitan action, but governance frameworks have generally failed to account for the role of higher tiers of government, as well as unequal influence in collaborative efforts.

This paper explores how state-level actors influence transit implementation choices. I propose that explaining the partial implementation of rail plans requires a

multi-scalar analysis of capacity, what Stone (1989, 2006) terms “power to,” and unequal influence, “power over” as discussed by Gendron and Domhoff (2009). After reviewing the literature, I describe the role of state-level actors in four proposed rail projects from Orlando and Miami. In each region, I focus on the most recent major project to reach implementation and a second project that was advanced but not implemented. Among the projects I examine, the state role varied more by project than by region. The state sponsored rail investments with regional consensus behind them and economic significance beyond their service corridors. I suggest in these instances, state-level actors exerted “power over” local implementation outcomes, not primarily by obstructing other rail efforts, but by selectively supporting projects. In an era of limited resources, funds expended for one project deplete funds available for another in the same region, even as the pool of available funds can increase through policy measures. Prioritizing some projects or initiatives can crowd out other possibilities—capacity can become “power over,” a topic unexplored in the governance literature. New regionalism and urban governance research will yield only a partial understanding of implementation without a better understanding of the effects of uneven influence and higher levels of government.

Regional Governance, Power and the Sub-National State

New regionalists employ varied rationale to argue for increased regional governance capacity. Economic justifications include suburban dependence on the central city and a shared need for improved regional economic competitiveness (Brenner, 2002; Pastor, Lester & Scoggins, 2009). These justifications may stem from hopes to win suburban support, but the evidence for these claims is mixed or qualified

(Swanstrom, 2001). Some critics of new regionalism contend that it overlooks equity issues, in effect, as it prioritizes smart growth, economic competitiveness, and quality of life (Rast, 2006; Scott, 2007). On the other hand, “social new regionalists,” according to Kipfer and Wirsig (2004), call for regional action to address current metropolitan inequities (e.g. Dreier, Mollenkopf & Swanstrom, 2004).

New regionalists call for a governance model of coordination in practice and go beyond analysis of government in research. Governance can be thus both an analytic category and a normative idea (Nuisl & Heinrichs, 2011; Pierre, 2005). Previous metropolitan reform efforts sought to reorganize government structures, but new regionalism emerged in the 1990s with an emphasis on cooperative and interjurisdictional, horizontal “governance” arrangements (Hamilton, 2004). Governance differs from government due to its emphasis on informal institutions and participation by business and civil society (Savitch & Vogel, 2000). It describes cooperative action, by the public and private sectors, to reach shared ends. In other words, urban governance is “the pursuit of collective goals through an inclusive strategy of resource mobilization” (Pierre, 2005, p. 449). Governance research has increased knowledge about the role of private actors and cooperation, but diverted attention from conflict (Davies, 2005; Minnerly, 2007) and the nation-state (Davies, 2002).

Research on new regionalism has frequently overlooked the importance of context and national policies (Clark & Christopherson, 2009; Lovering, 1999; MacLeod, 2001). Clark and Christopherson contend that new regionalism often attributes economic conditions to endogenous regional characteristics, “rather than to a

more broadly defined economic and political environment that produces patterns of uneven development” (p. 343). Related theoretical debates in geography on what constitutes a “region” raise important questions about our understandings of places and economic and social relationships across space (Pike, 2007). How researchers and practitioners define “regions” may have important implications for their findings and selection of appropriate scales for intervention, but new regionalism has not typically wrestled with this question.

Certainly the role of nation-states is critical—if not paramount—but the sub-national state is another significant aspect of regional context and is under researched (Hamilton, Miller & Paytas, 2004; Weir, Holman & Swanstrom, 2005). State legislation both creates municipal powers and constrains cities’ options (Frug & Barron, 2008). The relationship between cities and states can be one of conflict and tension (Burns & Thomas, 2008). For example, Johnson (2009) interprets the San Francisco highway revolt as a power struggle between the *City* of San Francisco and *California*.

State-level actors, on the other hand, may contribute capacity to urban initiatives. Knudson (2009) finds Governor Jesse Ventura built support for the Minneapolis Hiawatha light-rail, by making the rail line an effort to improve the competitiveness of Minnesota as a whole. Burns and Thomas (2004) use New Orleans development alliances to assert that gubernatorial-led coalitions are a distinctive urban regime type and that urban regime scholars can address deficiencies in the theory by considering extra-local actors who contribute to regimes. Smith (2010) criticizes their expansion of urban regime theory and proposes an alternative “triad” framework to

underscore the importance of the state government, special purpose authorities, and local government in urban development.

Regional research on the role of the state has garnered insights, primarily on state rules and legislative coalitions, but has not generated a new governance framework to account for the state role. State rules are most likely to increase the likelihood of regional coordination when they “create incentives for local politicians to consider not only the local but also the regional implications of their actions and...make more visible the shared fortunes of city and suburban localities within a metropolitan area” (Gainsborough, 2001, p. 509). According to Gainsborough’s study of Los Angeles and Houston, however, state rules promoting regionalism may still hinge on local political will to use authorized government powers. Weir, Wolman and Swanstrom (2005) caution that “[a]t a time when central cities are more dependent on their states than ever, there is considerable evidence that their clout in state legislatures is continuing to erode” (p. 756). Metropolitan coalitions between central cities and inner-ring suburbs may provide an alternative to the weakening coalition models—party-imposed, governor-brokered, and interest-based—that have historically supported central city priorities in state legislatures (Weir et al.). Some research has found, though not focused centrally on, the ability of state legislatures and agencies to constrain or enable regional action (Alpert, Gainsborough & Wallis, 2006; Swanstrom & Banks, 2009; Weir, Rongerude & Ansell, 2009). Finally, based on studies of Chicago and Los Angeles, Weir, Rongerude and Ansell argue vertical power—at higher levels of government—is a necessary addition to horizontal—within region—collaboration to create influential regional forums.

This research contributes to the emerging literature on the state role in metropolitan regions through examining state-level actors' action in transit implementation. Unlike the metropolitan research on state rules, I focus on the state as a participant in regional governance. I expand the treatment of the state as a member in urban coalitions to a larger metropolitan picture. Furthermore, unlike much of the new regionalism research, I use a dual concept of power. Rather than contrasting vertical and horizontal power, as Weir, Rongerude and Ansell (2009) do, I examine different aspects of one stakeholder's power. I argue state-level support can be an important contribution of "power to," but that state-level choices on how and when to support project efforts can act as "power over" that influences *which* components of regional transit plans are implemented or not.

From political science work on urban regimes, I use the concept of "power to" as capacity. Typically focused just on primary cities, urban regime literature often has an explicit interest in power as capacity. According to Stone (1989), the challenge of urban governance is bringing together the capacities needed for change in a fragmented world: "the power struggle concerns, not control and resistance, but gaining and fusing a capacity to act – *power to*, not *power over*" (p. 229, emphasis original). Such emphasis on capacity building as an object of study aligns with new regionalism's focus on or goal of collective mobilization for shared ends, an implicit adoption of "power to."

Urban sociologists have argued, conversely, that a different type of power explains urban outcomes. In this framework, some players exert significant influence to promote urban interventions for their own interests. According to Molotch and

Logan (Logan & Molotch 1987; Molotch, 1976), downtown businesses and real estate interests, with support from other institutions like media outlets, sports teams and universities, fundamentally seek to increase the exchange or monetary value of land in a competitive capitalist system. Through their constant interaction with local government, the private interests in this growth coalition build “systemic” power (Logan & Molotch) and drive urban agendas. Gendron and Domhoff (2009), likewise, argue the profit-seeking, growth machine coalition typically exerts “power over” local decisions. Gendron and Domhoff use “power over” interchangeably with distributive power in which “the emphasis is on the efforts of one group or class to dominate other groups or classes for its own profit or benefit” (p. 187) .

More study of the relationship between “power to” and “power over” is warranted (Gendron, 2006), as both may offer only partial understanding of governance. Stone (1989) does acknowledge “power to” and “power over” may sometimes overlap: “There is, of course, a point at which the two kinds of power merge, and a superior power to form a regime spills over into a kind of domination” (p. 229). I look at this interrelationship: how contributions of “power to” by state actors can exert unilateral influence or “power over” metropolitan outcomes by enabling some projects and in effect foreclosing other possibilities. This dual concept of power may be useful for interpreting governance coalitions more broadly, but I illustrate its utility for and the importance of understanding the sub-national state role in the cases that follow.

Research Design & Case Studies

This research uses comparative case studies, which are appropriate for understanding complex phenomena (Yin, 2003) and regions' relationships to other scales (Harrison, 2006). Selecting two metropolitan areas within one state, Miami and Orlando, allowed me to focus on the variability of the state's role by project and region, rather than on variability between states. In each region, I examine the most recent, major rail project that is being implemented and the most recent, major project that advanced toward implementation but ultimately without success. Table 3.1 displays general information about each project.

	Status	Length (miles)	Rider-ship (long-term)	Federal cost-effective-ness rating	Capital cost	Funding sources		
						Federal New Starts	State	Local
Miami: North Corridor	Uncertain/unlikely	9.5	22,600 (2030)	Medium	\$1.6 billion	43%	28%	28%
Miami: AirportLink	Under construction	2.4	n/a	n/a	\$526 million	0%	19%	81%
Orlando: I-Drive light-rail	Terminated	14.6	103,700 (2020)	Medium-high ⁵	\$600 million	55%	22.5%	22.5%
Orlando: SunRail	Under contract	31	7,400 (2030)	Medium-low	\$416 million ⁶	50%	25%	25%

Table 3.1: Project profiles.

Data collection methods were qualitative. As part of a larger research project,

⁵ The light-rail project's cost-effectiveness is based on the cost per new transit rider, while the other ratings use the current FTA measure (cost per hour of transit system user benefit). As a result, the project's cost-effectiveness might be underrated relative to the other projects.

⁶ Some news articles report the cost at \$1.2 billion. See Footnote 12 for more discussion.

in 2009 the author visited each region twice and a senior researcher⁷ once (six site visits total in 2009). We conducted approximately thirty-five interviews in South Florida, thirty in Central Florida, and six in Tallahassee, Florida's capital; interviewees are listed in Appendix I. Interviews were typically an hour, though they ranged in length from approximately fifteen minutes to two hours. We identified initial interviewees through organizational and governmental websites, personal contacts and media review. Interviewees suggested additional participants. Questions covered regional and transportation background, as well more specific information on projects' key supporters, opponents, challenges, and if and how supporters overcame such challenges. To triangulate and supplement interviews, I reviewed regional long-range transportation plans, Federal Transit Administration data, agency planning documents, organizational materials, and media coverage.

Setting the Scene: Florida's Department of Transportation, Miami, and Orlando

Like other state DOTs, the Florida Department of Transportation (FDOT) has expanded beyond roadways. State departments of transportation began as roadway agencies early in the twentieth century (Jones, 2008). After World War II, their capacity grew with the influx of funds for and control of interstate highway construction. Federal legislation, in 1991, required that states conduct multimodal planning and collaborate with metropolitan planning organizations, although the benefits of collaboration have generally emerged outside of the required planning processes (Taylor & Schweitzer, 2005). Along with its statewide multimodal

⁷The larger research project on fast-growth regions is part of the Building Resilient Regions network, which the John D. and Catherine T. MacArthur Foundation funds. Professor Juliet Gainsborough, of Bentley University, conducted the additional site visits and interviews.

transportation plan, FDOT formed a steering committee that recommended facilities for inclusion in the statewide strategic intermodal system (SIS). In 2003, the Florida legislature first adopted the SIS. The current strategic intermodal system includes roadways, freight and passenger railways, waterway shipping routes, intercity bus stations, passenger intermodal centers, and air, sea and space ports. Airports and seaports are important economically, as the state has a large tourist industry and goods movement economy. For example, the Miami International Airport serves as an international freight hub, with \$34.5 billion in imports and exports passing through it in 2007 (FHWA, 2009).

FDOT has evolved and partially devolved powers to metropolitan planning organizations, but still is a powerful agency with a roadway orientation. In its five-year work plan, FDOT allocates eighty percent of its Strategic Intermodal System funds to roadway capacity (FDOT, 2010). Public transportation receives a substantial amount of funds in the work plan (\$4.9 billion), but this is still less than fifteen percent of the total budget (\$36.2 billion). FDOT still wields strong institutional power and controls larger amounts of money than other transportation agencies within Florida, but much of its planning and activities occur within its seven districts, each with a district secretary. Despite this decentralization, one interviewee commented, “[o]f course, the major decisions still take place up in Tallahassee.”

Passenger rail has become a statewide issue in Florida. The Florida Department of Transportation will match local funds for intrametropolitan rail to help local sponsors secure money from the Federal Transit Administration. Currently, however, the only existing commuter and urban heavy rail lines are in metropolitan

Miami. FDOT support for rail may stem from its recognition that highway construction is insufficient for addressing congestion and other mobility challenges (Interviewees). Florida voters passed a referendum authorizing high-speed interurban rail in 2000. Governor Jeb Bush vetoed funding for it in 2003 and backed a successful ballot measure that repealed the original referendum. In the state house, commuter and high-speed rail have become contentious issues, as the SunRail case below shows.

The Miami-Fort Lauderdale-Pompano Beach metropolitan statistical area (MSA) is the most populous in the state of Florida, with a population of 5.4 million (U.S. Census, 2008). The City of Miami and the South Florida region are traditional entry points for immigrants. A slight majority (56%) of the city’s population is foreign born, and thirty-seven percent of the MSA’s population is also foreign born (U.S. Census 2008). Miami and the entire region are home to a large share of Latinos (69% and 40%, respectively), especially Cubans who make up about one-third of Miami’s population. Residents of Haitian origin also make up a sizable community (18, 309) in

	Total population	Hispanic or Latino	Non-Hispanic white	Non-Hispanic black	Median household income	Individual poverty rate	Foreign born
Miami (city)	349,85	69%	11%	19%	\$ 29,151	26%	56%
Miami MSA	5,403,075	39%	38%	19%	\$ 49,965	13%	37%
Orlando (city)	222,245	22%	45%	27%	\$ 44,287	17%	17%
Orlando MSA	2,025,729	22%	57%	14%	\$ 51,813	11%	16%

Miami (U.S. Census, 2000). Black residents account for almost twenty percent of the population in the city and MSA, as seen in Table 2. Miami and its MSA have lower household incomes and higher poverty rates than Central Florida, with poverty heavily concentrated in the City of Miami.

Table 3.2: Demographic profiles (American Community Survey, US Census Bureau, 2008).

The Orlando-Kissimmee metropolitan statistical area (MSA) has approximately two million residents, making it the third most populous in the state (following Miami and Tampa). The City of Orlando has a rather small population of 222,245. Latinos, currently twenty-two percent of the population in the city and MSA, make up a growing share of residents, but have not achieved political representation to the extent Latinos in South Florida have. African Americans account for one-quarter of Orlando's population and just under fifteen percent of the MSA population.

Case Studies

Miami

AirportLink.

The Florida Department of Transportation has been critical for the only rail project in metropolitan Miami's current, long-range plans. The 2.4-mile "AirportLink" will travel from Miami's one Metrorail line (22 miles) to the Miami International Airport's intermodal center, now under construction. In addition to a central passenger terminal (with commuter rail, Amtrak and bus service), the intermodal center project includes a people mover to the airport, roadway improvements, and a rental car center. Local support for the Miami Intermodal Center (MIC) project is strong. "That's been a project that's had pretty much local support," said one stakeholder. "I don't think that there's been any sort of opposition to it."

FDOT became the sponsor of the intermodal center in the 1990s. Studies had found that an increase in airport capacity required increased ground transportation capacity (Interviewee), but the airport had little land. An off-site intermodal passenger

facility could increase the capacity of the Miami International Airport, one of the region's economic engines. After federal legislation in 1991 allowed more funding flexibility, Miami-Dade County asked FDOT to coordinate the Miami Intermodal Center (MIC). FDOT can draw on its greater capacity, experience with federal agencies, eminent domain powers, and influence on local partners, reasons given by interviewees for FDOT's leadership role.

Metrorail service to the intermodal center will enhance ground transportation—and hence airport—capacity. In the mid-nineties, FDOT led a study of a Metrorail East-West⁸ line proposal that would have connected the MIC to downtown, the seaport, and the existing Metrorail line. Key stakeholders, including cruise ship lines concerned about passenger transfers and check-in logistics, had serious reservations about the proposal and the intermodal center (Interviewee). Furthermore, a 1999 sales tax referendum to fund transportation failed. Stakeholders began to consider a shorter line, which would branch off existing infrastructure (see Airport Link Figure 3.1⁹).

⁸ I selected the North Corridor, discussed in the following section, rather than this East-West project, because the East-West project never formally re-entered the application process for federal funds after the North Corridor was identified as the highest implementation priority in 2002.

⁹ Figures 3.1 and 3.2 show maps with density breaks that match the density of housing units per hectare needed for different levels of bus service: 10 units/gross hectare for service of 20 buses daily; 17 units/gross hectare for intermediate service; and at least 27 units/hectare for 120 or more buses per day (See Crewe and Forsyth, 2011). In Miami, the density of units may not reflect permanent residential density, due to second homes. Also, households are larger along the North Corridor areas, so population density differs from housing unit density.

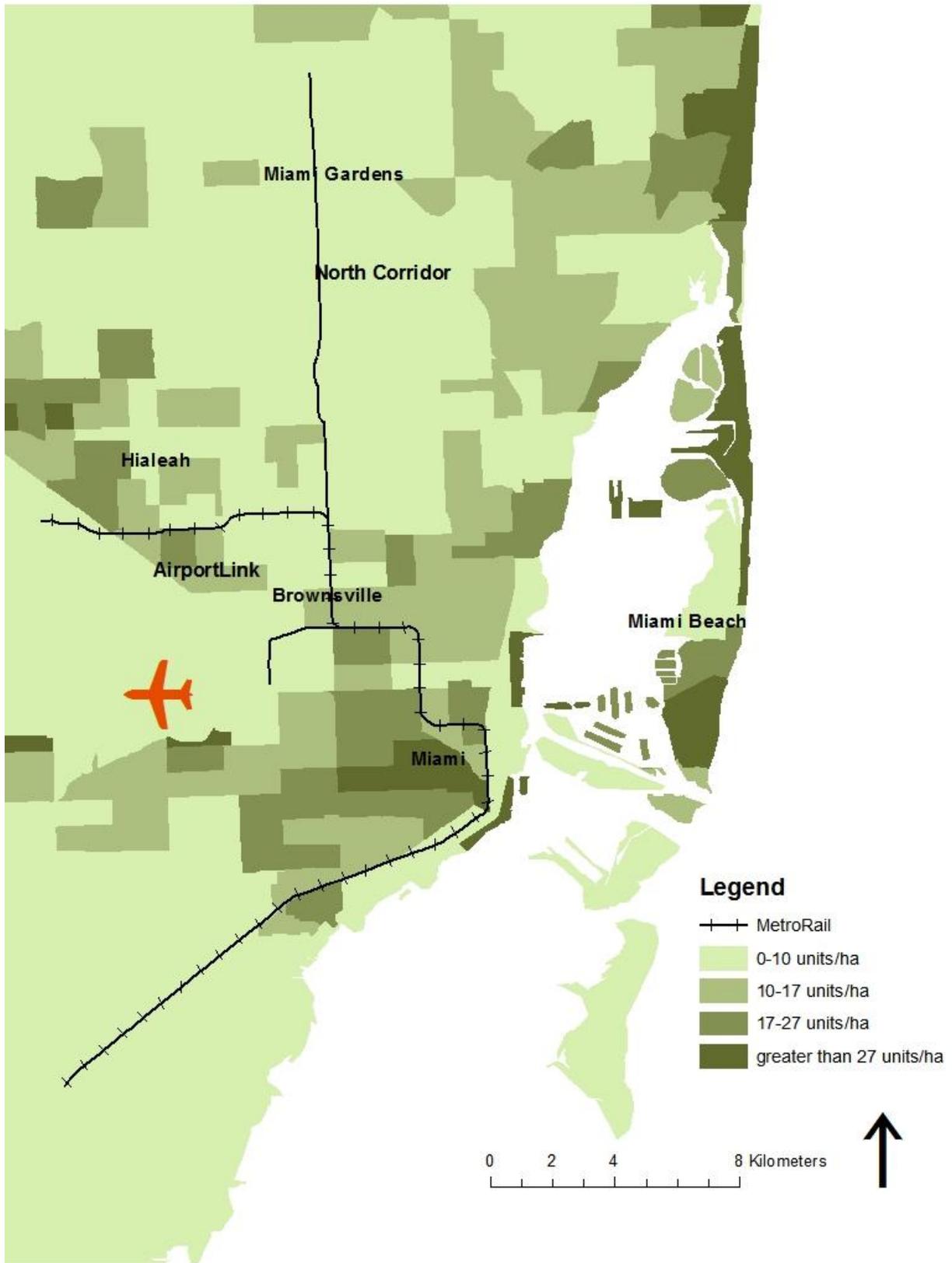


Figure 3.1: Metrorail proposals.

A later referendum authorized a sales tax that will fund the short spur, now called the AirportLink. As part of a 2002 sales tax campaign, Miami-Dade County's mayor developed a "People's Transportation Plan" (PTP), composed of the projects the proposed sales tax would fund. The spur from existing infrastructure to the intermodal center appeared in the PTP, although the plan listed other rail projects as higher priorities. Voters did approve this half-cent sales tax in 2002 for the PTP, with its ambitious list of service and infrastructure expansions. By that time, FDOT had already begun roadway construction for the airport's intermodal center (<http://www.micdot.com/background.html>).

In 2004, the Secretary of FDOT, who is now Miami-Dade County's Aviation Director, committed \$100 million for the Miami-Dade People's Transportation Plan. He specified, however, that this money would be for the rail spur between the intermodal center and the existing Metrorail (Abreu, 2004, February 24). By using only state and local funds, Miami-Dade Transit could avoid the lengthy federal application process for the AirportLink, but still seek federal funds for other projects. In April 2004, the Board of County Commissioners passed a resolution (R-424-04) that directed the county manager to work "expeditiously" on the MIC connector, "while continuing aggressive efforts to obtain Federal funding for the North and East-West Corridors." At that time, AirportLink was to cost \$260 million, using \$160 million of revenue from the PTP sales tax. Its cost has since increased to \$526 million; the sales tax portion is now \$426 million. Groundbreaking for the AirportLink occurred May 1, 2009 (http://www.miamidade.gov/transit/improve_airport.asp).

FDOT has increased local implementation capacity by sponsoring the

intermodal center and partially funding the rail project that Miami-Dade Transit is building. Though not a direct sponsor of the rail component, FDOT is institutionally invested in all aspects of the MIC project. With the \$100 million contribution to AirportLink soon after the PTP vote, it influenced which transit investment would be first (and now only). Thus, FDOT exercised influence on regional decisions. In effect, it drew an increasing amount of county dollars towards this particular investment. This depletion of funds is one of among several obstacles for the North Corridor Metrorail extension.

North Corridor.

North Corridor rail service would split off from Metrorail northwest of downtown to serve the majority-black communities in northern Miami-Dade County. The 9.5 mile extension would almost reach the Broward County line and serve a community college and Dolphin Stadium. Its most recent estimated cost is \$1.6 billion, with daily ridership of 22,600 projected for 2030 (see Table 3.1). It has earned a federal rating of “medium” for cost-effectiveness, like most projects in the federal pipeline.

North Corridor service was part of the original planning for Metrorail, but only one line of the envisioned network has materialized. From the perspective of some northern Dade residents, Latino leaders orchestrated the routing of the first (and only) Metrorail line to the majority-Latino City of Hialeah (community meeting). County officials, according to black leaders, promised North Corridor service during these routing decisions of the 1970s (Charite, 2008, May 7). Black voters supported bonds for Metrorail (Lebowitz, 2004, November 19), but even before it opened in 1984,

federal funds for additional lines appeared uncertain (Anderson, 1984, May 20). For years prior to the sales tax vote, Miami-Dade Transit lacked sufficient local revenue for major capital expansions.

The People's Transportation Plan (PTP) and successful 2002 sales tax referendum offered promise for the North Corridor's implementation. In advance of the vote, County Commissioner Betty Ferguson, from northern Dade, pushed for the North Corridor to be the top priority:

We were convinced as a community that if we supported the half penny sales tax that that extension would come to pass, [the] North Corridor as we're calling it. Because the half penny sales tax would support the build out of that extension. That is what we were told, that is what I was convinced – I was sitting on the commission at the time... I asked them to put that in writing, that the North Corridor extension would be the number one priority as to how that half-penny sales tax would be used for the Metrorail build out. They put it in writing. (Commissioner Ferguson at community meeting, December 12, 2009)

Despite a commission document that specifies the North Corridor as the top priority, subsequent decisions have left the North Corridor unfunded. Miami-Dade Transit and the county commission have directed money to the transit agency's new offices and delayed capital needs, including Metrorail car replacements, as well as the AirportLink project. Recognizing the transit agency's underfunded maintenance and operating needs, in March of 2009, the Board of County Commissioners voted to change the sales tax allocations. Instead of the tax supposedly funding service

expansions, now only ten percent is dedicated to expansion (Lebowitz, 2009, March 4). With citizens angry about unfulfilled PTP promises, County Mayor Alvarez, elected in 2004, and other county officials held transit summits. They acknowledged the county's inability to implement the PTP (Lebowitz, 2008, November 16), in part because the plan's cost estimates are unrealistic (at least currently).

The future for the North Corridor extension is unpromising. The Federal Transit Administration delayed its progress (FTA, 2009) and then stated the agency would remove it from the federal funding application process (FTA, 2010), because Miami-Dade Transit lacked sufficient operating funds. Miami-Dade Transit's most recent ten year plan (MDT, 2009) does not include any specific investments for the corridor. It states only that it will "pursue incremental and affordable transit improvements...until heavy rail funding options are identified" (p. 9-2). The Miami-Dade Metropolitan Planning Organization does not include the North Corridor in its twenty-five year plan (Gannett Fleming, 2009).

FDOT has pledged resources for the North Corridor, contributing "power to" the effort, but may have also marginalized its implementation. FDOT was to contribute \$452 million (just under 30%) of capital costs through its New Starts program. In fact, FDOT's capital contribution would have been larger for the North Corridor than it is for AirportLink. The role of capacity contributions as "power over," however, is clearer when viewing these two projects together. The timing and constraints of FDOT's \$100 million for the PTP advanced the AirportLink, not the projects prioritized in the PTP. Furthermore FDOT is sponsoring the intermodal center—without which there would not be this rail spur—and has a vested interest in

seeing implementation of all the MIC's elements. Since the AirportLink is absorbing an increasing amount of PTP funds and the dire fiscal condition of the transit agency has become apparent, little capacity remains locally to implement the North Corridor. The project has other barriers, such as critiques that it is not the most cost-effective project possible. Regardless, FDOT has contributed "power to" both projects, but this state-level actor has exerted "power over" regional action by partially determining *which* PTP project was implemented.

Orlando

Light-rail to International Drive.

The Orlando-area transit agency and local elected officials led efforts for a light-rail line in the 1990s, with support from the Florida Department of Transportation. The Central Florida Transportation Authority, known as LYNX, received federal funds to design a light-rail system in 1996 (May, 2009). Local actors decided to start with a 14.6 mile segment from downtown Orlando to International Drive (I-Drive) (see Figure 3.2). I-Drive has large attractions (e.g. Universal Studios Theme Park and SeaWorld), as well as dining, lodging, and shopping establishments that have sprouted between downtown and Walt Disney World. Orlando Mayor Glenda Hood was a key champion for the project, along with Orange County Mayor Linda Chapin¹⁰ and Congressman John Mica.¹¹

¹⁰ At the time, Chapin was Chairperson of the Board of County Commissioners. The office is now titled County Mayor, and she retroactively has the title of Mayor.

¹¹ Mica represents Florida's Seventh District that includes Flagler and St. John's Counties, as well as parts of Orange, Seminole, Volusia and Putnam Counties. This light-rail route would *not* have been within his district.

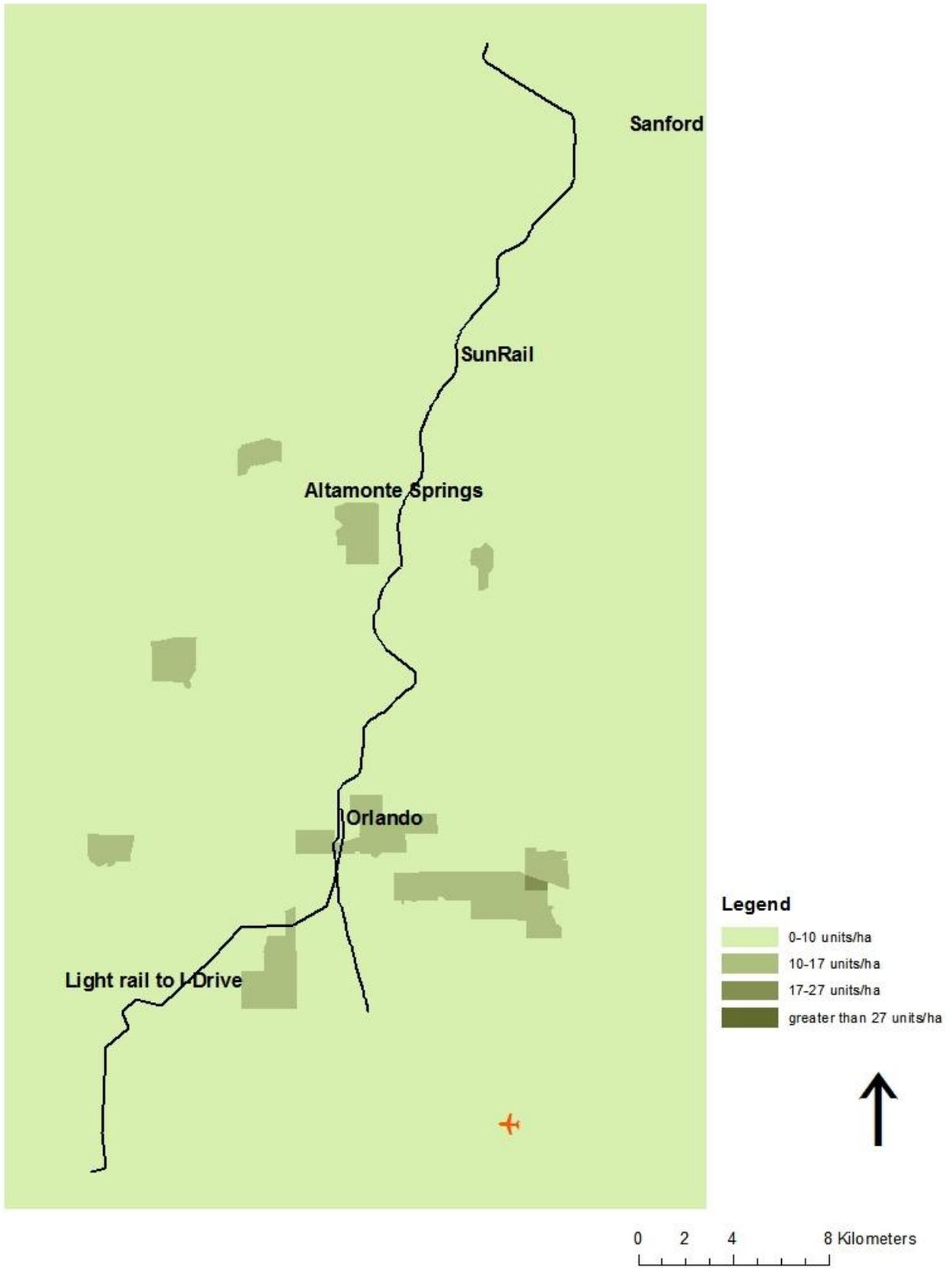


Figure 3.2: Orlando-area proposals.

Light-rail would have supported downtown revitalization, a high priority for Mayor Hood. Certainly downtown Orlando businesses would have benefitted from increased connectivity, with a forecast of 103,700 trips along the line each day (FTA, 1999). Downtown businesses generally supported the proposal, but its benefits received less attention than the financing package (Interviewee) that included funds from Orlando, Orange County, FDOT, Universal Studios, and a special commercial tax district.

I-Drive businesses had mixed reactions. While some major attractions supported the light-rail plan, many major businesses opposed it. At the time, both Universal and Disney World were building evening entertainment and dining districts to capture more visitor spending. According to Foglesong (2001), this put them in competition with downtown, thereby reducing potential support for tourist mobility via the light-rail project. Harris Rosen, the Orlando-based “unofficial Mayor of I-Drive” (Barker, 2000, November 26) and owner of five I-Drive hotels, judged the rail plan disruptive for business and without significant benefits. He maintains this assessment in retrospect: “We fought very hard and defeated it. And we’re a lot better off for having done that. It would not have done anything worthwhile” (Interview). He thus led the charge to halt the project, as did John Morgan, a liability attorney and owner of a small I-Drive attraction.

Business opposition and a turn-over in the Orange County Board of Commissioners led the county to withdraw its funds from the project. After the 1998 elections, the new county mayor and commissioners sought new financing arrangements and even raised the possibility of alternative light-rail projects. The

Federal Transit Administration pressured locals to maintain focus on the proposed line (Stratton, 1999, February 17 in Grovedahl, 2007). The city and county eventually forged a funding compromise, but it failed to pass on a 4-3 county commission vote. A commissioner, who previously had voted for the project, cast the critical negative vote, a position change interviewees attributed to the I-Drive opposition.

Orlando Mayor Glenda Hood, with support of the city council, proposed a shortened segment within the city (approximately 7 miles). After discussions with FDOT, however, Hood too turned away from the project:

I decided to go it alone with the city. And so the city commission supported that, and then we realized that other communities were quickly swooping in and going to grab those federal dollars...And of course, it would have been a shorter route, just within the city limits, and so then in conversation with the state DOT, we realized it was not the wisest thing to move forward. (Interview)

The media described the final decision in a different light, with FDOT's rescission of funds triggering the project's demise:

[S]tate Department of Transportation Secretary Tom Barry informed Hood on Friday that he was withdrawing \$48.1 million tentatively set aside for light-rail, along with another \$3.5 million for annual operating and maintenance expenses. Without that money, the city could not afford to carry on. Barry told Hood the plan had generated too much acrimony and precious little support. (Tracy & Stratton, 1999, December 4 in Grovdahl, 2007, p. 33)

FDOT's exact role is unclear, but it initially pledged critical resources, enhancing implementation capacity. It also assisted in planning activities; both contributions of "power to." Later FDOT withdrew funds for a shortened segment. Hood's insider account portrays the decision as collaborative, while the media presents FDOT's choice as unilateral. Regardless, the state influenced transit outcomes by withdrawing funds and/or advising Hood. FDOT thus exerted "power over" locals by successfully encouraging them to abandon the project.

After several failed initiatives, including the light-rail project and an Olympic bid, Central Florida leaders built support for increased regional cooperation at a 1999 retreat. Following the retreat, myregion.org formed, under the umbrella of the Greater Orlando Chamber of Commerce, and formally partnered with the East Central Florida Regional Planning Council in 2001

(<http://myregion.org/Aboutmyregionorgi/ProjectHistory/tabid/63/Default.aspx>). In 2006 and 2007, myregion.org led extensive outreach to craft a regional vision, in cooperation with the Florida Department of Community Affairs, FDOT, the Central Florida MPO Alliance, the East Central Florida Regional Planning Council, and the Orlando Regional Chamber of Commerce. The effort emphasized the negative outcomes of current growth trends, such as sprawl and congested roadways. The resulting regional concept plan, *How shall we grow?*, proposes concentrated growth and more transportation options, with "4 C's" as organizing ideas: centers, corridors, conservation and countryside. The notable regional consensus around this voluntary effort (21 of 86 municipalities in the region have modified their comprehensive plans

to align with it) may have contributed to the broad-based support of the SunRail project, discussed in the following sections.

SunRail.

A republican congressman built early interest in an Orlando commuter rail project, although state actors would become essential. About six months after the final vote on light-rail, Congressman Mica began to promote a commuter rail project. Mica, whose district includes some northern Orlando suburbs, had put the idea on hold to support the light-rail initiative (Interviewee). In 2000, he suggested commuter rail could run within three years (Oldham, 2000, February 6 in Grovdahl, 2007), using existing rail infrastructure that a freight operator owned. The thirty-one mile commuter rail project, dubbed SunRail, will connect suburbs north of Orlando in Orange, Seminole, and Volusia Counties to Orlando's central business district. Low ridership projections for 2030 (7,400 daily boardings) contribute to the project's medium-low cost-effectiveness rating (FTA, 2008). Due to LYNX's unfavorable public image after the light-rail project failed, local leaders asked FDOT to sponsor the project (Interviewees).

SunRail soon became the region's rail priority. Regional visioning had built cooperation and support for transportation alternatives to the automobile. As a member of the House Transportation and Infrastructure Committee (and its chair as of January 2011), Mica could help reserve federal funds for it. A civic leader noted that SunRail became the transit project of choice almost by happenstance: "What I want to say is that whether we would sit here having been around all of this and said let's do a commuter rail route versus a light-rail and what makes sense and everything—that

debate died away because of the circumstances” (Interviewee). As the feasibility, unity, and resources for the project grew, local players saw it as the *one* project to support for the regional good, a starting “spine” for rail in a region without any and a vision that depends on it.

Business support for SunRail is wide-ranging, including Walt Disney World, Darden Restaurants,¹² two major hospitals and the Orlando Magic. The Magic even purchased 5,000 SunRail pins and promoted the project during basketball game announcements (Kassab, 2009, April 24). Most business support was less direct, relying on lobbyists and business organizations, specifically the Central Florida Partnership (which runs the chamber of commerce) and the Metro Orlando Economic Development Commission (Kassab).

To implement commuter rail, FDOT needed access to a rail corridor that travels north-south and through downtown Orlando. CSX, which owns the track, is a large freight operator with national headquarters in Jacksonville, Florida. FDOT reached a purchase agreement with CSX, but the liability provisions required approval from the state legislature. Initially CSX’s ownership appeared to be an obstacle, but its involvement may explain FDOT’s commitment to the project.

The state has an economic development rationale for supporting CSX’s freight plans and purchasing the track. For some years, CSX had been considering shifting its freight traffic slightly to the west and building an intermodal logistics center. Their plan would move most freight off the downtown Orlando corridor. The freight would

¹² Darden Restaurants is one of the few Fortune 500 companies with headquarters in Central Florida. Among other brands, Darden owns Olive Garden, Longhorn Steakhouse and Red Lobster.

travel to a logistics center in Winter Haven (outside of Mica's district and to the west of Orlando), where CSX predicts creating 8,000 jobs (Decamp, 2008, March 16). Governor Jeb Bush's administration actively sought a deal with CSX (Peterson, 2007, November 30), with an initial agreement announced in August 2006. Currently the deal is slated for \$641 million (Laing, 2010, June 26). It includes purchase of sixty-one miles of CSX track—allowing for future commuter rail south of Orlando—and major infrastructure improvements for the alternate track and logistics center. It allows CSX to use the rail FDOT is purchasing and liability provisions for when it does.

The need for legislative approval (of the liability provisions) made project critics at the state-level prominent. As even some supporters acknowledge, the project is costly and offers only modest direct benefits, except to CSX. State Senator Paula Dockery (R, Lakeland) led opposition, concerned by the cost of the project, the deal's secrecy, benefits to CSX, and the increased freight traffic her hometown will experience (Interviewee). According to some interviewees, she really opposed the project for personal reasons. Jeb Bush was behind the CSX deal, and Doc Dockery (her husband) had spearheaded the high-speed rail efforts that Bush killed. Some fiscally conservative legislators opposed the project because of its high cost, up to \$1.2 billion,¹³ and the state's commitment to fund operating costs for seven years.

Project supporters failed to secure needed legislative approval in the 2008 and 2009 legislative sessions, despite increased efforts in 2009. Elected officials from

¹³ Some news articles report the project's cost as \$1.2 billion. These estimates add the CSX deal (\$641 million) and the actual project cost for stations, rolling stock, etc. (\$600 million) (Kassab, 2009, April 24; Laing, 2010, May 26). The actual track purchase within deal is \$150 million (FDOT, 2008), making \$750 million another potential cost figure. The most recent FTA evaluations of the project's cost-effectiveness use a lower projected capital cost (FTA, 2010).

Central Florida lobbied in Tallahassee, notably State Senator Lee Constantine (R, parts of Seminole and Orange counties) and Mayors Dyer (D, Orlando) and Crotty (R, Orange County). Trying to win votes from South Florida legislators, supporters added funding for South Florida's commuter rail line to the 2009 SunRail bill. It still failed to pass. By this time, FDOT had expended significant funds on rights-of-way and paid out \$44 million to contractors, including \$941,000 for public relations, of which myregion.org received \$266,000 (Garcia & Deslatte, 2009, June 11). With FDOT-funded infrastructure improvements uncertain and the economic downturn, CSX announced a delay in its plans for the logistics center in May 2009 (Palmer, 2009, May 8).

SunRail did pass at a *special* legislative session in December 2009, when it became intertwined with high-speed rail funding. Florida was seeking federal stimulus funds for a \$2.6 billion high-speed rail segment, and competition for the federal dollars was fierce. In October 2009, U.S. Transportation Secretary Ray LaHood explained Florida's high-speed rail application had potential, but that the state must sustain its metropolitan and local transit systems (Tracy, Hafenbrack & Deslatte, 2009, December 9). This triggered a special legislative session and a new bill. The successful bill authorized SunRail, had slightly modified liability measures, created a statewide rail authority, and directed \$15 million annually to South Florida's commuter rail service. A legislative staffer explained this different approach:

[LaHood] said that without a commitment from the state, without a commitment to rail transit, Florida does not stand a chance on getting the 2.5 or 2.6 billion dollars in high-speed rail funds. So what

transpired was really a metamorphosis in the thought process in Tallahassee. We were like, “Well, we need to get our act together”...So how is it different? It’s different because it’s not a regional piece of legislation—this is a statewide piece of legislation.

As for the Miami projects, FDOT contributed capacity, or “power to,” for both of these Orlando projects. It offered some institutional support for the light-rail, but the level of support it provides for SunRail dwarfs that support. FDOT negotiated purchase of the corridor, committed capital and operating funds, and sponsors the project—tremendous contributions of financial and institutional “power to.” It is unclear how much FDOT’s support hinges on a desire to support the freight industry or enable regional goals and partnerships.

Examples of “power over” are both direct and indirect through the prioritization of SunRail. Of course, the state legislature exerted some “power over” local implementation by delaying, although ultimately approving, the liability provisions for SunRail. FDOT exerted “power over” directly on the I-Drive project through withdrawing funds and encouraging the project’s termination. Perhaps more importantly, FDOT’s contribution of resources, coupled with Mica’s advocacy, made SunRail *the* transit project moving forward in the region. FDOT and Mica effectively exerted influence over regional choices by advancing this project in an environment where local players believed they needed regional unity. Despite low ridership projections, local visionaries see SunRail as an initial step towards a transformed region with improved transit. The election of a new, fiscally conservative governor in 2010 appears to present new implementation challenges for SunRail, but these events

are still unfolding. Ironically, the federal funding that triggered the special session will not come to Florida, due to the new governor's stance on the high-speed rail project.

Discussion

In this section, I describe the conditions of and outcomes for the cases through the lens of “power to,” including the conditions common to the projects for which FDOT plays a larger institutional role. Then, I interpret state action as “power over,” at the project and regional level. I conclude the discussion section by identifying the potential significance for new regionalism.

For each project, state-level actors enhanced collective “power to” implement projects, through contributions of financial and/or institutional capacity. FDOT pledged millions towards the capital costs of all four rail projects, and is an institutional leader role for two projects. FDOT's sponsorship of the intermodal center enables the possibility of the AirportLink in Miami and ensures the center's components advance. FDOT's institutional role is most significant for SunRail. It sponsors the project, will provide seven years of operating funds, and brokered the track purchase.

SunRail and AirportLink, for which FDOT has a sponsorship role, differ from the other projects in two ways. First, these projects benefit from regional consensus that the projects are desirable and important; broad agreement behind the other projects was lacking. Supporters have mobilized extensively for SunRail, but the I-Drive project was contentious. The intermodal center and AirportLink have not prompted visible mobilization in South Florida, but interviewees frequently noted the importance of ports in the regional economy. Furthermore, there has not been

opposition. Though the North Corridor Metrorail extension has not been contentious, it lacks support outside its service corridor.

Second, AirportLink and SunRail have economic significance beyond their corridors. Central Florida leaders describe SunRail's potential to transform metropolitan growth patterns and enhance the region's competitiveness. Regardless of this envisioned transformation, the project is intertwined with freight movement in Florida. The state, especially under the leadership of Jeb Bush, sought to facilitate CSX's plan to reroute rail traffic and build a logistics center. Likewise, AirportLink will expand the capacity of an airport that serves not just traveling locals, but a recreational tourist economy, international business travel, and freight movement. Florida's Strategic Intermodal System includes the CSX tracks involved in the SunRail deal and the Miami International Airport; it will include the airport intermodal center upon completion.

The two projects that benefitted from increased FDOT institutional sponsorship are those poised for implementation. FDOT contributed some financial capacity but less institutional involvement to the two projects that appear terminated, the I-Drive light-rail and Miami's North Corridor. Economic significance and regional consensus were the common conditions for the state's *institutional* contribution of "power to." In these cases, state institutional leadership acts as an important mechanism that increases "power to" and the likelihood of implementation. FDOT sponsorship in turn strengthens regional consensus, for example by funding SunRail's public promotion, earmarking funds for the MIC rail link, and shepherding local partners responsible for various aspects of the MIC project. Figure 3.3 below depicts

the relationship between project dynamics, state institutional leadership and outcomes for these cases.

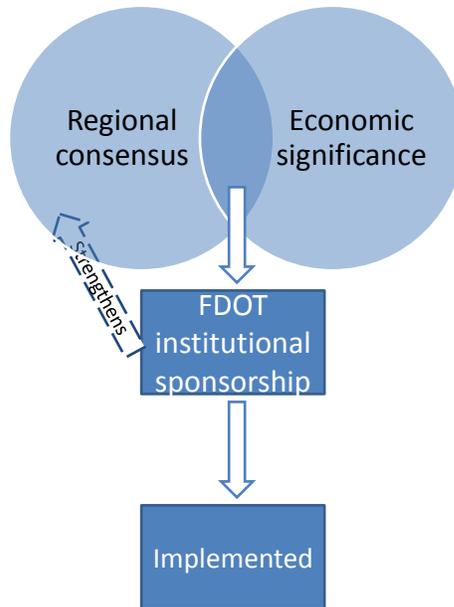


Figure 3.3: Diagram of projects with state sponsorship.

At the project-level, state actors can also exert “power over.” One obvious example of FDOT’s exercise of “power over” local outcomes is when its withdrawal of funds triggered the demise of the I-Drive project. The most obvious instance of state-level “power over” is the legislature’s obstruction of SunRail, even as another state-level actor (FDOT) was enabling it. Ultimately though, federal control of high-speed rail money led to the legislature’s assent. Perhaps at the project level, state actors exert influence by choosing the extent to which they mobilize institutional capacity; a higher degree of state-level mobilization increases the likelihood of implementation.

Seeing FDOT’s “power over” regional choices, however, is easier when

considering projects in conjunction. At the regional level, state actors’ “power over” is mainly through selecting where to most mobilize “power to” and implications from such choices, as summarized in Table 3.3. In South Florida, FDOT’s earmarked and early contribution to AirportLink effectively prioritized this investment for the region, rather than the People’s Transportation Plan’s higher priority projects. The county will now spend almost half a billion dollars on AirportLink, reducing PTP funds available for other expansions. Certainly the North Corridor has other implementation challenges, but FDOT’s and other capacity mobilized for another rail expansion has limited local financial capacity for pursuing the North Corridor.

	“Power to” (state actors)	“Power to” explanation	“Power over” (state actors)	“Power over” explanation	Outcome
North Corridor (Miami)	Some; Financial only	Would have matched local funds (\$452.72 of \$1.6 billion)	Some	Earmarked funds for AirportLink; effectively prioritizing it over this extension	Not in ten-year transit plan or twenty-five year transportation plan
AirportLink (Miami)	Substantial; Financial and indirectly institutional	\$100 million (of \$426 million) directly for AirportLink; sponsoring intermodal center (only new stop)	Some/ substantial	Earmarked funds for AirportLink; effectively prioritizing it over other investments	Under construction
I-Drive light-rail (Orlando)	Substantial; Financial and planning support	Helped planning, would have contributed substantial funds (\$135 of \$600 million; 1998 costs)	Some	Withdrew funds/encouraged City of Orlando to halt project after Orange County vote	Terminated
SunRail (Orlando)	Most substantial; Financial and institutional	CSX track purchase & infrastructure improvements (\$491 million); Project sponsor; Capital (\$104 of \$416 million) and operating expenses	Substantial	Legislature delayed and almost halted project; early negotiations made this the key regional project	Poised for implementation

Table 3.3: Case summaries.

In Central Florida, FDOT sponsors the commuter rail project. Its institutional support, Representative Mica's advocacy, and local concern for regional unity stunted debate about other possibilities. This "power over" regional decision making foreclosed other transit projects as potential priorities for implementation. FDOT has even allocated funds for public relations, though these efforts are to promote SunRail, not directly discredit other ideas.

Findings from these case studies indicate potential directions for new regionalism and urban governance research. First, the critical role of state-level actors in these cases strengthens the call to better incorporate analysis of higher tiers of government in regional research. Even though some research has indicated a role for the state, a new framework for incorporating complex roles and higher tiers may be needed. Second, my use of a dual lens for power also provides a new way to look at the capacity focus of new regionalism and governance literature. While the literature has largely failed to consider inequalities of power, this lens allows me to identify capacity, unequal degrees of influence, and how the two are intertwined.

Conclusion

Through analysis of four projects, this research has examined the role of state-level actors in transit implementation. State-level actors pledged important financial resources, but FDOT only sometimes took an institutional leadership role. The two projects poised for implementation are those that FDOT helped sponsor but also those which have more regional consensus and economic significance. For governance and implementation research more broadly, these case studies suggest that state-level actors can be important governance participants in building collective "power to," but

that as they do so, they almost inevitably exert “power over.” Federal actors, as well, appeared in case studies as exerting “power over” regional outcomes, and the federal role certainly merits more investigation. The exercise of “power over” through selective contributions to capacity suggests that new regionalism and urban governance studies should consider how and for what cooperation emerges. While planners in transportation practice may find the state’s dominant role self-evident, these literatures have not sufficiently explored the expanding state role in multimodal systems and intrametropolitan transit.

In addition to expanding research beyond these cases, research can further examine multiple dimensions of power within regions and in relation to political-economic context. This research has focused on state actors, but the cases suggest the importance of critical analysis of horizontal (within region) power in governance. For example, the contention over light-rail in Orlando indicates “power over” and conflict remain central in horizontal, regional arenas and thus merit attention. Further research on capacity building could draw on critiques of network governance (Hadjimichalis & Hudson, 2006; Moulaert & Cabaret 2006; Reckhow & Lester 2007) to explore how agenda setting, coalition participation and existing inequities exclude some possibilities and players—exerting “power over”—while still building regional capacity.

Finally, economic context and policy influence the goals of regional governance coalitions. The instances in which the state department of transportation had greater institutional investment were those with more economic significance. This is not surprising, but brings to light the larger macroeconomic motivations of

stakeholders in cooperative implementation that may be glossed over in conversations emphasizing the shared interests of collaborators. New regionalism and governance literature need more analysis of how policy and economic factors influence the targets for which governance actors mobilize capacity, especially since the emphasis on governance has blurred normative and analytic approaches to coalitions and capacity.

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CHAPTER 4: Federal Transit Funding, Politics and Local Factors

Abstract

Despite the billions of dollars that the federal government has invested in mass transit, its funding role in transit expansion is understudied. Currently, most of its contributions to rail expansion are through its New Starts program. Despite the program's formal evaluation of project benefits and local financial commitment, I hypothesized that national political clout and metropolitan characteristics would affect projects' success in the program. Regression results indicate that a project's local financial commitment rating correlates with whether it reaches a grant agreement and its benefits rating correlates with how quickly it does so. I found little statistical evidence that national political factors and most metropolitan attributes correlate with outcomes. Case profiles and statistical findings on local financial commitment indicate a significant role for local context and funding dynamics. Local financial commitment ratings might thus be an outcome of and proxy for the local political will behind projects. Changing the criteria for project benefits evaluations may have limited impact due to the importance of local funding.

Federal policies and programs have dramatically shaped metropolitan landscapes in the United States, as the interstate highways that cross metropolitan regions visibly demonstrate. Accounts of transportation finance (Beimborn & Puentes, 2005; Taylor, 2004) and histories of minority neighborhoods (Mohl, 1993) identify mechanisms in the interstate program's design that contributed to current development and transportation patterns. The federal role in mass transit infrastructure and its subsequent impact on urban environments has received less attention. Since the federal government authorized capital grants in 1964 (Jones, 2008), however, federal funds have been critical for most major, mass transit infrastructure expansions. In 2005, major transportation legislation (SAFETEA-LU) authorized \$6.6 billion for transit expansion through the federal New Starts program (http://www.fta.dot.gov/planning/newstarts/planning_environment_2607.html). In this program, project sponsors must navigate a multi-step application process in which the Federal Transit Administration (FTA) evaluates projects using justification (benefits) and financial criteria.

This analysis identifies to what extent national political clout, metropolitan characteristics, and project evaluation criteria correlate with success in the New Starts (NS) program. I define success as reaching a grant agreement with the FTA and doing so relatively quickly. Based on the political science literature, I hypothesized that political clout and metropolitan demand factors would correlate with funding outcomes, but found limited correlation between these factors and whether projects were funded. I did find a significant correlation between local financial commitment and funding outcomes. Increased project benefits, as captured in a "justification"

rating, did correlate with success in moving through the process more rapidly. Brief profiles of four exceptional cases show the importance of project context and factors beyond the FTA's current control. I argue that these findings do not indicate a non-existent federal role but rather one in which the rules of the game privilege local sustained capacity, rather than projects that maximize benefits and best support national priorities.

The New Starts Program and Federal Funding

According to Beimborn and Puentes (2005), transit competes with highways on an uneven "playing field" for funding. Historically, the United States Department of Transportation has contributed a smaller share to transit capital projects than highways, and, unlike highways, it awards transit expansion funds competitively. Even though transit requires a larger local share than the interstate program did, there are still incentives for expansion: federal funds can still seem to be largesse from above and infrastructure is thought to create jobs (Taylor & Samples, 2002).

The New Starts program is the Federal Transit Administration's major program for funding rail and other fixed guideway¹⁴ transit expansion. The FTA distributes most funds via a formula (\$4.1 billion in FY 2009), but the New Starts program provides substantial additional funds (\$1.8 billion in FY 2009)¹⁵ through a competitive and sometimes lengthy process. Through New Starts, the FTA may fund up to 80 percent of project costs, although the FTA prefers that projects request a smaller federal share. Currently, many more projects are in the pipeline than the FTA

¹⁴ A guideway (e.g. a catenary system) or an exclusive right of way makes transit service "fixed guideway." Rail is fixed guideway, and bus rapid transit with special right-of-way can qualify as fixed guideway (New Starts Working Group, 2009, Appendix A).

will be able to fund (GAO, 2007).

To receive New Starts funds, project sponsors must complete a multi-stage application process, with three critical decision points. Local agencies must conduct comprehensive transportation “systems planning” and “alternatives analysis” for specific corridors, before seeking FTA authorization for a selected project to enter into “preliminary engineering” (PE), the first stage in the official pipeline. In my analysis, funded projects spent a mean of 4.7 years in the pipeline. The second milestone is authorization from the FTA to enter final design (FD), the next stage in the pipeline. Finally, if successful, the project’s sponsor and the FTA will sign a full funding grant agreement (FFGA) in which the FTA commits to seek congressional appropriations for the project (see Figure 4.1). New Starts project authorizations appear in the major transportation bills that Congress passes approximately every five years, but Congress must later appropriate funds for each project.

¹⁵ http://www.fta.dot.gov/funding/apportionments/grants_financing_9562.html

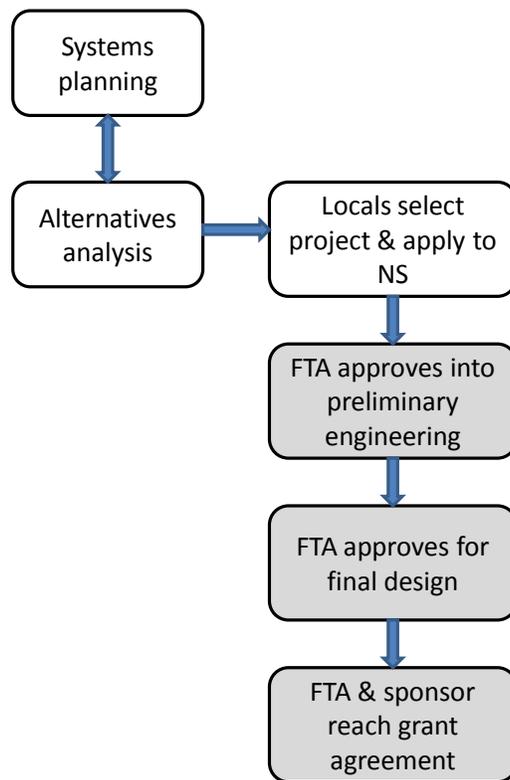


Figure 4.1: New Starts application process, shaded portions indicate the official NS pipeline (Adapted from GAO, 2007, p. 9).

The FTA annually evaluates projects in the New Starts pipeline (the shaded portion in Figure 4.1) and reports these ratings to Congress as part of its funding recommendations. A project’s overall rating is the equal combination of categorical ratings for “local financial commitment” and “project justification,” the latter approximating benefits. The FTA rates financial commitment based on the share of local funds for the project (preferring projects that request a smaller share from the program), the strength of the capital funding program, and the operating funding plan (the long-term fiscal capacity of the project’s operator with an expanded system). The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) defined criteria for the FTA’s evaluation of project justification or benefits: cost-effectiveness, operating

efficiencies, land use, mobility improvements, and environmental benefits. Later legislation (SAFETEA-LU) added economic development as a criterion (GAO, 2008).

Though Congress mandated the justification criteria, the FTA has repeatedly modified the specific measures and weights for criteria. For example, prior to the mid-2000s, the FTA used capital cost per *new transit* rider (a rider who had shifted from a different mode of transportation) as the measure for cost-effectiveness. This disadvantaged projects along corridors and from metropolitan areas with high transit use. Now, the agency uses hours of transportation system user benefits (TSUB) in the calculation of cost-effectiveness. Some claim this measure does not capture all the benefits of a transit investment (GAO, 2008), and its calculation is based on numerous assumptions about the future. The Government Accountability Office (2007) has identified the New Starts evaluation process as a model for other programs, due to its formal process and specific measures. Despite this exemplary evaluation system, I hypothesized that national political and local capacity variables would still affect funding outcomes.

Politics and Federal Funding

Political analysis of rail investment has tended to examine whether investment choices align with stated goals. Ridership projections—an underlying piece of the rationale to build rail—have historically overestimated ridership (Flyvbjerg, 2007; Laverny-Rafter, 2010) but have improved somewhat (FTA with Vanasse Hangen Brustlin, 2008). In an analysis of the NS program, Chen (2007) attributes inaccurate estimates of costs and benefits to a principal-agent problem. The NS program's structure allows the interests of the local sponsor (the agent) to differ from the

interests of the federal government (the principal). At the metropolitan or local level, rail routes are sometimes selected not for their maximum contribution to official goals but for their political (Taylor, Kim & Gahbauer, 2009) or technical (Cohen-Blankshtain & Feitelson, 2011) feasibility.

There is limited analysis of federal transit capital spending in the United States. Emerson (2002) provides descriptive information on projects funded by the New Starts program and notes that the number of projects in the pipeline exceeds demand. He also finds that most NS funds go to very large metropolitan areas. Brown's (2003) analysis of the allocation of highway and transit funds is likely the most comprehensive study of federal transportation spending. Brown finds significant relationships between total earmarked transit capital dollars received by each *state* and total state population, percentage of urban population, and whether the state had members on two critical House committees. Political variables have limited significance, however, on a per capita basis. His analysis considers change over time by comparing three different years but does not compare spending over multiple years. Limited existing studies and Brown's interesting but inconclusive results suggest that further study of transit capital funding is warranted. To consider federal rail spending, I turn to the political science literature that has used "supply" and "demand" factors to explain allocation patterns.

In supply-side studies, federal funds represent a "supply" of money that politicians and officials seek to use to their advantage. According to this framework, legislators will direct funding toward their districts to secure voter allegiance, a practice commonly known as "pork barrel" spending. Some studies have found

significant relationships between congressional committee memberships, which enable legislators to direct funds, and federal spending (Carsey & Rundquist, 1999). Senate and House committee memberships may have different effects (Brown, 2003; Gamkhar & Ali, 2007; Lauderdale, 2008). Similarly, allocations at the state level may be part of presidential election strategies (Gamkhar & Ali, 2007; Larcinese, Rizzo, & Testa, 2006). Lowry and Potoski (2004) argue, however, that empirical evidence is mixed on whether federal expenditures reflect officials' attempts to use the "supply" of money to their advantage.

"Demand"-side analysis looks at the characteristics of constituents and recipients, with a wide range of potential actors and measures. Lowry and Potoski (2004) assert that organized interests are a critical factor of demand. They measure organized interests as tax-exempt organizations, private establishments, and the number of local governments. Across seven policy areas, they find at least one measure of organized interests had a significant relationship with the discretionary grants received by a state. Inter-local cooperative agreements are another measure of constituent demand and capacity. Such agreements show significant correlation with the number of grants received by a metropolitan statistical area, even when accounting for population (Bickers & Stein, 2004).

To better understand federal transit funding, I examine the influence of national political factors, constituent characteristics, and federal criteria on projects' success in the New Starts pipeline. I examine two aspects of success: whether project sponsors reach grant agreements with the FTA and how quickly they do so. Informed by the political science literature, I incorporate variables for supply-side national

political factors and demand-side factors, like metropolitan population. I also consider FTA ratings and criteria effects. I build on Brown's (2003) analysis through focusing on *one* program throughout a twelve-year period, exploring additional variables, and considering funding at a scale more appropriate to transit capital funding—the urbanized area.

Methodology

I primarily adopted statistical methods to understand the federal New Starts program. A multi-year analysis was necessary, since projects take years to move through the pipeline.¹⁶ FTA data collection and retention has improved in recent years, but the agency still lacks comprehensive, centralized information on proposed and funded projects (GAO, 2009). Information since the late 1990s is more available and consistent, and so I study projects that the FTA rated for fiscal years 1998 to 2011. To limit analysis to major and comparable investments, I excluded the small projects that are exempt from FTA ratings (those requesting less than \$25 million) and those in the new Small Starts program (for projects under \$250 million with less than \$75 million in NS funds). In this section, I discuss dependent variables, independent variables, statistical methods, and the case profiles.

Variables

I consider two aspects of success: reaching grant agreements and speed through the pipeline. Successful projects are those that resulted in full funding grant agreements with the FTA. Among successful (funded) projects, I define less time

¹⁶ The average time for a project to progress from alternatives analysis (a stage prior to the FTA's oversight) to a full funding grant agreement is ten years (New Starts Working Group, 2009). Among the

spent in the pipeline as more successful. Thus, I use two dependent variables as measures of a project's success in the New Starts program: 1) whether a project reached a grant agreement (a categorical variable) and 2) the length of time (in years) it took to do so, as seen in Table 4.1. Based on the political science literature, I expected that increased political clout, a supply-side factor, and measures of metropolitan demand and capacity would correlate with increased success. The FTA has designed a process with great attention to project merits and local financial commitment, and thus I anticipated that to some extent higher FTA ratings would correlate with increased likelihood of funding and quicker progression in the program.

projects I analyzed, the mean time in the official pipeline (from entry into preliminary engineering to reaching a full funding grant agreement) was 4.7 years (n=38).

Dependent variables	Measure	Success	N	Min.	Max.	Mean	Model
Reached a grant agreement	Categorical	1	60	0	1	.65	Binomial logistic regression
Time in pipeline	Years in pipeline	Fewer	38	0.6	10.5	4.7	Linear regression

Table 4.1: Dependent variables and methods.

I used three independent variables for supply-side factors or federal political clout. I summed the number of times that the state, where a project was located, was a swing state in presidential elections (2000, 2004, and 2008), given the correlation between swing-state status and increased discretionary highway spending (Gamkhar & Ali, 2007). For each urbanized area, I calculated the leadership appointments held by congresspersons on eight key committees¹⁷ during the 105th to 111th Congresses. I assigned a value of one for appointments as a chair or ranking member during each session and one-half for a few listings of vice-chairs. Because the Senate and House of Representatives can have different effects on federal spending (Brown, 2003; Lauderdale, 2008), I tallied leadership appointments by each chamber separately, thereby generating two independent variables, as seen in Table 4.2.

Comprehensive measures of multi-sectoral and multi-jurisdictional governance do not exist, and so I experimented with several measures for demand that I expected to correlate with success. I included the total population of urbanized areas to indicate latent demand, due to Emerson’s (2002) finding on NS funds and large metropolitan

¹⁷ Senate committees included in the analysis were: the Appropriations Committee; the Appropriations Subcommittee on Transportation, Housing and Urban Development; the Commerce, Science and Transportation Committee; and the Subcommittee on Highways and Transit. Leadership appointments from the following House Committees were included: the Appropriations Committee; the Appropriations Subcommittee on Transportation, Housing and Urban Development, and Related Agencies; the Transportation and Infrastructure Committee; and the Subcommittee on Highways and Transit. Leadership data is accessible via the Congressional Directory (<http://www.gpoaccess.gov/cdirectory/index.html>).

areas. I also expected widespread transit system usage, measured by the share of commuters using transit (2000 census data), would indicate greater demand. On the other hand, I expected urbanized areas with fragmented transportation agencies to have less capacity to seek funds. Thus, I included the total number of metropolitan planning organizations and transit providers per urbanized area, expecting that to indicate less demand and correlate with less success.

Independent variables	Min.	Max.	Mean	Anticipated effect
<i>Supply-side: national political clout</i>				
House appointments	0	3.5	.4	+
Senate appointments	0	7	.9	+
Swing-state status	0	2	.4	+
<i>Demand-side: metropolitan characteristics/capacity</i>				
Transit providers	1	39	8.4	-
MPOs	1	5	1.4	-
Share of commuters using transit	1.4%	29.0%	7.6%	+
UZA population	541,175	17,800,238	4,419,108	+
<i>Project characteristics</i>				
First justification rating	1	4	2.3	+
First financial rating	0	4	2.1	+
Last justification rating	1	4	2.4	+
Last financial rating	0	4	2.3	+
Capital cost (in millions)	\$ 97	\$ 8,371	\$ 1,054	-
New Starts share of costs	0%	80%	52%	-
Cost/projected rider (in millions)	\$ 3,109	\$ 110,872	\$ 34,200	-

Table 4.2: Independent variables and anticipated effects.

Finally, I included independent variables based on FTA criteria, anticipating at least some correlation. Project justification and financial criteria ratings are based on FTA categorical ratings transformed into ordinal rankings.¹⁸ I included the ratings for project justification and local financial commitment, which equally compose the

project's overall rating. As project's move through the pipeline, ratings change and thus I included both first (when available) and last ratings. Among the unfunded projects, the FTA's last ratings sometimes were incomplete or seemed to reflect an existing decision to terminate the project. Therefore I used the penultimate ratings for unfunded projects. In addition to the categorical ratings, I suspected some particular criteria had especially significant relationships to the dependent variables and included them. The FTA measure for cost-effectiveness changed during the study period, and so I calculated and used a different proxy: the ratio of the project's total cost (adjusted to 2009 dollars using a producer price index) to the long-term (approximately twenty-year) projected daily ridership. Because of the increasing emphasis on local match, I included the share of total costs the project sponsor sought from the NS program. I also anticipated that more costly projects would tend to be less successful and included total capital cost (adjusted to 2009 dollars). All project data is from the FTA's annual reports to Congress.¹⁹

Methods

I used binomial regressions, nonparametric tests, and cross tabulations to identify factors that correlated with whether projects reached a grant agreement, my first measure of success. In most of my analysis, I excluded three outliers that sought a zero percent share of NS funds. These projects were by definition ineligible for a full funding grant agreement, as they did not actually seek funds. First, I compared how

¹⁸There have been some shifts in categories, but generally I quantified the categorical ratings as follows: Low=0; Medium-low=1; Medium=2; Medium-high=3; High=4.

¹⁹ These reports are available online

(http://www.fta.dot.gov/planning/newstarts/planning_environment_2618.html). The annual report for

independent variables differed between the funded and unfunded categories. I used standard t tests to compare the difference in means for the two independent variables with normal distributions (New Starts share of costs and cost per projected rider). For variables without normal distributions, I used Mann-Whitney U scores, which when significant disprove the null hypothesis that the distribution of independent variables is the same in the two groups. The Mann-Whitney U score is not a test of difference between means, but, like the t test, can indicate the distribution of values differs across categories. Second, I employed a binomial logistic regression to model how independent variables might together correlate with outcomes. I present two models: one with all proposed variables and a second, more parsimonious model.²⁰ Third, I also provide cross tabulation tables to show how ratings might act as thresholds, even if not predictors.

Among funded projects, I used linear regression to model how factors correlate with the time a project took in the pipeline, my second measure of success. I present two models, one with all variables and a second, more parsimonious model.²¹ I also

FY 1999 is not available online nor was it easily accessible in the FTA's office. Because almost all projects appear in multiple years, this omission is unlikely to affect results.

²⁰ I retained measures that had statistically significance correlations in the first binomial regression or had a significant Mann-Whitney U score. In my revised binomial regression, I removed the congressional clout measures but retained the swing-state measure, given the limits to the congressional proxies and potentially more important role of presidents. I removed the total population, speculating Emerson's finding on large metropolitan areas may have been due to large metros having higher transit usage. I excluded the organizational proxies for metropolitan capacity (MPOs and transit agencies), as they were only experimental. I removed the NS share and cost per predicted rider, as these measures should be incorporated into project ratings. Also, I anticipated that ultimate ratings were more important than initial ratings for funding outcomes and excluded the latter.

²¹ I retained senatorial appointments, given their significant correlation, but excluded the other demand-side variables. I used the same metropolitan factor as the previous parsimonious model (transit commute share). Because first ratings might have a greater effect on the time taken to advance and showed significant correlations, I used first and not last project ratings. Finally, even as the New Starts share should be incorporated into the financial rating, its significant correlation (albeit in the unanticipated direction) led me to retain it in the second linear model.

calculated correlations between independent variables and successful projects' time in the pipeline; I used Spearman's correlation coefficients due to the non-normal distributions of most variables.

Following the statistical results, I provide brief profiles of four outlying cases. These profiles supplement models that have some explanatory power but may raise rather than answer questions. The case profiles draw primarily on FTA evaluations, but I supplement the reviews with news media and other materials.

Results

Success at Reaching a Grant Agreement

Statistical tests provided limited evidence of a relationship between reaching a grant agreement and most variables. Only one demand-side variable, the share of commuters using transit, and one project variable, the last financial rating, had *robust* results indicating a relationship with reaching a grant agreement. Results did not consistently show a robust relationship between grant agreements and any supply-side variables. Beyond the robust results for transit commute share and financial rating, several variables had significant Mann-Whitney U scores. In this section, I discuss results from Mann-Whitney tests of distribution, binomial regressions, and tabulations of outcome by project ratings.

Statistical tests did not show a significant difference between funded and unfunded projects for most variables. Table 4.3 includes the means and medians of each independent variable and indicates whether there is a statistically meaningful difference in distributions across the two outcome categories. Among supply-side measures of political clout, only the swing-state score had a Mann-Whitney U score

that indicated a significant difference in the distribution of the variable (For Mann-Whitney results, see Appendix II). Interestingly, the average swing-state status was lower among funded projects, not higher as anticipated. Among metropolitan characteristics, only the share of commuters using transit had a Mann-Whitney U score that indicated significant difference in the distributions across the two categories. Among project characteristics, first financial rating, last financial rating, and total capital cost had Mann-Whitney U scores that indicated statistically significant difference in the distribution across the two categories.

Variable	Outcome	N	Mean	Median
House appointments	No GA	18	.33	.0
	Grant agreement	39	.49	.0
Senate appointments	No GA	17	.71	.0
	Grant agreement	38	.97	.0
Swing-state status*	No GA	17	.76	1.0
	Grant agreement	38	.34	.0
Transit providers	No GA	18	5.67	4.0
	Grant agreement	39	9.46	5.0
MPOs	No GA	18	1.61	1.0
	Grant agreement	39	1.31	1.0
Share of commuters using transit**	No GA	18	5.0%	3.6%
	Grant agreement	39	8.9%	7.3%
UZA population	No GA	18	3,261,013	1,782,393
	Grant agreement	39	4,816,397	2,674,996
First justification rating	No GA	18	2.22	2
	Grant agreement	39	2.33	2
First financial rating*	No GA	18	1.78	2
	Grant agreement	39	2.26	2
Last justification rating	No GA	18	2.33	2
	Grant agreement	39	2.44	2
Last financial rating***	No GA	18	1.61	2
	Grant agreement	39	2.67	3
Capital cost (in millions)**	No GA	18		
	Grant agreement	39	\$ 1,174	\$ 970.4
New Starts share of cost	No GA	18	52%	50%
	Grant agreement	39	56%	55%
Cost/projected rider	No GA	18	\$ 37,573	\$ 36,432
	Grant agreement	39	\$ 34,174	\$ 31,946

Table 4.3: Independent variables by outcome. *Indicates a Mann-Whitney U score significant at the .1 level, ** at the .05 level, and *** at the .01 level.

The first binomial logistic regression (Model 1) included all independent variables. It had a modest goodness of fit score (Cox and Snell R square score=.463), but correctly predicted 87 percent of project outcomes, as seen in Table 4.4. The

model predicted funded projects (the majority) more accurately than unfunded projects (92 % versus 76%). Only two variables had significant coefficients, as seen in Table 4.5. The coefficient for a project’s last financial rating was in the anticipated direction and significant at the .05 level. For every category increase in its last financial rating, a project’s score would increase by 3.1. The share of population using transit for commuting had a significant coefficient at the .1 level, likewise in the anticipated direction. Its coefficient of 42.5 indicates that for a one percent increase in the transit share of commuting the prediction score would increase by .4.

Observed	Predicted		
	Reached GA		Percentage
Reached grant agreement	No	Yes	Correct
No (0)	13	4	76.5
Yes (1)	3	35	92.1
Overall Percentage			87.3

Table 4.4: Model 1 predictions (The cut value is .500).

	Model 1: Coefficient	Model 1: Sig.	Model 2: Coefficient	Model 2: Sig.
House leadership appointments	-.204	.729		
Senate leadership appointments	.061	.836		
Swing-state status sum	.854	.361	-.009	.989
Transit providers in UZA	.150	.651		
Metropolitan planning organizations	-.286	.637		
Share of residents commuting by transit	42.478*	.080*	28.939*	.065*
Urbanized area population	.000	.697		
First justification rating	-.025	.984		
First financial rating	-.222	.707		
Last justification rating	-.733	.533	-.538	.504
Last financial rating	3.139**	.005**	2.616**	.003**
Capital cost (in millions, 2009 dollars)	-.001	.170	-.001	.192
New Starts share of cost	5.360	.203		
Cost/projected rider	.000	.192		
Constant	-9.641	.033	-4.866	.054

Table 4.5: Coefficient results for binomial models. *Indicates significance at the .1 level; **Indicates significance at the .05 level.

A more parsimonious model (Model 2) yielded a slightly weaker goodness of fit score (Cox & Snell R square .415) and predictive ability for unfunded projects (11 of 17), as seen in Table 4.6. The same variables had coefficients with statistical significance at the same levels, as Table 4.5 shows: last financial rating (at the .05 level) and share of transit-riding commuters (at the .1 level). Again these variables were in the anticipated direction. Among the variables without statistical significance, the swing-state count and last justification scores were in the unanticipated direction, as they correlated with decreased rather than increased likelihood of success. The total cost (in 2009 millions of dollars) had the anticipated effect—more costly projects were

predicted to be less likely to reach grant agreements—but the coefficient did not have significance. In Table 4.7 below, I have provided an example project and show how each variable would affect the predicted likelihood of reaching a grant agreement.

Observed	Predicted		
	Reached GA		Percentage
Reached grant agreement	No	Yes	Correct
No (0)	11	6	64.7
Yes (1)	3	35	92.1
Overall Percentage			83.6

Table 4.6: Model 2 predictions (The cut value is .500).

	Example value	Coefficient	Variable effect on predicted score
Swing-state status	1	-.009	0.0
Share of commuters using transit	5%	28.9	1.4
Total capital cost (in millions, 2009 dollars)	1,000	-.001	-1.0
Last justification rating (ordinal)	1	-0.5	-0.5
Last financial rating (ordinal)	2	2.6	5.2
Constant			-4.9
Predicted value (.5 cutoff)			0.3
		Predicted	unfunded

Table 4.7: Example predicted project outcome.

Findings thus are inconclusive for most variables. Findings are robust for the transit commute share, a demand variable, and last financial rating, a project variable, indicating a potential relationship between funding and those variables. Other variables had limited statistical findings. Mann-Whitney U scores indicated a difference in the distribution of independent variables for one supply-side variable, swing-state status, and two additional project variables, first financing rating and capital cost.

Simple cross tabulations of funded and unfunded projects (Table 4.8) show

that no projects with financial rating scores below medium (2) reached grant agreements. I also include a cross tabulation for final justification scores, even as increased justification scores did not have significant results. Like last financial scores, only projects with scores of medium reached agreements. This matches the program’s evaluation design; it appears that obtaining medium ratings is necessary but not sufficient for reaching grant agreements.

Last financial rating			
	Unfunded	Funded	Total
Low (0)	2	0	2
Medium-low (1)	5	0	5
Medium (2)	11	15	26
Medium-high (3)	3	22	25
High (4)	0	2	2
Total	21	39	60

Last justification rating			
	Unfunded	Funded	Total
Low (0)	0	0	0
Medium-low (1)	1	0	1
Medium (2)	13	25	38
Medium-high (3)	7	11	18
High (4)	0	3	3
Total	21	39	60

Table 4.8: Last ratings by outcomes (includes three outlier cases).

Success as Less Time in the New Starts Pipeline

Among funded projects, correlation and modeling results did not indicate a strong relationship between length of time in the pipeline and most variables. Results did consistently show a significant effect for two variables, both project related: a project’s first justification rating and the share of its funding from New Starts, the latter in the opposite direction expected (that is those with more funding were

quicker). Several other variables (Senate leadership appointments, transit commute share, and first financial ratings) sometimes had significant relationships with the time variable, but the remaining variables had no significant relationships. Because the dependent variable is years a project was in the pipeline, negative relationships (correlation and coefficients) indicate increased success (reduced time). In this section, I discuss Spearman's correlation coefficients and then linear regression results.

Several independent variables had significant (Spearman's) correlations with the dependent variable, as shown in Table 4.9. Increases in a project's first justification rating and NS share had a significant relationship with reduced time in the pipeline at the .05 level. The New Starts correlation is in the unanticipated direction, as I anticipated asking for a *lower* share of funds would correlate with success (as reduced time). At the .1 level, a project's first financial rating correlated with reduced time and thus increased success. Also at the .1 level, the count of Senate leadership appointments was significant, but in the opposite direction anticipated. More senatorial leadership appointments correlated with *increased* time.

	Correlation Coefficient	Sig.		Correlation Coefficient	Sig.
House appointments	.081	.627	First justification rating	-.356	.028**
Senate appointments	.279	.094*	First financial rating	-.291	.077*
Swing-state status	.005	.975	Last justification rating	.067	.690
Transit providers	.220	.185	Last financial rating	-.116	.486
MPOs	-.164	.326	Capital cost	.142	.395
Share of residents commuting by transit	.168	.313	New Starts share of cost	-.380	.018**
UZA population	.112	.505	Capital cost/rider	.041	.808

Table 4.9: Spearman's correlation between years in pipeline and independent variables. *Indicates significance at the .1 level; **Indicates significance at the .05 level.

The F statistic for linear Model 3, with all independent variables, indicated

significance at the .01 level. Its adjusted R square was more moderate, as seen in Table 4.10. Table 4.11 displays the coefficients for both models. Two project variables had significant coefficients: first justification score (at the .01 level) and the NS share of costs (at the .05 level). Increases in both are associated with decreased time and increased success. Thus, an increased share for NS had the unanticipated effect of increased speed in the pipeline. An increase of one point (category) in the first justification score results in reduction of 2.3 predicted years in the pipeline. An increase of 10 percent (.1) in the NS share correlated with a reduction of 7.6 years in the predicted time in the pipeline.

	Adjusted R Square	F	Sig.
Model 3	.448	3.091	.009
Model 4	.414	6.096	.000

Table 4.10: Models 3 & 4 goodness of fit scores.

A more parsimonious regression (Model 4), based on correlation scores and exclusions discussed in the methodology, also yielded an F statistic significant at the .01 level. It had a slightly lower adjusted R square (.414), as seen in Table 4.10. All variables in this regression, however, had significant coefficients, as Table 4.10 shows. Again, the first justification rating had the anticipated effect, and the NS share had an unanticipated effect. Increased senatorial leadership appointments and public transit shares had unanticipated effects; as these increased, so did time in the pipeline. Table 4.12 uses possible values for each variable to demonstrate the predicted time in the pipeline according to Model 4. The predicted value, 5.4 years, would place the hypothetical project in the third quartile for speed, thus slower than the median.

	Model 3: Coefficients	Model 3: Significance	Model 4: Coefficients	Model 4: Significance
(Constant)	14.814***	.000***	11.802***	.000***
House leadership appointments	-.068	.862		
Senate leadership appointments	.367	.194	.328	.090*
Swing-state status sum	-1.180	.149		
Transit providers (in UZA)	-.099	.727		
Metropolitan planning organizations (in UZA)	-1.219	.207		
Share of residents commuting by transit	20.506	.174	7.314	.082*
Urbanized area population	1.823E-8	.969		
First justification rating	-2.329***	.003***	-1.677***	.002***
First financial rating	-.359	.401	-.666	.054*
Last justification rating	1.242	.111		
Last financial rating	-.669	.278		
Capital cost (in millions, 2009 dollars)	.000	.404		
New Starts share of cost	-7.610*	.010*	-4.827	.016**
Cost/projected rider	2.177E-6	.904		

Table 4.11: Linear regression coefficients. *Indicates a significance at the .1 level, ** at the .05 level, and *** at the .01 level.

	Example value	Coefficient	Variable effect on predicted result (yrs)
Senate appointments	1	0.3	0.3
Share of residents commuting by transit	5%	7.3	0.4
First justification rating	2	-1.7	-3.4
First financial rating	2	-0.7	-1.3
New Starts share of costs	50%	-4.8	-2.4
Constant			11.8
Predicted time (yrs)			5.4

Table 4.12: Example project application.

Project Profiles

Statistical analysis does not provide evidence for most hypothesized factors and therefore raises questions about what other factors may have relationships with funding outcomes. Given the inconclusive results, small dataset, and experimental proxies, next I provide brief case profiles of four exceptional cases. The profiled projects are: a highly rated but unfunded project, a project requesting a zero percent New Starts share, the funded project that was in the pipeline for the longest amount of time (10.5 years), and the funded project that moved most quickly through the pipeline.

High ratings, unfunded.

Four unfunded projects had first and last financial scores with the equivalent of a medium high-rating (3). Among these, the Central Florida light-rail project had the highest averaged first and last justification score (3), so I review why this highly rated project failed to result in a full funding grant agreement.

The area's transit operator, LYNX, sponsored a light-rail proposal to connect downtown Orlando and the tourist corridor, adjacent to Walt Disney World in Orange County, Florida. The Orlando mayor led efforts to implement the line in the late nineties, but some high profile tourist businesses opposed the project. After a change in the Orange County Commission's leadership, the commission voted (4 to 3) to withdraw its funding for the project. As a result, the Florida Department of Transportation withdrew its funds, and the Orlando mayor also abandoned the project (Grovdahl, 2007). Put simply, the failure to reach a full funding grant agreement was due to the demise of the sponsor's partnership and funding 1999, not FTA actions.

Zero funding requests.

Three projects had final funding plans proposing a zero percent New Starts share. All three had average first and last justification scores equivalent to medium (2). Among them, the project with the highest financial ratings was the proposal for a light-rail line from downtown Houston to the Astrodome (7.5 miles). The FTA's profile for fiscal year 2001 (FTA, 2000) included a substantial NS share, but the subsequent profile's financial plan (FTA, 2001) had a zero percent NS contribution. Congressional action seems to account for this shift. Representative Tom DeLay, a staunch opponent of light-rail transit from suburban Houston, inserted a provision into federal legislation restricting the area from receiving federal funds for this project (Mason, 2001). Using a dedicated county sales tax, the county transit agency was able to build the line without New Starts funds.

At first glance, it seems odd that the county transit agency would expend resources to keep the project in the federal pipeline, but it may have had a longer-term strategy. In fact, later federal legislation directed the US Secretary of Transportation to consider the \$324 million, already expended for the Astrodome line, as a local contribution for future NS projects. By including these funds, the local (non-New Starts) share for the proposed Houston North Corridor Line is higher (FTA 2010, p. A-94).

Slowest in the pipeline and low ratings.

Among the projects that reached grant agreements, a Norfolk light-rail project took the most time in the pipeline (10.5 years). In addition, it and the University

extension in Salt Lake City had average financial commitment ratings equivalent to medium-low (1), the lowest among funded projects. Despite some poor FTA ratings, the FTA issued a grant agreement for the Norfolk project.

The original proposal was for an eighteen-mile light-rail line connecting downtown Norfolk to the Oceanfront in Virginia Beach. The 1999 FTA evaluation indicated local funding for the project was not secure (FTA, 1999 [FY 2000]). Soon thereafter (1999), Virginia Beach voters rejected a funding mechanism, and the project scope was reduced to a seven-mile line within Norfolk. Subsequent projections for ridership fell from just over 14,000 riders daily to around 7,000 (FTA [FY 2009], 2008). The project's sponsor also changed, from the Tidewater Transportation District Commission to Hampton Roads Transit. Before reaching a grant agreement, the city approved rules limiting downtown parking, a condition underlying ridership estimates (FTA 2008 [FY 2009], p.A-63) and project benefits.

Quickest project through pipeline.

A double-tracking commuter rail project in South Florida moved most quickly through the New Starts pipeline. From its official entry into preliminary engineering, it took about seven months to reach a grant agreement in 2000. The project had a medium-high (3) first justification rating. Only one project received the highest possible score for justification (high/4) in its first evaluation. The project may have enjoyed elite support, a demand-side factor. Regional business leaders used the need to secure federal *allocations* for the project, which already had a grant agreement, as rationale for reorganizing the commuter rail operator (Alpert, Gainsborough & Wallis, 2006).

Project characteristics align with anticipated outcomes and some statistical data. The moderate to high ratings of the project match statistical data (especially the correlation of first justification rating with time) and anticipated positive relationships between success and ratings. The project requested a relatively small share of New Starts funds (33%) versus the mean of 56 percent for all funded projects. Only four projects asked for a smaller share. While an increased New Starts share correlated with decreased time in statistical results, this case study follows my anticipated logic of small shares correlating with quicker timelines. The project's total cost was \$459.7 million (in 2009 dollars), less than half the mean for funded projects (\$1,038 million). The cost of projects did not show a statistically meaningful relationship with time in the pipeline, but I had anticipated less expensive projects would be more successful.

Discussion

Statistical findings provide little support for most of my hypothesized variables but indicate local funding dynamics have a robust relationship with federal funding patterns. Case profiles support this finding and provide examples of local dynamics that are beyond the FTA's control but affect federal funding patterns. In this section, I describe three main findings: the limited evidence for political factors and most metropolitan proxies, the importance of local dynamics, and the qualified effects of program evaluation. I then discuss implications for the federal program's structure.

First, I found very limited evidence of a systematic relationship between success and political factors and most metropolitan proxies. No supply-side variables demonstrated a consistently significant relationship between national political factors and funding outcomes or pipeline progress. Swing-state status and senatorial

appointments yielded some significant results for project outcome and speed, respectively, as seen in Table 4.12 below. As variables did not consistently show significant effects or relationships, I cannot conclude that political supply-side factors are influential. Furthermore, senatorial appointments had the opposite effect anticipated. These null findings for supply-side factors could be due to insufficient proxies, an inaccurate hypothesis, or the challenges of a small dataset. In fact, despite strong conceptual reasoning for supply-side factors, the Houston rail case profile even includes a politician obstructing the flow of federal funds to his region.

Evidence on metropolitan demand factors does not support a demand-side role, except for the share of commuters using transit. Other proxies of metropolitan capacity did not have any significant relationships, but they were experimental. Nonetheless, the share of transit commuters had robust and significant results for funding outcomes and sometimes a relationship with time in the pipeline. Furthermore, inter-jurisdictional dynamics around funding in the case profiles suggest that metropolitan dynamics and “demand” or political will might be important. Perhaps other proxies would capture a systematic effect, but a useful proxy may not exist, as the case profiles present such varied metropolitan effects.

	Supply-side	Demand-side	Project factors
Funding outcome	Swing-state status	Transit share of commuters	Last financial rating First financial rating Capital cost
Time in pipeline	Senate appointments	Transit share of commuters	First justification rating NS share of cost First financial rating

Table 4.13: Statistical findings of significance. Bold indicates multiple findings of significance.

Even with limited findings on demand-side proxies, local funding has a strong

relationship with project outcomes, as a demand-side analysis (Bickers & Stein, 2004; Lowry & Potoski, 2004) would predict. Statistical analysis revealed a robust relationship between ratings for local financial commitment, one component of local dynamics, and whether a project reached a grant agreement. I classified local financial commitment rating as a project variable, but it is also an outcome of local funding agreements. Case profiles suggest the importance of local dynamics in project outcomes, as the collapse of funding partnerships in Orlando and Norfolk terminated and delayed projects, respectively. Project termination, as detailed in the Orlando profile, is largely beyond the FTA's control. Given these dynamics, perhaps local financial commitment is best conceived of as an indicator and outcome of local political will behind projects. It, more than any other variable, has a strong relationship with actualized patterns of federal funding.

Third, findings show a mixed relationship between federal evaluation and funding outcomes. A project's last financial rating consistently showed a statistically significant coefficient in models of whether a project reached a grant agreement. The relationship was as anticipated—an increased rating correlated with an increased probability score for reaching a grant agreement, but it could reflect local political will more than federal decisions. On the other hand, a project's initial justification score showed a significant relationship with its speed in the pipeline. It appears that projects thought to provide more benefits reached agreements more quickly, if they did reach grant agreements. This should encourage those who hope for a criteria-based process. The NS share consistently had a significant relationship with success in quickly moving through the pipeline, but in the unanticipated direction. Despite officially

favoring projects with lower NS shares, increased shares of NS funds correlated with quicker movement through the pipeline.

Project profiles and the limited effects of project ratings and criteria suggest a limit to the FTA's influence. As discussed in the introduction to the NS program, the FTA depends on locals to conceive of, prioritize, and implement projects. High justification scores, suggesting substantial project benefits, do not correlate with whether a project is funded, but cross tabulations show they may represent a threshold for grant agreements. Project benefits, as captured in justification ratings, do correlate with a project's time in the pipeline. A project's final rating for financial commitment has the strongest relationship with whether a project is funded. This could be due to the FTA's program design and the importance it gives to ratings and/or this rating could be an outcome of the strong local political will behind a project's implementation.

The importance of local dynamics and funding commitments may have practical implications. The FTA has a strong rationale for emphasizing local financial commitment. The agency can fund more projects if it does so at lower shares. The agency seeks to ensure that the projects it funds do not divert critical operating funds from existing services. At least as important, financial criteria help ensure that project sponsors will be able to fund the operating costs for the proposed infrastructure. This emphasis and the pipeline's structure, however, reward project supporters that can raise funds and sustain applications, not necessarily those advancing the most beneficial services for environmental, economic, or equity goals. Some metropolitan areas, where resources are most limited and needs are greatest, may be excluded

inadvertently. The program's emphasis on financial commitment, along with the ban on federal operating subsidies for large metros, disadvantages large, older systems that have higher operating and maintenance demands but serve the most riders.

Furthermore, within metropolitan areas, leaders may back some projects more than others. As a result, local funds may be secured for some projects, while other projects that may better serve national transportation goals never make it to the application stage.

Conclusion

Transit infrastructure investment shapes metropolitan areas, and federal funding enables many such investments through its New Starts program. To date, studies have focused on inaccurate ridership estimates more than the federal role in and pattern of investment. I hypothesized that national political clout, metropolitan demand, and project characteristics affect federal funding outcomes.

Statistical analysis of success in the New Starts pipeline indicated that FTA ratings for financial commitment and project justification affect success in different ways. I measured success as whether sponsors reached a grant agreement and how long they took to do so. I considered supply- and demand-side variables, as well as project characteristics. Statistical analysis indicated significant relationships between reaching a grant agreement and a project's last financial rating and the share of commuters using transit in the urbanized area. The time a project took, however, showed a stronger relationship to a project's first justification rating and the share of funds requested from the New Starts program. Other proxies did not show robust relationships to success.

Statistical findings, in combination with the four profiles, point to tentative findings and raise important questions for future research. First, findings suggest the importance of local dynamics that are hard to capture. A project's financial rating may be an outcome and effective proxy for local political will. I find little indication of supply-side factors, commonly referred to as pork barrel politics, and mixed effects of program evaluation. Local financial commitment ratings appear to have the strongest relationship to reaching a grant agreement, and justification ratings appear to have the strongest relationship to speed. These measures may represent thresholds, but the effective emphasis on local political support could disadvantage metropolitan areas with existing, extensive transit systems. Given the limited role of project justification ratings beyond a threshold and primacy of local dynamics, marginal improvements in the accuracy of ridership projections or changing weights and measures for criteria are unlikely to shift funding patterns in the near term. Further research could examine whether projects that do not make it into the official pipeline would fare differently, explore new proxies for metropolitan demand, and consider the effects of and possible changes in program funding structure.

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CHAPTER 5: Conclusion

Each preceding paper addresses the subject of transit implementation from a different perspective. In the introduction, I describe Orlando's pending commuter rail project, SunRail. The project is exemplary of many of the questions around implementation, multi-sector action, regional futures, and equity that motivate this body of research. In the first paper, I discuss decision making processes outside of MPO planning that bypass it but determine transit investment. The MPO process responds to, rather than determines, transit implementation choices in my cases. Because of intergovernmental context, federal directives for equity in planning appear insufficient. In Boston and Miami, rail investments proposed for low-income and minority communities advanced through mobilization targeting the county level in Miami and the state level in Boston.

Next, I examine the state role in the implementation of four projects in Miami and Orlando. The Florida Department of Transportation took a larger institutional role for projects that have economic significance and regional consensus behind them. I argue that by selectively contributing capacity, "power to," state actors exert "power over" regional outcomes. I suggest that new regionalism might benefit from an altered concept of capacity building that considers what capacity is mobilized for and the multiple levels of government that act in metropolitan regions.

Finally, my third paper presents a quantitative analysis of the federal New Starts program. Statistical results show a robust relationship between local financial commitment and federal funding. Cross tabulations demonstrate that all funded

projects met a minimum threshold of benefits. Relatively more beneficial projects reached grant agreements quicker, but higher justification ratings do not correlate with an increased likelihood of receiving funding. Case profiles indicated that numerous and variable local conditions affect outcomes, demonstrating the challenge of finding appropriate metropolitan proxies.

In the remainder of this chapter, I consider these papers in relationship to the broader questions I raised in the introduction and then identify practical implications for rethinking the role of metropolitan planning organizations and transit investment. Findings suggest several answers to how regionally significant action happens—not simply through planning nor easily, but instead through significant mobilization of capacity and through established government entities. I propose Altshuler and Luberoff’s (2003) “bottom-up” federalism as a useful frame to describe how the powerful federal role responds to action at smaller scales. The importance of local initiative and mobilization contributes to the appeal of governance as a policy and normative category. However, findings indicate the need to further develop governance as an analytic category that incorporates multiple types of power and spheres of action. I find that equity does not fare as well in implementation as in plans, due in part to the challenges of implementation and mobilization. I then identify potential options to strengthen or alter the role of metropolitan planning organizations. I conclude with reflections on making the ideal rail deal. Political will, behind infrastructure investment, may be an opportunity to connect rail infrastructure to critical environmental and equity interventions, such as changes in land use policy and federal operating assistance for transit.

Action, Intergovernmental Relationships, and Equity

How Does Significant Action Happen Across Jurisdictions?

First, cooperative and voluntary regional planning alone did not result in significant action toward implementation in this study. Proposed transit projects are often unimplemented, even when part of official, regional, long-range plans. This is a quite simple observation, but provides reason to reflect carefully on planning and implementation. In the first paper's case studies of Boston and Miami, appearing in the MPO plan had a limited connection to implementation. Rather, processes outside of MPO planning, *bypasses*, determined transit investment decisions, and in turn MPO plan content. In my New Starts analysis, many of the applicant projects failed to reach grant agreements. As a result, many projects failed to be implemented. Project sponsors must identify projects through, or at least after, a systems planning process; projects are in MPO long-range plans. In the case studies of transit implementation in Orlando and Miami, only some projects from long-range plans became poised for implementation. Despite the fiscal constraint requirements for MPOs, their plans might actually not be financially realistic, because funding shortfalls triggered some implementation failures.

Second, though simple to note, significant action does not come easily. Rather, implementation requires substantial capacity to overcome highly varied obstacles. For example, the Green Line extension faced state inaction, while SunRail had a unique need for legislative approval of its liability agreement. The AirportLink emerged as an option from earlier visions of a much longer rail line. Different projects thus faced

different challenges in a world of limited resources. Sponsors for each project had to navigate slightly different terrain and draw upon diverse capacities. At any point, funding partnerships are fragile. For example, after a change in Orange County's elected officials and continued business opposition, the funding agreement for light-rail collapsed.

Government appears critical for significant action. In the case studies, the critical decision making sites and lead actors were established government entities, the county and state in the case studies of papers one and two. MPOs are official quasigovernmental entities, operating through cooperation. They lack the status and capacity of formal government units where determinative action happened. It is important to note these formal governmental units wield direct power over substantial sums of money; the control of funds matters.

Government entities mobilized capacity in response to business and civic sector actors, as well as economic priorities. Even as formal government entities were lead actors for developing capacity, their actions responded to private sector mobilization and political will. If financial commitment is a proxy for local political will behind projects, the quantitative analysis of NS projects shows it as highly uneven. Boston's community-based organizations have relatively high capacity and pushed the state to implement two projects. They also could leverage a legal commitment, linked to a massive highway project. In Miami, the North Corridor project is important to black community leaders, but not as key issue for mobilization. In Orlando, the minority leaders who I was able to identify, did not specify transit investment as a top issue. The rail spur to the Miami International Airport has not

required much mobilization but enjoys a broad consensus of support. The amount of local political will behind SunRail is exceptional. Local political will can thus be broadly distributed but at a low level (such as AirportLink) or highly mobilized by specific groups, like neighborhood organizations in Boston. Stakeholders can, of course, mobilize in opposition to implementation, such as the business efforts against the I-Drive project in Orlando.

Funds available for transit are neither fixed nor unlimited. Politicians and agencies can seek new funding sources, but new sources do not provide unlimited revenue. Perhaps this partly explains why local political will matters—projects and initiatives require funds. Without some political will or intense mobilization, government entities may not be able to raise or secure necessary funds. Funding one project can deplete resources available for another, unless there is new or abundant revenue. This is a tangible way that supporters of one initiative can exert “power over” supporters of a different project. Funds for the first project may deplete enough resources such that there are not funds left for the second. Governance frameworks have not accounted for this interrelationship—how capacity mobilized for one intervention can make implementing another more challenging.

Government responsiveness to private actors makes focus on governance understandable, but still incomplete. Findings show the need for further development of governance as an analytic category. Normative assumptions about governance—that stakeholders should unite to actualize more in horizontal collaboration—have meant inattention to unequal influence and the continuing role for existing government forms. A more critical approach questions how capacity coalesces and for what, as

well as how power affects cooperative relationships. Transit and plan implementation more broadly can be an area for developing a more complex view of capacity building, including analysis of relationships across government levels, as I discuss next.

What Is the Role of State and Federal Governments in Metropolitan Action?

Horizontal partnerships were insufficient for transit implementation in my analysis. Instead, in the case studies of papers one and two, state and federal funds enabled implementation. SunRail relies heavily on state and federal sources, while AirportLink, in Miami, is a rare project that uses only local and state money. The Boston projects also rely on multiple sources of funding, and projects in the NS pipeline (paper 3) sought federal funds. The Houston Astrodome Line, discussed as a NS case profile, was a rare example of an entirely locally funded project, but the transit agency still is seeking federal funds for other rail lines.

Certainly the federal level is powerful, but federal actors had limited avenues for action. Federal funding enabled many projects, but federal agencies neither proposed nor implemented any of the projects discussed. Through its New Starts program, the Federal Transit Administration can opt to reach a full funding grant agreement (or not) for proposed projects. Its assessments of benefits create a minimum threshold and may structure local decision making in ways I did not study.²² Yet, I found that FTA funding agreements most strongly correlate with local financial commitment, something that the federal agency has little to no control over. At the same time, federal actors can affect local actions through unexpected connections, as when the U.S. DOT Secretary implied HSR funds for Florida were contingent on

state-level support for intrametropolitan transit. Furthermore, the promise of federal funds stifled potential debate on SunRail, as Orlando actors sought regional unity.

Like federal-level actors, state-level actors helped fund projects but used more channels of action. State agencies, like federal agencies, sometimes simply provide transit capital funds. This was not sufficient for implementation of the I-Drive LRT in Orlando or the North Corridor in Miami. States also take more direct roles, such as the Commonwealth of Massachusetts' Big Dig transit investments. The Commonwealth is funding a significant portion of the Fairmount project and is responsible for implementing and funding the Green Line extension. In all of the Massachusetts examples, the state is responding to political mobilization and/or legal obligations—in this way the state is a useful arena for action. In Orlando, FDOT is sponsoring the SunRail project, from the track purchase to its first seven years of operations. In Florida, the state took a more active role for projects with economic significance and consensus. In turn, state support strengthened the feasibility of and consensus behind projects. States are the “direct sovereign” of cities (Johnson, 2006), other local government entities, and quasigovernmental authorities. States can be funders, partners, initiators and implementers.

The importance of state and federal actors for implementation demonstrates the need for NR analysis to go beyond the horizontal, intrametropolitan arena. Altshuler and Luberoff (2003) use the concept “bottom-up federalism” to describe the relationship between local leaders and the federal government. In exploring highway, transit, and airport mega-projects during the mid-20th century, Altshuler and Luberoff

²² See GAO, 2005, pp. 28-29 for survey findings that indicate federal funding availability is a top factor

conclude that the related federal funding programs “were all distinguished more by their openness to local initiative than by their sharp definition of national purpose” (p.234). Local leaders “took the lead at every stage. And while sensitive to federal program rules” (p.236), locals could seek congressional override of rules. Meanwhile, grantees, as a whole, could influence federal funding program design and related legislation.

Altshuler and Luberoff may overstate the case, since the landscape of interests and aims is shaped also by the state and ongoing policy, economic, and political conditions. Furthermore, “bottom-up” frequently has normative connotations as desirable and more authentic. At times, it is associated with grassroots leadership or at least local legitimacy. My research provides some examples of grassroots action, but implementation still often hinges on action by powerful actors that hardly seem to be the “bottom.” The “bottom” might be the state. Regardless, if interpreting the preceding papers through the lens of bottom-up federalism, the region does not appear as a critical actor in intergovernmental action. Perhaps this is because the region lacks the substantial governmental powers of the city, county, and state, despite federal mandates for regional transportation planning and MPOs.

The New Starts program provides a tangible example of bottom-up federalism. Sub-national sponsors, like state DOTs, transit agencies, and counties, propose projects. The federal agency evaluates these projects and has a minimum threshold which proposed projects meet. The ultimate pattern of funding agreements, however, most correlates with local financial commitment.

in transit agency decision making.

Bottom-up federalism describes relationships during a particular historic period in the United States. It is not the only possible model of decision making and connections across government levels. In fact, the role of the federal government and its relationship to states and cities changes over time, as Johnson (2006) describes. The “cooperative federalism” that emerged in the 20th century marked an increase in federal intervention and replaced an era of more distinct state sovereignty, according to Johnson.

Nonetheless, the concept of bottom-up federalism can provide a useful entry point into meso-theory about the multiple levels of government in *implementation*. It emphasizes the federal role, while also identifying the local initiative that steers investment. One risk of the bottom-up concept is its potential to direct attention away from existing federal policies that have dramatically shaped regional development, local incentives, and the landscape for action. That is why I specify its utility for *implementation* analysis. State and local agencies take a different role than the federal government, but the latter still wields tremendous power. In my deployment of “power to” and “power over,” I suggest a complex role for state actors. These dual concepts of power might be useful for analysis within regions and across more levels of government. Future research could further develop the mechanisms of bottom-up federalism and identify how federal transportation and other policies shape the landscape in which locals (or states) initiate, identify, and advance projects.

Due to this central role for sub-national action, the focus on horizontal cooperation in the NR literature and practice is understandable, but overlooks federal and state-level actors. Within political economic context and with incentives and

priorities set by governing arrangements, local actors leverage and lead implementation. Without their action, federal agencies do not invest in transit infrastructure, but local implementation often depends on federal funds. States control the arrangement of cities, counties, MPOs, and transit agencies; they sometimes even lead infrastructure investments. The state legislature also has power over revenue options (Frug & Barron, 2008). Thus, models for action and analysis of investments are incomplete without attention to the state and federal roles. Furthermore, the region rarely appeared as a critical scale in my study of implementation.

How Does Equity Fare in Implementation?

As discussed in the introduction, there are multiple concepts of equity in transportation (Taylor & Tasiello Norton, 2009) and a myriad of measures for each concept. I adopt an opportunity equity perspective—that investments should be proportional across groups and communities. Because of my implementation focus, I consider if actualized infrastructure investments, among those proposed, include those that especially benefit low-income and minority populations. In implementation, it appears equity does not receive the level of investment suggested by new regionalism’s vision of integrated equity, environment, and economy. The neglect of equity in implementation is not due to active obstruction of investment in low-income and minority communities. Rather, in a fragmented world of limited resources, actors and resources often coalesce around other priorities and projects and therefore deplete funds and crowd out other possibilities. This is how mobilizing “power to” becomes “power over.”

My first paper directly addresses equitable implementation. In the two case

study regions, MPO planning is *not* what determines transit implementation. Thus, I suggest federal directives on equity in planning will not be enough to affect MPO plans, let alone equitable implementation. Investments for low-income or minority communities depended on the action of elected officials and community advocates. In Boston, advocates leveraged a legal agreement for the Green Line and used the state legislature to fund a moderately priced commuter rail project. In Miami, some efforts to advance a promised line were part of a sales tax campaign plan. However, prioritizing this project in one document was insufficient for the project to advance.

The structure of federal support for transit investments has mixed implications for equity. Bottom-up federalism requires sustained and high capacity at the local, regional or state level. Growth machine theory suggests that elected officials, business leaders and institutions will share an interest in growth, and thus growth will be the agenda upon which they act. If indeed action requires extensive mobilization, these powerful actors may be likely to emphasize economic growth functions. With powerful actors pursuing other goals, transit equity may not fare well in implementation.

State agencies and legislatures were important arenas of recourse for equity groups in Massachusetts. In Boston, advocates tried to use federal planning requirements to advance equity, but found the MPO's changes insufficient. Soon thereafter, however, CBOs pushed the state legislature for the Fairmount project's funding. Across the political spectrum, interviewees mentioned the Fairmount project as desirable due to equity issues. Perhaps the controversy over the MPO changed the terms of debate. Still, the Fairmount project is relatively modest, especially without

increased service frequency. The implementation of the Green Line extension depended on a state-level agreement, but the agreement was spurred by a state agency's knowledge that an environmental group could use *federal* provisions to sue. In their St. Louis case study, Swanstrom and Banks (2009) identified the state DOT as critical in the pursuit of community benefits agreements. However, the state may offer more or less fertile ground, depending on rural/metropolitan dynamics and the political leanings of state legislatures. Nonetheless, the state, with multiple channels of action and as a direct sovereign (Johnson, 2006), is a powerful arena, perhaps with more structures for democratic accountability than governance forums.

The success of some community groups is encouraging for equity advocates, but the process of implementation is still likely to disadvantage equity concerns and investments. Community development activists assert the need to see assets—not just needs—in urban communities. Like the community benefits agreements that Swanstrom and Banks (2009) discuss, however, the ability to advance investments may require extraordinary capacity. Even if extraordinary capacity exists, transit infrastructure may not be the most critical campaign among the myriad of issues in low-income and minority communities. The federal limit on operating subsidies for large metropolitan areas means that federal funds are not aiding systems precisely where transit benefits and needs may be greatest. Increased transit operating funds and more modest improvements in bus speed and service levels may bring more benefits in the near term. The risk of this latter emphasis, however, is a continuation of a bifurcated transit system.

Implications for Policy and Practice

Arguments for metropolitan planning organizations and unified regional transportation planning are compelling. Residents cross over jurisdictional lines again and again in their daily travels across metropolitan areas. Municipal jurisdictions alone cannot effectively address transportation woes, nor can separate agencies that deliver only one mode of the transportation system. Intermodal planning that combines automobile, transit, and active modes of travel can more effectively connect these systems. In addition, a centralized and meaningful metropolitan arena could provide a clearer site for civic engagement. More unified planning should eliminate actions at cross purposes: for instance the adoption of policies to reduce vehicle miles traveled (VMT) while other actors invest in ways that encourage increased VMT. MPOs are often associated with a modal paradigm that differs from the “predict and provide” model of roadway expansion that powerful state departments of transportation have often adopted. The rationale for regional transportation planning, however, is likely stronger than its actual role, due to metropolitan conditions and the current division of governmental powers.

Given the complex landscape of agencies with separate processes and funds, what contributions can regions expect from MPO planning? Some literature on the evaluation of plan implementation considers whether plan makers follow the policies and obtain the outcomes that plans describe (“conformance”) (Laurian et al., 2004). Alternatively, implementation evaluation can assess if plans are useful frameworks for decisions and spark dialogue (“performance”) (Laurian et al., 2004). Transportation planning may differ from other types of planning. Even if plans express regional

visions and goals, a main focus is project selection. Regardless, findings from the bypassing equity chapter suggest that the planning process is not the site of decision making. If regional planning is not the site of decision making, can it then even align with the performance criterion of plans being used in later decision making? Further research could more systematically and quantitatively assess what share of projects or policies, from fiscally constrained plans, are implemented. This would further strengthen the field of planning's knowledge of what MPO planning does or does not do. Further research could also consider a "performance" evaluation—are these plans used to guide decisions? Likely, many MPOs make significant contributions even if implementation is partial or other decision sites more critical. For example, federal MPO directives on equity may have shifted the parameters of debate, without yet directly translating into dramatically different investment patterns. Some MPOs have probably shifted the parameters for decision making in ways this research did not uncover.

Findings do suggest a need to rethink expectations and roles for MPOs. Regionalists have identified MPOs as a potential model for federally encouraged regionalism (Dreier, Mollenkopf & Swanstrom, 2004). Previous research (Goldman & Deakin, 2000; Goldman, 2007) and my findings, however, show MPOs plan in an environment with durable government structures that blunt their influence. The particular configurations of institutional powers and responsibilities vary, but MPOs across contexts are subject to decisions that other agencies make on how to use funds. Plans must reflect other decisions made in consultation with, but not truly hinging on the regional forum. According to one interviewee quoted in my first paper, the model

supports the “illusion of choice.” Reflecting the importance of transportation on the regional level, policy makers could strengthen the role of MPOs or identify other means for MPOs to contribute within the current landscape of governmental responsibilities.

A number of actions could strengthen metropolitan planning organizations or increase their accountability. At the federal level, the DOT could funnel more funds directly to MPOs and give them more latitude to flex funds across categories. The National Surface Transportation Policy and Revenue Commission recommended (2007) something like this, a metropolitan mobility program with an 80 percent federal match. The report identifies MPOs as one among several possible homes for these metropolitan mobility funds. Sciara and Wachs (2007) present several examples of local revenue that MPOs control, but caution the capacities of and contexts for MPOs vary tremendously. Presumably, more funds would mean the regional forum had more power. Federal agencies could pressure MPOs to leverage their powers over area agencies. In fact, the FTA is investigating the San Francisco Bay Area’s MPO. An area transit provider, who receives federal funds through the MPO, has not done due diligence on Title VI. The FTA may hold the MPO accountable. The GAO (2009) suggests performance measures for MPOs. Their proposed measures, however, reflect neither that MPOs are not plan implementers or the influence of land use on transportation system outcomes.

State actions could also empower MPOs. Such changes may be unlikely, as they might shift power away from the state. State DOTs should devolve more decisions and funds to metropolitan planning organizations, according to Katz,

Puentes & Bernstein (2005). States with existing growth management controls could give MPOs a role in growth management and land use. States could reorganize transportation agencies into centralized, multimodal metropolitan agencies responsible for planning, implementation, and operations. In fact, two interviewees in Miami-Dade County suggested a consolidated, multimodal and function county transportation agency, with the expressway authority as the umbrella organization. Regardless, without dramatic changes, MPOs will still be subject to the funding decisions of established transit, state, county, and federal agencies.

Alternatively, MPOs could redirect their efforts away from the rational planning process, the model for their planning. Currently MPOs do conduct a variety of activities; many have expanded beyond regional transportation planning (GAO, 2009). But, their authorizing purpose and federal requirements place them in an uncomfortable place between visions and actual decision making. Instead MPOs could focus more on the visioning of possible futures and the mechanisms—infrastructure investments *and policies*—that would enable such visions. In fact, this has to some extent been the role of Boston’s Metropolitan Area Planning Commission (not the area’s MPO). The planning commission has taken policy positions and occasionally, opposed infrastructure investments. The risk with this model may be transportation infrastructure programs that are too disconnected from fiscal reality. In such visioning roles, however, MPOs could make the potential trade-offs and outcomes from different choices starker. Another option is for MPOs to serve as a clearinghouse of information on other transportation agency plans. Finally, rather than seeking public participation in its processes, MPOs could educate citizens about the multiple arenas

for transportation—and other—regionally significant decisions. They could measure public participation success by how the MPO supports citizen involvement in infrastructure decisions made elsewhere.

Federal change related to funding programs may have a more tangible effect on transit investment patterns—and perhaps transportation outcomes—than changes in MPO requirements. Even as actual project outcomes hinge on local financial commitment, federal criteria screen out projects in the NS pipeline. The FTA's land use assessment for NS could be more strenuous. Furthermore, Congress and the FTA could shift the program's structure to advantage projects that maximize federal goals, rather than projects with local funds that sufficiently meet criteria. For transit equity, allowing significant federal support for transit operations in large metropolitan areas would support these critical systems that advance national goals cost-effectively.

Making an Ideal Deal

What should regional actors seek out of transit infrastructure investment? What is the ideal deal? The ideal rail deal, of course, depends on the perspective of the actor. Various incentives encourage infrastructure expansion, making any deal seem ideal for some. Capital projects provide political cache for elected officials in the forms of ribbon cutting (Taylor, 2004) and promises of jobs (Taylor & Samples, 2002). As a result, politicians from opposing parties may unite around capital investment, as in the Orlando case. Growth machine dynamics lead civic leaders to support public investment to encourage growth. With most transit projects receiving substantial funds from the federal and/or the state level, capital projects also represent largesse from above. Transit, in general, enjoys broad political support that can include

environmentalists, advocates for the poor (Altshuler & Luberoff, 2003), and planners. Transit's broad support and the desirability of local infrastructure investment can offer leverage for other critical interventions that would increase the likelihood of reaching regional goals.

From the perspective of the public interest, taken to be the objectives articulated in regional plans, the ideal deal for new transit infrastructure is difficult to define. The projects that seem most feasible for political or technical reasons may not be the most suited to promote equity, environmental, and even economic goals. Research suggests that rail investment has transformative effects only under some conditions (Giuliano & Agrawal, forthcoming). On the other hand, the long-term benefits could typically take more time than evaluations have allowed. Regardless, rail investments can be very costly, and the public sector should critically assess if a project is best suited for public goals, identified through democratic processes and planning. Supporting the wrong investments may be counterproductive. At the same time, even less than ideal infrastructure may launch later actions or broaden transit's political support base in ways that enable more transformation in the long-term.

The political support that can coalesce around infrastructure investment is an opportunity to make deals more ideal for advancing regional plan goals for sustainability. When projects have support across parties and jurisdictions, sustainability advocates can push for meaningful policy, land use, and financing changes. The Federal Transit Administration has laid groundwork for this, by considering land use in its evaluation of project benefits. For example, in one of the profiled cases in paper three, federal ratings increased after the City of Norfolk

adopted a new parking policy. Earlier in the decision making process, planners could identify the accompanying policies and land use controls that are essential to maximizing the benefits of rail investment. Making policy changes binding or required for funds is more likely to make them stick, and infrastructure investment might make such policies more politically palatable. There is likely more opportunity for such leverage where expansion is most extensive—places like Denver, Houston and Salt Lake City—but even the regions in papers one and two have ongoing investments. Other types of infrastructure investment, such as Boston’s Big Dig, may provide leverage for these policies as well.

From an equity perspective, an ideal deal would include substantial investment in low-income and minority communities and/or new revenue for operating expenses. Thus, an ideal rail deal would also require leveraging political will behind infrastructure for other interventions. Leveraging political will for improved equity outcomes appears to require *ongoing* mobilization. For example, the 1990 Big Dig agreement provided enormous leverage, but the Green Line’s implementation still demanded extensive mobilization in the 2000s. The written prioritization of the North Corridor in Miami-Dade was insufficient for its implementation. Beyond capital investments, the ideal deal from an equity perspective might be tying expansion to operating funds increases, as operating funds are a critical issue for equity (Garrett & Taylor, 1999). At the federal level, the current enthusiasm for high-speed rail may be important leverage to push intrametropolitan multimodal funds and transit operating subsidies for large metros, where environmental and equity benefits may be greatest and come at lower public cost.

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Appendix I: Interviewee List

Boston (all interviews by Lowe)

<i>Organization</i>	<i>Interviewee</i>
A Better City (formerly Artery Business Committee)	Rick Dimino
ACE (fmr Four Corners)	Lee Matsueda
Action!	Meira Soloff
Boston MPO	Pam Wolfe, Scott Peterson, Alicia Wilson & Liz Moore
City of Boston-Transportation	Vineet Gupta
Conservation Law Foundation	Carrie Russell
Fairmount Collaborative	Joan Tighe/Mat Thall (telephone)
Federal Highway Administration	Michael Chong
Government-fmr	Confidential
LISC	Kristin Blum
Metropolitan Area Planning Commission	Marc Draisen (Executive Director)
Metropolitan Area Planning Commission	Eric Bourassa (Transportation Manager) (telephone)
MassDOT	Scott Hamwey
MBTA Advisory Board	Paul Regan
MBTA-Planning	Joe Cosgrove
MBTA-Service Planning	Melissa Dullea
Somerville Community Corp.	Mary Regan & Meridith Levy
Somerville Transportation Equity Partnership	Elin Reisner
Tufts Univ/ACE	Penn Loh
Washington Street Corridor Coalition	Bob Terrell

Florida [Tallahassee] (all interviews by Lowe)

<i>Organization</i>	<i>Name</i>
1000 Friends of Florida	Charles Pattison (w/Magee)
Department of Community Affairs	Charles Gauthier
FDOT-Central office	Kathy Neill, Terry Kraft, Ed Coven, & Ed Hutchinson
Florida chapter, APA	Julia "Alex" Magee (w/Pattison)
Florida League of Cities	Rebecca O'Hara

Floridians for Better Transportation (FBT)	Douglas J. Callaway
Office of [State] Senator Paula Dockery	Rachel Perrin Rogers
Federal Highway Administration (Florida Office)	Carl Mikyska, Carey Shepherd, Tamara Christian, LeeAnn Jacobs (telephone)

Miami

<i>Organization</i>	<i>Name</i>	<i>Interviewer</i>
Broward County-Planning	Cathy Randazzo	Gainsborough
Broward MPO	Chris Hesmati & Gregory Stuart	Lowe
Broward Planning Council	Henry Sniezek	Lowe
Broward Workshop	Kareen Boutros	Gainsborough
Catanese Center for Urban & Environmental Solutions; Florida Atlantic University	Jim Murley	Lowe
Citizens Independent Transportation Trust	Charles Scurr	Gainsborough
City of Miami-Planning Department	Harold Ruck	Gainsborough
Civic	Confidential	Lowe
Collins Center for Public Policy	Phil Bacon	Lowe
FDOT-District 4	Gerry O'Reilly and Lois Bush	Gainsborough
FDOT-District 6	Gary Donn and Brian Rick	Lowe
FIU Metropolitan Center	Dario Moreno	Lowe
Government	Confidential	Lowe
Greater Miami Chamber of Commerce	Barry Johnson	Gainsborough
Hold the Line/Clean Water Action	Dawn Sherrifs	Lowe
Human Services Coalition	Daniella Levine	Gainsborough
Miami-Dade Aviation	Sunil Harman	Lowe
Miami-Dade County Commission	Commissioner Katy Sorenson (w/Jeremy Glazer, Legislative Analyst; Sean McCrackine, Environmental Legislative Analyst)	Lowe
Miami-Dade County Commission (fmr)	Commissioner Betty Ferguson	Lowe

Miami-Dade County-Department of Planning and Zoning	Subrata Basu	Gainsborough
Miami-Dade Expressway Authority	Javier Rodriguez	Gainsborough
Miami-Dade MPO	Carlos Roa	Lowe
Miami-Dade Transit	Harpal Kapoor & John Garcia	Lowe
MoveMiami	Tony Garcia	Lowe
MPO [Miami-Dade] CTAC	Barbara Walters	Lowe
Palm Beach County MPO	Randy Whitfield	Gainsborough
Palm Beach County-Planning	Lorenzo Aghemo	Gainsborough
Regional Business Alliance	Ralph Marrinson	Gainsborough
South Florida Community Development Coalition	Andrea Baker	Lowe
South Florida Planning Council	Carolyn A. Dekle (plus staff)	Lowe
South Florida Regional Transportation Authority	Joseph J. Quinty	Lowe
Transit provider	Confidential	Lowe
Transportation advocate	Tom Boiton	Lowe
ULI Southeast Florida	Carla Coleman	Gainsborough
University of Miami	Peter Muller	Lowe

Orlando

<i>Organization</i>	<i>Name</i>	<i>Interviewer</i>
Convention Center Authority	Larry Henrichs	Lowe
Castle & Cooke (developers)	John F. Rinehart	Lowe
City of Orlando	Glenda Hood	Lowe
City of Orlando-Economic Development	Christian Oleck	Gainsborough
City of Orlando-Transportation Department	Roger Neisender	Lowe
Civic sector	Confidential 3/09 A	Lowe
Congressman Mica	Dick Harkey	Lowe
East Central Florida Regional Planning Council	Philip Laurien	Gainsborough
FDOT-District V	Gene Ferguson, John Moore & Jon Weiss	Gainsborough
Latino Leadership	Marytza Sanz	Lowe
League of Women Voters	Lynn Eberly & Joanie Schrim	Lowe
LYNX	Tony Walter	Lowe
LYNX	Linda Watson	Gainsborough

Metroplan (MPO)	David Grovdahl	Lowe
myregion.org	Shelley Lauten	Lowe
New Covenant Baptist Church of Orlando, NAACP	Reverend Bracy	Lowe
Office of [State] Senator Lee Constantine's office	Nathan Cook	Lowe
Orange County	Linda Chapin (fmr mayor)	Lowe
Orange County	confidential	Lowe
Orange County	Commissioner Fernandez	Gainsborough
Orlando/Orange Expressway	Michael Snyder	Gainsborough
Osceola County-Planning	Dave Tomek	Gainsborough
Rollins College	Richard Foglesong	Gainsborough
Rollins College	Bruce Stephenson	Gainsborough
Rosen Hotels	Harris Rosen	Lowe
Seminole County-Planning	Alison C. Stettner	Gainsborough
ULI Central Florida	Mark Loeb	Lowe
Universal Studios	John L. McReynolds	Lowe
University of Central Florida	James Wright & Jana Jasinski	Lowe
Voulsia County	Commissioner Bruno	Gainsborough

Appendix II: Mann-Whitney U Scores

Variable	Outcome	N	Test	Significance score
House appointments	No GA	18	Mann-Whitney U	.214
	Grant agreement	39		
Senate appointments	No GA	17	Mann-Whitney U	.404
	Grant agreement	38		
Swing state status	No GA	17	Mann-Whitney U	.061*
	Grant agreement	38		
Transit providers	No GA	18	Mann-Whitney U	.346
	Grant agreement	39		
MPOs	No GA	18	Mann-Whitney U	.687
	Grant agreement	39		
Share of commuters using transit	No GA	18	Mann-Whitney U	.034**
	Grant agreement	39		
UZA population	No GA	18	Mann-Whitney U	.194
	Grant agreement	39		
First justification rating	No GA	18	Mann-Whitney U	.603
	Grant agreement	39		
First financial rating	No GA	18	Mann-Whitney U	.098*
	Grant agreement	39		
Last justification rating	No GA	18	Mann-Whitney U	.803
	Grant agreement	39		
Last financial rating	No GA	18	Mann-Whitney U	.000**
	Grant agreement	39		
Capital cost (in millions)	No GA	18	Mann-Whitney U	.023**
	Grant agreement	39		
New starts share of costs	No GA	18	t test	0.44
	Grant agreement	39		
Cost/projected rider	No GA	18	t test	.596
	Grant agreement	39		

**Indicates a Mann-Whitney U score significant at the .1 level and ** at the .05 level.*