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MUNICIPAL REVENUES AND LAND POLICIES

Edited by Gregory K. Ingram and Yu-Hung Hong

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Does a Rising Tide Compensate for the Secession of the Successful? Illustrating the Effects of Business Improvement Districts on Municipal Coffers

Leah Brooks and Rachel Meltzer

Municipal governments have long coexisted with smaller submunicipal jurisdictions that levy taxes and provide local public goods. In the early 1800s property owners on New York City blocks organized into taxation units to fund street construction (Diamond 1983). Two current manifestations of such submunicipal public goods providers are homeowners associations and business improvement districts (BIDs). These organizations provide local public goods to homeowners and commercial property owners, respectively, and have been touted for their relative autonomy. Particularly in times of revenue shortfalls, these alternatives for revenue generation and service provision may be very appealing. Might they affect the fiscal health and behavior of their home municipality? If so, how?

In this chapter, we specifically consider the extent to which business improvement districts could impact a city's fiscal position. A BID is formed when a majority of property owners in a commercial neighborhood vote to tax themselves in order to provide local public goods such as cleaning, marketing, and security. When a majority of votes are cast in favor of the BID, everyone in the district is

We are grateful to William Strange for very constructive suggestions, and to Carol Becker for sharing her data on BIDs.

required to pay, even those who voted against it. Since their introduction in the 1970s, BIDs have garnered praise for their potential to repair troubled neighborhoods (Pack 1992). They have also elicited suspicion for their potential to change the redistributory dynamic of the public sector (Reich 1991).

We perform simple simulations to illustrate how these divergent views about the effect of BIDs on the public sector translate into the dollars and cents of public spending and revenues. We consider three separate scenarios, each a general equilibrium view of how BIDs could affect the municipality and the commercial firms in that municipality. In each scenario, we are interested in the size of BIDs' impacts on municipal revenues and expenditures and in the distribution of public expenditures and tax shares across BID and nonBID firms. We use our estimates to draw conclusions about the relative magnitudes of positive and negative BID consequences on the municipal fisc.

Our first scenario assumes that BID services are substitutes for municipal services and is an attempt to quantify the concerns raised in Reich (1991) and Helsley and Strange (1998, 2000). These authors argue that because BID members may provide services outside of the standard municipal package, and do so at lower cost or in a more tailored fashion, BID members' demands for municipal services decline. Thus, municipal expenditures for nonBID firms are lower, all else equal, in cities with BIDs relative to cities without BIDs. Within this framework, we also examine how this overall change affects the distribution of municipal spending across BID and nonBID firms.

Our second scenario assumes that BID services complement municipal services. This view is discussed by Briffault (1999), who examines BIDs' potential to disproportionately attract investment and services. Here we assume that total municipal expenditures remain constant, but that the marginal value of public funds increases in private efforts (fiscal or otherwise). We further assume that the city prefers to spend where the marginal value of public funds is highest. Following these assumptions, BIDs shift the distribution of municipal funds toward BID members, who additionally benefit from spending by the BID.

Our final scenario assumes that BIDs have no effect on the level or distribution of municipal spending, but that BIDs affect the composition of revenues by increasing their proportion of the tax base. This line of analysis is motivated by studies that suggest that BIDs improve outcomes for BID properties without harming nonBID properties (Brooks 2007; Ellen et al. 2007). If this is true and BIDs constitute a larger portion of the tax base, then in a city with BIDs, the existence of BID firms implicitly subsidizes nonBID firms, relative to the status quo in the city without BIDs.

We believe that all three of these scenarios are empirically plausible, and we aim to quantify their relative magnitudes. In the absence of national data on BID spending, we use estimates of BID presence in New York and Los Angeles to calculate the number of BID firms and total BID spending in 275 U.S. cities that have BIDs. Given that BIDs in New York and Los Angeles are large relative to BIDs in the rest of the country, we interpret these measures of BID presence as an

upper bound on BIDs' true extent. We combine these estimated measures of BID presence with data on municipal finances and demographic characteristics, and calculate the likely impacts of BIDs under our three scenarios.

Regardless of the scenario, we find that BIDs are small enough to have little effect on the distribution of expenditures or taxation.[1] Although we assume large BID-induced changes in public expenditures, these differences account for less than 1 percent of the difference in per-establishment spending in cities with BIDs relative to cities without BIDs. This is in contrast to the more strident claims that BIDs sound a death knell for municipal government as we know it. Our findings also contrast with the claims of BIDs' most ardent proponents, who argue for BID-like solutions as a revenue solution for cities (Inman in chapter 2 in this volume; Norcross, McKenzie, and Nelson 2008).

What Are Business Improvement Districts?

BIDs were pioneered in Toronto, Canada, in the early 1970s and came to the United States in 1974 with the establishment of the New Orleans Downtown Development District (Houstoun 2003). Since then, BIDs have emerged in cities across the country and world. As BIDs are not surveyed by any governmental or nongovernmental agency, comprehensive counts of BIDs or the jurisdictions in which they exist are rare. When such counts do exist, they are infrequently comprehensive samples. Mitchell (2001) reports finding 404 BIDs in the United States[2] and another 400 in Canada as of 1999; Hoyt (2006) finds that by 2005 BIDs had spread to New Zealand, South Africa, the United Kingdom, Jamaica, Serbia, and Albania. Brooks's (2007) survey of California cities finds that one-fifth of cities have BIDs; this number rises to one-half of cities in 25,000 or more. The most recent national survey estimates approximately 700 BIDs in the United States, located across nearly 400 cities and 45 states (Becker 2008).

BIDs use their revenues to provide services exclusively to members, who are generally commercial property owners. These services are primarily street cleaning, security, and marketing, but they can include almost anything members approve. For example, the Downtown DC BID spends slightly less than a third of its $10 million in revenues on safety activities, employing a "cadre of safety, hospitality and maintenance corps" to "provide a reassuring presence on Downtown streets seven days a week." The district reports that "these uniformed radio-equipped teams help maintain an inviting, comfortable and user-friendly experience by serving as additional 'eyes and ears' for local law enforcement agencies"

1. Though it is not our focus here, the way BIDs affect the quality of municipal services is also clearly of interest. Meltzer (2009) looks at the effects of BIDs on public spending and service inputs, but no study to date assesses the impact of BIDs on service quality specifically.

2. Some sources claim that there are more than 1,000 BIDs in the United States (Briffault 1999). Mitchell (2008) claims that the number is likely between 500 and 1,000.

(Downtown DC Business Improvement District 2007). In 1995 the Downtown Phoenix Partnership BID completed an award-winning streetscape beautification project that transformed what many considered an eyesore into a clean and navigable shopping area. Five years later, the BID used extensive banners and publicity campaigns to successfully brand the area "Copper Square," alluding to one of Arizona's natural resources and the hue of the local landscape. These investments both improved the perception of the area and generated significantly more pedestrian traffic (Houstoun 2003).

BIDs are designed to solve the problem of collective action in the provision of local public goods. While a commercial property owner may be willing to pay for local services, she fears that individual action is inadequate to resolve neighborhood problems and is thus unwilling to invest without commitments from neighbors. For example, a property owner may be willing to pay for cleaning in front of her property. However, if customers need to cross other dirty properties to get to hers, individual investment is insufficient. On the other hand, if the owner has a guarantee that other owners will also invest in cleaning, she is more likely to be willing to pay for the service. The BID mechanism provides exactly this type of binding commitment through the authority to levy mandatory assessments on property owners.[3] Thus, the BID allows neighborhood members to overcome the problem of collective action in service provision.

State enabling legislation allows, but does not always require, city councils to approve BID adoption after a majority of property owners vote in favor. BIDs are managed by either quasi-public agencies or nonprofit organizations, both of which are governed by boards of directors, generally "unencumbered by urban politics" (Houstoun 1997, 38). In general, they function relatively independently from the general purpose government (Houstoun 2003).

New York

New York State passed BID-enabling legislation in 1982, thanks in large part to the efforts of the businesses and community advocates who soon after formed the city's first BID in the Union Square area of Manhattan. As of 2008 there were 60 BIDs in existence in New York City and at least 10 more in other cities in the state.

New York City BIDs range in size from 14 to 514 members and have total budgets of $53,000 to $13,000,000.[4] While BID properties account for less than

3. It is this characteristic of BIDs that distinguishes them from nonprofit entities like local development corporations or community development corporations, which also typically engage in similar localized supplementary service provision.

4. BIDs may collect revenue from sources other than assessments levied on the individual properties. Therefore, while the total assessment is a good approximation of relative budget size, it does not include all budgeted expenditures.

1 percent of all New York City properties, BIDs constitute about 20 percent of the commercial square footage in the city and 23 percent of total assessed value, generating approximately 25 percent of total property tax revenues. New York City BIDs provide a range of supplemental services focused primarily on keeping the streets clean and safe. On average, BIDs spend about half of their budgets on sanitation and safety services; they spend only 3 percent on marketing and 7 percent on capital improvement projects.

BID revenues are small relative to the city's budget; for the 2006–2007 fiscal year total BID revenues were $73 million, or just 0.13 percent of total municipal expenditure. This small spending, however, is a large local investment. For example, on average New York BIDs spend $318,000 on sanitation and maintenance. If this local spending were scaled citywide, it would amount to about $147 million, or 45 percent of municipal spending on similar services.

Los Angeles

In 1994 California passed legislation authorizing the assessment of commercial property owners for BIDs,[5] after which, California's first BID started in the Los Angeles Fashion District. Before the passage of the 1994 law, the city had no BIDs; in 2006 the city had more than 30.

In 2002 Los Angeles BIDs spent a total of $17.4 million. The lowest-spending BID had a total budget of $19,507, and the highest-spending BID $3.6 million. The average BID is 0.23 square miles large and spends $670,601. Across all BIDs, the categories accounting for the most spending are security, sanitation and maintenance, and marketing. However, BIDs vary widely in their spending: many spend nothing at all on security, while one BID spends 81 percent of its revenues on security. In the 2006–2007 fiscal year, the city of Los Angeles spent $6.7 billion on security; the city's BIDs spent $22 million, or 0.003 percent of the municipal expenditures. For example, if city BID expenditure in Los Angeles were scaled so that all neighborhoods spent as much as BIDs, this would yield total spending of approximately $1.3 billion, or roughly one-fifth of the city budget. Thus, in both New York and Los Angeles, BIDs make large local investments. However, because the areas that BIDs cover are small, the large local investments are small relative to municipal expenditures.

The Effect of BIDs on Municipal Finances

In this section we present three frameworks for the potential effect of BIDs on municipal finances, and on the distribution of municipal spending and tax shares across BID and nonBID establishments. Each framework is a general equilibrium

5. Earlier California laws allowed for the assessment of merchants rather than property owners.

view of the world after BID formation, but with notably different consequences. In case 1, we assume that BIDs provide services that are exclusively substitutes for municipal services. In case 2, we assume that BIDs provide services that are exclusively complements to municipal services. In case 3, we assume that BIDs increase property values and sales tax revenues, but have no impact on total municipal spending.

To make the framework as simple as possible, we imagine a city that has only commercial property owners, and we suppose that municipal services are directed only toward commercial properties. We realize that these assumptions are a rather limiting description of municipalities, where residents frequently play the chief political role. In recognition of this, we return at the end of this section to consider how residents may affect our analysis.

CASE 1: BID SERVICES ARE SUBSTITUTES

We first assume that BIDs provide services that are substitutes for municipal services, and we consider the effect of BIDs on total municipal expenditures and the distribution of municipal expenditures across BID and nonBID establishments. Certain BID services overlap with those usually provided by a city, such as trash pickup, policing that deters drug dealing, and upgrading street median strips. BIDs may be more likely to provide these substitute services where the quality or quantity of municipal services is low, or where neighborhood characteristics make the neighborhood particularly high-cost for the city to service.

Helsley and Strange (1998) work through a detailed model similar to this case. They assume that the municipality is constrained to provide the same level of service across its entire area. The municipality maximizes total welfare, which is equivalent to choosing the level of services preferred by the owner with the mean preference for public goods. In a municipality without a BID, this level leaves some property owners dissatisfied. Property owners who want less than the mean service pay more taxes than they desire. Property owners who want more services than the municipality provides wish to supplement them, but are impeded by the problem of collective action.

When a BID is an option, high-demanding property owners have a vehicle to resolve the collective action problem and provide supplementary public goods. However, the ability to supplement municipality-provided public goods—even if those goods cost the same as the municipality-provided ones—causes BID members to demand less of the municipally provided public goods. Since the level of municipally provided public goods is constrained to be constant across the municipality as a whole, Helsley and Strange find that this leads to lowered levels of municipal public goods for nonBID members as well as for BID members. However, because BID members also receive the BID supplement, they receive more total (public and private) service expenditures. Robert Reich (1991) calls this "the secession of the successful."

In sum, for case 1, total municipal revenues and municipal expenditures per commercial property are lower in cities with BIDs relative to cities without BIDs.

In cities with BIDs, nonBID commercial properties receive only municipally provided public goods, while BID commercial properties receive the lowered level of municipal public goods plus the BID-provided supplement.[6]

CASE 2: BID SERVICES ARE COMPLEMENTS

As an empirical matter, it is not clear whether BID services are entirely, or even substantially, substitutes for municipally provided public goods. Cheung (2008) formally extends the Helsley and Strange model to allow for complementaries in service provision, acknowledging the potential importance of positive spillovers from coordinated public and private service provision. We call this case "the suction of the successful."

Anecdotal evidence abounds suggesting that at least some BID services are complements. For example, a Los Angeles Hollywood BID purchased cameras to watch the street. Due to civil liberties concerns, the BID cannot watch these cameras, but the Los Angeles Police Department (LAPD) can. Due to financial constraints, the LAPD cannot afford the cameras, but the BID can. Thus, BID cash complements police legal powers. In New York City, a BID in the Bronx arranged for the city to pick up trash more frequently during the day to keep up with the increased sweeping and bagging of garbage by the BID sanitation employees. The BID dedicates much of its resources to sweeping and cleaning the streets, but it cannot afford to contract its own trash pickup. The local government has already paid the fixed costs for trash trucks and is happy to have the BID contribute to economies of scale in its trash enterprise. Using data on BIDs and neighborhood-level police and sanitation service provision in New York City, Meltzer (2009) finds evidence that public funds flow to BIDs: neighborhoods with BIDs receive more police spending and personnel than similar neighborhoods without BIDs, and neighborhoods with a greater BID presence receive more sanitation vehicles. BIDs should be more likely to provide services that are complements to municipal services when such services exist and when they believe the city is willing to be a reliable partner.

In case 2, we relax the assumption that the municipality spends equally across neighborhoods. Instead, we now assume that the municipality attempts to equalize the marginal value of a dollar spent across communities. We assume that municipal dollars are more effective—have a higher marginal value—when they are matched with nonmunicipal funds. We define this match broadly, so as to include, for example, neighbors sharing information with the police or calling to report crime. In a city without a BID, the distribution of funds across neighborhoods

6. For cases 1 and 2, we assume that the distribution of public spending is constant across both types of cities. We recognize that this is not entirely realistic. Even if it is not the case, however, our results should be valid if the underlying distribution of dollars across the city is unaffected by factors external to the analysis.

depends on the extent to which neighborhoods are able to voluntarily match municipal funding.

BID-adopting neighborhoods resolve a problem of collective action in providing a match. For example, a mall owner, by calling his city council member on behalf of all mall establishments to complain about crime, indicates a willingness to match policy enforcement with establishment vigilance. In the absence of a BID, a small commercial property owner has no method to convey a willingness to make a similarly sized match. With a BID, the small commercial property is represented by an organization that can credibly claim to make a substantial match when it calls to report crime. Colloquially, the existence of a BID makes public services more productive.

In case 2, total municipal spending is unchanged when a municipality has a BID. However, the distribution of this spending changes: the municipality spends more per BID property and less per nonBID property. A model that has property owners lobby for municipal services could reach a similar conclusion. If BID services are complements to municipal ones, the BID gives a dual incentive to lobby: it increases the value of municipal services and lowers the cost of their attainment by resolving a collective action problem in lobby effort.

CASE 3: BIDS INCREASE MUNICIPAL REVENUES

The final case is one in which BIDs have no impact on municipal expenditures. Instead, BIDs alter the composition, but not the level, of municipal tax revenues. We investigate how changes in this composition affect BID and nonBID properties.

Given what we have outlined in cases 1 and 2, under what circumstances might BIDs plausibly not affect municipal spending? Suppose that BID services are potentially substitutes for municipal services. Suppose also that the municipality is fiscally constrained and provides near-zero services.[7] If the level of municipal services is already low, there is little room for BIDs to depress it. Alternatively, one could also imagine a case in which the municipality is legally obligated to provide a minimum level of service and cannot go below that limit. In Los Angeles, the city often signs a contract with the BID, promising not to cut neighborhood services after BID adoption.[8] Anecdotal evidence from New York City also suggests that the costs of service discrimination may prohibit spending changes: the coordination efforts in modifying direct services by neighborhood are often perceived as costly relative to the amount of BID spending.

Given the assumption that total municipal spending is unchanged, we now consider how BIDs might impact the distribution of tax liabilities. We assume

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7. This is what one BID manager in Los Angeles suggested.

8. Unfortunately, we have no information on how widespread such contracts are in other BID cities. In Los Angeles, the contracts were regarded skeptically by BID members, who saw many ways for the city to cut services while still abiding by the letter of the agreement. In New York City, such an agreement is often assumed, but not formally recorded.

that the government decides on the amount of revenue it wishes to raise, knows the size of its tax base, and sets the tax rate accordingly. For simplicity, we sketch this argument as if the property tax is the sole source of funding; we discuss variations on this in the empirical sections. Also suppose, as empirical evidence suggests, that BIDs increase the value of BID properties (Brooks and Brennecke 2008; Ellen et al. 2007). It is possible for BID property values to increase without a commensurate decrease in nonBID municipal properties if BID investments draw shoppers from outside the city boundaries. Given these assumptions, for any given tax rate, BID properties constitute a larger portion of the total tax levy in a municipality with BIDs than in the same municipality without BIDs. Thus, nonBID properties receive a tax benefit from BIDs' higher tax share in a municipality with BIDs.

GENERALIZATION

The three frameworks above offer no role for residents in the political process. Were residents pursuing aims uncorrelated with BID presence, these frameworks would still give an accurate impression of the relationship between BIDs and municipal finances. In this case, our framework likely overstates the ability of BIDs to manipulate policy and shift services. Our results should thus be interpreted as an upper bound on BIDs' effect. Supporting this view, Ellen at al. (2007) find no evidence of an impact of BIDs on residential properties, suggesting that BID services generate no consequential benefit (or cost) for neighboring residents.

Our results are still upper bounds if residents actively oppose BIDs, perhaps due to noise or traffic inconveniences. Any efforts by residents to mute BIDs' effects would attenuate BIDs' impacts, again suggesting that our estimates are, if anything, overstated.

If residents were BID proponents and produced services complementary to BIDs, our estimates may be too small. Given that local commercial services are only one of many public goods that residents consume, we believe that it is reasonable to assume that even if residents do support BIDs, their influence on BID-related fiscal outcomes is small. Thus, our results are most likely upper-bound estimates.

Throughout, we plan to deliberately neglect the fact that BID services come at a cost to BID members. Our interest is in quantifying BIDs' potential impact on municipalities and nonBID members. For these actors, BIDs are costless—at least directly.

Data

In this section, we discuss our detailed data on New York and Los Angeles BIDs, as well as the identification of other cities with BIDs. We then discuss the public finance data with which we combine the BID data in order to bound the effects of BIDs on municipal finances and examine the distribution of municipal spending and revenues.

BID PRESENCE

Ideally, we would use information on BID presence—both existence and spending—for cities across the United States to approximate BID effects on municipal finances. Unfortunately, no such comprehensive data exist. Instead, we derive estimates of BID presence from 2002 New York and from 2002 and 2006 Los Angeles data.[9] It is fair to argue that New York and Los Angeles are not representative of all U.S. cities. However, we expect the New York and Los Angeles data, if anything, to overstate BIDs' extent. This is consistent with Mitchell's survey findings (2001) that BIDs in larger cities provide more, and a greater range of, services than those in smaller jurisdictions. Thus, using New York City and Los Angeles data is in line with the general thrust of our estimates throughout, which is to put an upper bound on the plausible effects of BIDs on municipal coffers.

BID CITIES

We identify municipalities with BIDs (BID cities) as of 2007 from a survey conducted by Carol Becker (2008), the most current and comprehensive list of BIDs available. Becker surveyed independent private organizations that collect revenue from a mandatory fee or tax and that deliver services traditionally provided by the general purpose government. She excludes BID-like organizations without independent policy-setting authority operated by a municipality and those without a mandatory tax or fee paid by all entities in a district. The survey catalogs 636 BIDs located in roughly 400 cities across 46 states.

In the analysis that follows, we use a sample of 275 municipalities of more than 25,000 people that have BIDs for which we have fiscal and establishment information. We examine only cities that currently have BIDs, rather than comparing BID and nonBID cities, to focus on the comparison of the same city with and without a BID. By doing this, we aim to avoid comparisons of cities that choose to adopt and those that do not choose to adopt BIDs.

DEMOGRAPHIC AND FISCAL DATA

In order to illustrate the impact of BIDs on local expenditures and revenues in cities other than New York and Los Angeles, we compile data on all cities with populations of 25,000 or more in 2000 (the sample frame comes from the 2000 decennial census). Specifically, we include information by municipality on the existence of BIDs, the number of business establishments, governmental expenditures and revenues, and demographic characteristics.

Municipal fiscal data come from the U.S. Census 2002 *Survey of Local Government Finances*. We choose 2002 because the survey is a census in years ending in 2 and 7, and this is the most recent available census year. We use several

9. Los Angeles BID finance data are from 2002; measures of BID presence, such as BID commercial square feet, are from the oldest available year, 2006. See the appendix for details on data sources.

variables from this data set, including total expenditures, current expenditures,[10] total revenues, total property tax revenues, and total sales tax revenues.

To examine BIDs' effect on the distribution of expenditures and revenues, we need to know the number of BID members per city. Since BIDs comprise commercial properties, we would ideally identify the extent of potential BID members with the amount of commercial property by municipality. Because national data of this kind are not available, we turn to establishment data by municipality from the 2002 *U.S. Economic Census*. We use ZIP-code-level data to find the total number of establishments by municipality (herein referred to as "total establishments"). From these data, we also calculate the number of establishments likely to be in commercial or retail districts (rather than in manufacturing areas). This total of "commercial establishments" includes establishments in accommodation and food service, arts, entertainment and recreation, finance and insurance, and retail. Finally, we use municipal-level data on population and median family income from the 2000 decennial census Summary Tape File.

Methodology

We use our uniquely detailed and comprehensive data on BIDs from New York City and Los Angeles to simulate the impact of BIDs on local expenditures and revenues for 275 municipalities across the country for our three outlined scenarios.[11] The simulation exercise involves two parts. First, for each city, we estimate the number of BID firms (which we refer to as "establishments" from this point forward, as this is their precise definition in the economic census data) and the total amount of BID spending. These two measures capture the BID presence in a municipality. We use information on BID assessments, square footage, assessed values, and sales and property taxes from New York City and Los Angeles to estimate the number of BID establishments, spending, and tax liabilities for the other cities in the sample. We call our New York and Los Angeles data values

10. Current expenditures include direct expenditure for compensation of own officers and employees, supplies, materials, contractual services, and repair and maintenance services for the upkeep of buildings, infrastructure, and equipment. They exclude assistance, subsidies, and interest on debt.

11. We choose to use this simulation approach in order to generate plausible bounds, rather than concrete estimates, of BIDs' effect on municipal finances. Were we to focus the analysis on just New York and Los Angeles, we would be faced with difficult econometric issues (and a small sample size) in precisely estimating the impact of BIDs on municipal finances. We do not limit the analysis to a specific type of BID because we do not believe that BIDs are easily classifiable from available information (and possibly not even with full information). The BID form, by construction, allows each district significant latitude in both budget and tasks. We chose not to limit the analysis to BIDs in particular regions or states since our simulation methodology does not depend on any particularly New York–specific or California-specific assumptions.

"input values." Each pair of input values gives a low and a high estimate of BID presence. We note any variable calculated with these low and high values in the variable name with a superscript of (*low,high*). We expect that these values place reasonable upper bounds on BID presence. Second, we use these estimates of BID presence by municipality to calculate the low and high municipal fiscal position with and without BIDs. We also calculate municipal spending and tax shares for BID and nonBID establishments.

In each scenario, variables that describe a municipality with at least one BID have *BIDcity* in the variable name; variables that describe a municipality without any BIDs have *nonBIDcity* in the variable name. The subscript m denotes variables at the level of the municipality. Variables with a bold $\boldsymbol{m}$ subscript are observed at the municipality level, but do not vary across municipalities (e.g., the share of commercial square footage in BIDs in Los Angeles and New York City). We use the subscript i to denote an establishment. To describe establishments located in a city with a BID, BID establishment variables have a subscript *BID* in addition to the establishment i subscript; variables for establishments not in BIDs have only the establishment i subscript.

BID PRESENCE: NUMBER OF ESTABLISHMENTS AND SPENDING

We use two key measures of BID presence: the number of BID establishments in a municipality and total BID expenditures in a municipality. We derive these for all municipalities from two statistics we calculate from our New York and Los Angeles BID data: BIDs' share of total commercial square footage and BID expenditure per commercial establishment.

We estimate the number of BID establishments in a municipality m ($\#BIDEstab_{\boldsymbol{m}}^{(low,high)}$) by multiplying the BID share of commercial square footage ($BIDShare_{\boldsymbol{m}}^{(high,low)}$) from New York or Los Angeles by the number of commercial establishments in that municipality ($\#CommercialEstab_m$). As a matter of practice, BIDs' share of commercial square footage varies little between New York at 0.197 ($BIDShare_{\boldsymbol{m}}^{(low)}$) and Los Angeles at 0.206 ($BIDShare_{\boldsymbol{m}}^{(high)}$).[12] These and all input values for the simulation exercise are found in table 10.1. Therefore,

$$\#BIDEstab_m^{(low,high)} = BIDShare_{\boldsymbol{m}}^{(low,high)} \times \#CommercialEstab_m.$$

We estimate total BID revenues for municipality m by multiplying the amount spent per commercial establishment i on BID services (from New York and Los

12. The share of commercial square footage in a BID is likely the most reliable measure of BID presence, since it is not as influenced by variations in density or taxing schemes. For example, other measures of BID presence, such as the share of properties in a BID or the share of assessed value in a BID, would be more vulnerable to these types of biases.

Table 10.1
Describing BIDs in New York and Los Angeles

	New York City		Los Angeles	
Measures of BID Presence		**High or Low**		**High or Low**
BIDs' share of municipal commercial square footage	0.197	Low	0.206	High
BIDs' share of municipal retail square footage	0.164	Low	0.256	High
BID expenditures per commercial establishment ($1,000s)	1.02	High	0.62	Low
Number of BIDs	44		26	
Number of parcels in BIDs	7,294		10,379	
Land area in BIDs (square miles)	1.96		6.02	
Square footage in BIDs (1,000s)	444,433		207,315	
Per capita BID expenditures ($1,000s)	0.008		0.005	
BID Spending Patterns ($1,000s)		**Share**		**Share**
Total BID expenditures	60,766	1.000	17,436	1.000
Security	14,680	0.242	5,798	0.333
Sanitation and maintenance	13,981	0.230	5,166	0.296
Marketing	6,031	0.099	3,427	0.197
Capital improvement[a]	7,008	0.115	0	0.000
Parks	1,063	0.017	0	0.000
Administration	13,923	0.229	2,336	0.134
Other	4,080	0.067	708	0.041
Relating BID Spending to Municipal Spending				
Total municipal expenditures ($1,000s)	74,286,991		11,847,071	
Total BID-related municipal expenditures[b] ($1,000s)	11,579,676		2,574,848	
BID expenditures as share of total municipal expenditures	0.001		0.001	
BID expenditures as share of BID-related municipal expenditures	0.005		0.007	
Measures of BIDs' Role in Municipal Taxation		**High or Low**		**High or Low**
BIDs' share of total property assessed value	0.228	High	0.058	Low
Property value increase attributed to BIDs	0.157	Low	0.270	High

(continued)

Table 10.1
(continued)

Measures of BIDs' Role in Municipal Taxation	New York City	High or Low	Los Angeles	High or Low
BIDs' share of total property taxes	0.251	High	0.058	Low
BIDs' share of retail sales[c]	0.164	Low	0.232	High

[a] Capital improvement is included in sanitation and maintenance for Los Angeles BIDs.
[b] BID-related municipal expenditures include fire protection, housing and community development, parks and recreation, police protection, libraries, parking facilities, and solid waste management.
[c] For New York City, we proxy for BIDs' share of retail sales with BIDs' share of retail square footage.
Source: Values are based on authors' calculations. All data reported for 2002, save for nonfinancial characteristics of Los Angeles BIDs, which are from 2006 (the earliest year available). Values noted high or low are used in our calculations. All dollar figures (save per capita BID expenditures, which are in 2006 dollars) are expressed in thousands of 2006 dollars. BID expenditures are total revenues raised through BID assessments. BIDs may generate additional revenues through other fundraising activities or collaboration with other public entities or private organizations; these are usually small relative to BID assessment revenues. Property value increases attributable to BIDs are from Ellen et al. (2007) and Brooks and Brennecke (2008). We also use the property value increase attributed to BIDs to proxy for sales tax increases attributable to BIDs. Per capita BID expenditures are measured relative to 2000 population figures.

Angeles, labeled $BIDCommExpend_{i,m}^{(low,high)}$)[13] by the total number of commercial establishments in municipality m:

$$BID\_TotExpend_{m}^{(low,high)} = BIDCommExpend_{i,m}^{(low,high)} \times \#CommercialEstab_{m}.$$

For New York, the average BID assessment per commercial establishment is \$1,023 ($BIDCommExpend_{i,m}^{(high)}$); the average for Los Angeles is nearly 50 percent lower at \$615 ($BIDCommExpend_{i,m}^{(low)}$).[14]

Based on these calculations, we estimate that the average city in our sample has total BID expenditures of \$990,110 using the lower input value and \$1,646,960 using the higher input value. We also calculate BID expenditures per BID establishment as

$$BIDExpend_{i,m}^{(low,high)} = BIDCommExpend_{i,m}^{(low,high)} / BIDShare_{m}^{(low,high)}.$$

BID expenditures per BID establishment are higher than BID expenditures per commercial establishment, inflated by the inverse of the BID share of establish-

13. It is possible for BIDs to use revenues other than BID taxes to fund their services. However, taxes levied on the property owners typically constitute the majority of the BIDs' budgets and are highly correlated with total BID budgets.

14. We also ran simulations using BID spending per retail establishment, which is \$1,996 for New York and \$1,500 for Los Angeles. Results using the retail share are available from the authors upon request.

ments. Because of our assumptions, per-establishment BID spending does not differ across municipalities in our sample; the number of BID establishments ($\#BIDEstab_m^{(low,high)}$), however, does.

CASE 1: BID SERVICES ARE SUBSTITUTES

In case 1, BID services are substitutes for municipal provision. The demand for spending on comparable services provided by the local government in the city with BIDs is lower than the demand for spending in the city without BIDs. We estimate how this relatively lower demand changes municipal per-establishment expenditures and the distribution of municipal spending across BID and nonBID establishments. For purposes of illustration, we assume that municipal expenditures decrease by an amount exactly equal to total BID revenues. This is an extreme assumption, so it should serve as an upper bound for BIDs' effect on municipally provided services. We relate spending in a city with at least one BID ($PublicExpend\_BIDcity\_case1_m$, which we observe in the data for all cities) and without any BIDs ($PublicExpend\_nonBIDcity\_case1_m^{(high,low)}$) as

$$PublicExpend\_nonBIDcity\_case1_m^{(low,high)} = PublicExpend\_BIDcity\_case1_m + BID\_TotExpend_m^{(low,\,high)}.$$

We express this difference in public spending as a share of total expenditures in municipality m without BIDs:

$$Share\_Total\Delta PublicExpend_m^{(low,high)} = \frac{BID\_TotExpend_m^{(low,high)}}{PublicExpend\_nonBIDcity\_case1_m^{(low,high)}}.$$

The numerator in this share is the difference in public spending in the city with and without BIDs, which is exactly equal to the total BID assessment for municipality m. The denominator is municipal spending in the city without a BID.

We also calculate how these different spending levels impact the distribution of expenditures across BID and nonBID establishments in cities with BIDs relative to cities without BIDs. To estimate per-establishment public spending in a city without a BID, we assume that all establishments receive an equal share of municipal expenditures. Thus, we calculate municipal spending for establishment i in municipality m without any BIDs as

$$PublicExpend\_nonBIDcity\_case1_{i,m}^{(low,high)} = \frac{PublicExpend\_nonBIDcity\_case1_m^{(low,high)}}{\#TotalEstab_m}.$$

When the municipality has BIDs, we assume that each establishment i still receives an equal share of the observed public expenditures:

$$PublicExpend\_BIDcity\_case1_{i,m}^{(low,high)} = \frac{\left[PublicExpend\_BIDcity\_case1_{m}^{(low,high)}\right]}{\#TotalEstab_m}.$$

Because the numerator here is smaller than in the city without BIDs, the per-establishment spending in the city with BIDs is lower than the per-establishment spending in the city without BIDs.

BID establishment *i* also benefits from expenditures generated by BID assessments and receives the sum of public and private expenditures:

$$TotalExpend\_BIDcity\_case1_{i,BID,m}^{(low,high)} = PublicExpend\_BIDcity\_case1_{i,m}^{(low,high)} + BIDExpend_{i,m}^{(low,high)}.$$

Thus, BID member establishment *i* in city *m* receives municipal spending evenly distributed across different types of properties (first term), plus BID expenditure per BID establishment (second term).

CASE 2: BID SERVICES ARE COMPLEMENTS

In case 2, we assume that BID services are complements to publicly provided goods. Instead of decreasing demand for municipal spending, BIDs increase demand for localized municipal spending. In contrast to case 1, we do not assume that total municipal expenditures differ when a city has BIDs. As before, we are interested in how cities with BIDs differ from cities without BIDs in the distribution of spending across BID and nonBID establishments.

Since public spending is the same in cities with and without BIDs by assumption,

$$PublicExpend\_nonBIDcity\_case2_m = PublicExpend\_BIDcity\_case2_m.$$

As in case 1, we assume that all establishments receive the same amount of municipal expenditures in a city without any BIDs:

$$PublicExpend\_nonBIDcity\_case2_{i,m} = \frac{\left[PublicExpend\_nonBIDcity\_case2_m\right]}{\#TotalEstab_m}.$$

In the city with BIDs, we assume that municipal spending directed toward BIDs is higher than in the city without BIDs. Specifically, we assume that BID establishments receive a total amount equal to the total BID assessment in the municipality, which is equivalent to saying that the municipality matches BID spending one to one.[15] We believe that this extreme assumption provides an upper bound

15. Municipalities infrequently provide direct funding to BIDs; matches are more likely to be in-kind, such as greater police presence or a street median strip replacement sooner than sched-

on BIDs' possible effects. Thus, for nonBID establishments, we calculate per-establishment spending as the sum of total observed municipal expenditures less the amount of BID expenditures, divided by the total number of establishments. Municipal spending for nonBID establishment i when the municipality has at least one BID is therefore

$$PublicExpend\_BIDcity\_case2_{i,m}^{(low,high)} = \frac{PublicExpend\_BIDcity\_case2_m - BID\_TotExpend_m^{(low,high)}}{\#TotalEstab_m}.$$

BID establishments receive municipal expenditures for all establishments; they also benefit from the public expenditures directed toward BID establishments. We calculate municipal expenditure per BID establishment in a city with BIDs as

$$PublicExpend\_BIDcity\_case2_{i,BID,m}^{(low,high)} = PublicExpend\_BIDcity\_case2_{i,m}^{(low,high)} + BIDExpend_{i,m}^{(low,high)}.$$

Therefore, total public expenditure for each BID establishment is the sum of public expenditures distributed evenly across all establishments in municipality m and additional public expenditures the city devotes to matching BID expenditures.

In addition, BID establishments benefit from direct BID spending, yielding total (both public and private) expenditures for BID establishment i:

$$TotalExpend\_BIDcity\_case2_{i,BID,m}^{(low,high)} = PublicExpend\_BIDcity\_case2_{i,BID,m}^{(low,high)} + BIDExpend_{i,m}^{(low,high)}.$$

Total expenditures per BID establishment are the sum of public expenditures and private expenditures from BID revenues.

CASE 3: BIDS INCREASE MUNICIPAL REVENUES

In the final case, we analyze the impact of BIDs on local revenues. We simulate differences in the tax base due to BIDs in cities with BIDs relative to cities without. We use these estimates to explore the impact of these differences on the relative tax share of BID and nonBID establishments and on BID and nonBID per-firm tax payments. To simplify our analysis, we assume that total tax payments remain unchanged.

To estimate the magnitude of BID-induced changes in tax revenues, we rely on the only existing estimates in the literature for BIDs' effect on property values.

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uled. Because we have no measure of this matching, we chose a very high matching rate (100 percent) to observe the consequences, consistent with our upper-bound methodology. The one-to-one matching also provides a clear parallel to the one-to-one substitution in case 1.

Previous empirical evidence has shown that, in New York City and Los Angeles, BIDs increase commercial property values by, on average, 16 percent and 27 percent, respectively (Brooks and Brennecke 2008 Ellen et al. 2007). We denote these values as $\%\Delta BID\_PV_m^{(low,high)}$.

We proxy for the share of the property tax base in a BID using the share of property taxes paid by BID establishments in New York and Los Angeles ($BIDShare\_PT\_BIDcity_m^{(low,high)}$). In New York BID properties account for about 25 percent of all property taxes paid ($BIDShare\_PT\_BIDcity_m^{(high)}$); in Los Angeles this share is 6 percent ($BIDShare\_PT\_BIDcity_m^{(low)}$).[16] Let $PTRevenues\_BIDcity_m$, the tax revenues we observe in the data, be the property tax revenues in a city with BIDs. The amount of property tax revenues in municipality m with BIDs that is attributable to BIDs is therefore

$$\Delta PT\,Revenues_m^{(low,high)}$$

$$= \left(BIDShare\_PT\_BIDcity_m^{(low,high)} \times \%\Delta BID\_PV_m^{(low,high)}\right)$$

$$\times \left[\frac{PTRevenues\_BIDcity_m}{\left(1 + BIDShare\_PT\_BIDcity_m^{(low,high)} * \%\Delta BID\_PV_m^{(low,high)}\right)}\right].$$

The first term in this equation is the percentage of total property tax revenues attributable to differences in the value of BID properties due to the BIDs. The second term is municipal property tax revenues in municipality m without a BID, that is, without any BID-induced revenue change.

We also calculate the difference in the sales tax base in cities with BIDs relative to cities without BIDs. Unfortunately, there are no direct estimates of BIDs' effect on sales tax revenues. In the absence of such estimates, we assume that the sales tax base in cities with and without BIDs differs by the same proportion as the property tax base (that is, the sales tax base accounted for by BID establishments in cities with BIDs is $\%\Delta BID\_PV_m^{(low,high)}$ percent larger than in cities without BIDs). We believe this assumption sets an upper bound for the changes in sales tax revenues, since any change in property values would be attributable partially to an increase in sales transactions and revenues, as well as partially to other factors. Changes in sales revenues due to neighborhood-wide traffic should capitalize into the property values; thus, the estimated BID-induced change in property values is a cap for BID-induced changes in the sales tax base.

16. As we do throughout the analysis, we again rely on data from New York and Los Angeles. To the best of our knowledge, these are the only available systematic estimates for both the share of property tax paid by BIDs (not calculable from available data for other cities) and the BID-induced change in the property tax base.

As in the property tax analysis, we calculate the sales tax revenue amount attributable to BIDs by multiplying the BID-induced change in sales tax revenues ($\%\Delta BID\_PV_m^{(low,high)}$) by the share of the total sales tax revenue in a BID ($BIDShare\_ST\_BIDcity_m^{(low,high)}$). We proxy for BIDs' share of sales tax with the share of retail square footage located in a BID in New York, and the share of sales tax revenues generated by BID establishments in Los Angeles ($BIDShare\_ST\_BIDcity_m^{(low,high)}$).[17] In New York BIDs make up 16 percent of the total retail square footage (low), and in Los Angeles, BIDs contribute to 23 percent of the sales tax revenues (high). Thus, we estimate the amount of sales tax revenue in a city with BIDs that is attributable to BIDs to be

$$\Delta STRevenues_m^{(low,high)} = \left(BIDShare\_ST\_BIDcity_m^{(low,high)} * \%\Delta BID\_PV_m^{(low,high)}\right) \times \left[\frac{STRevenues\_BIDcity_m}{\left(1 + BIDShare\_ST\_BIDcity_m^{(low,high)} * \%\Delta BID\_PV_m^{(low,high)}\right)}\right].$$

Analogous to the equation solving for the BID-induced property tax revenues, the first term in this equation is the percentage of total sales tax revenues attributable to increases in sales of BID businesses. The second term is municipal sales tax revenues in municipality m without a BID.

What do these BID-induced changes in the composition of the tax base mean for nonBID members? We assume that the total tax levy is the same in cities with and without BIDs. If this is the case, nonBID establishments pay lower taxes when BID establishments constitute a larger portion of the tax base. We now turn to how BIDs change the distribution of tax share. We use our most reliable measure of tax share, BID properties' share of all property taxes in cities with BIDs ($BIDShare\_PT\_BIDcity_m^{(low,high)}$), to estimate BIDs' tax share in cities without BIDs. First, we define the property tax share of nonBID properties in city m with BIDs as

$$nonBIDShare\_PT\_BIDcity_m^{(low,high)} = 1 - BIDShare\_PT\_BIDcity_m^{(low,high)},$$

which is one minus the share of property taxes paid by BID establishments.

17. Since we do not have data on BIDs' share of sales tax revenues in New York City, we proxy for the BID contribution by taking the share of retail square footage in BIDs. We assume that the primary contribution to sales tax revenues from BIDs is generated by retail transactions; the relative presence of retail in BIDs should generally capture their relative contribution to sales tax revenues.

We assume that the assessed value of nonBID properties does not differ in cities with and without BIDs, and that the total tax levy remains unchanged regardless of BID presence. Given these assumptions, BID properties in a city without BIDs (or specifically, those properties that would belong to a BID were any in existence in that city) account for the following share of taxes:

$$BIDShare\_PT\_nonBIDcity_m^{(low,high)} = \frac{BIDShare\_PT\_BIDcity_m^{(low,high)}}{1 + \%\Delta\ PT\_Rev_m^{(low,high)} \times (1 - BIDShare\_PT\_BIDcity_m^{(low,high)})}.$$

In this equation, the BID property tax share in a city without BIDs is smaller than the property tax share in the city with BIDs by the BID-induced tax revenue increase. Note that the BID property tax share in the city without BIDs does not depend on anything that varies by sampled municipalities.

Do these differences in tax shares translate into appreciable differences in tax payments? To evaluate this, we calculate the per-establishment property tax payments for BIDs and nonBID establishments in cities with and without BIDs by multiplying the BID or nonBID share of taxes by the total property tax revenue and dividing by the total number of associated establishments. We then repeat this exercise, assuming that BIDs' tax share for property taxes in the city with and without a BID is BIDs' tax share for all own-source revenues (revenues raised by the municipality itself). Mechanically, this translates into a larger possible subsidy of nonBID firms by BID firms in cities with BIDs.

Results

In this section we present the results for the three scenarios. Our discussion focuses on the results for 275 cities with BIDs as of 2007.[18]

CASE 1: BID SERVICES ARE SUBSTITUTES

For the first scenario, we examine the municipal fiscal response when BIDs provide services that are substitutes for municipal services and present results in table 10.2. In our sample, average total BID revenues are as low as $1.1 million and as high as $1.8 million. These amounts are 0.4 and 0.7 percent of current municipal expenditures. Since we assume that the change in municipal spending

18. We also replicate all simulations using the number of retail establishments (instead of all BID-related commercial establishments), which is likely a more conservative estimate of commercial presence. In addition, we run identical simulations for samples stratified along several dimensions: (1) the share of public expenditures spent on BID-related services; (2) the share of establishments that could potentially join a BID, that is, classified as commercial or retail; and (3) the share of revenues generated by property and sales taxes. The stratified simulations

Table 10.2
Case 1: BID Services Are Substitutes for Municipal Public Goods

	Low	High
Estimated BID Revenues		
Total BID revenues in municipality *m* ($100,000s)	1,078	1,794
As a share of total municipal expenditures	0.003	0.006
As a share of current municipal expenditures	0.004	0.007
Expenditures per Establishment		
City Without BIDs		
Total municipal expenditures	731,031	731,747
Municipal expenditure per establishment		
NonBID establishment	89.95	90.10
BID establishment	89.95	90.10
City with BIDs		
Total municipal expenditures	729,953	729,953
Municipal expenditure per establishment		
NonBID establishment	89.73	89.73
BID establishment	89.73	89.73
BID establishment, plus BID expenditures	92.85	94.69

Note: Values are based on authors' calculations. All dollar figures are from 2002, expressed in thousands of 2006 dollars. Current expenditures include direct expenditure for compensation of own officers and employees, supplies, materials, contractual services, and repair and maintenance services for the upkeep of buildings, infrastructure, and equipment. They exclude assistance, subsidies, and interest on debt.

due to BID presence is exactly equal to the total assessment generated by the BIDs, municipal expenditures in the average city with BIDs are $1.1 or $1.8 million lower than in the average city without BIDs. In the average city with BIDs, municipal expenditures are $729 million, so total expenditures with BIDs are either $731 or $732 million.

When we calculate average municipal spending per establishment in cities without BIDs, we find a low estimate of $89,950 and a high estimate of $90,100. Remember that these large values are generated by assuming that all municipal

attempt to bound the effects of BIDs on municipal expenditures and revenues in the context of this variation. The implications from the results of these simulations remain unchanged. The results of these analyses can be obtained from the authors upon request.

expenditures are directed toward commercial establishments. For cities with BIDs, spending per establishment is $89,730 for BID and nonBID establishments.[19]

However, we estimate that total spending, including BID spending, per BID establishment in cities with BIDs is $92,850 (low) or $94,690 (high). Since BID establishments in cities with BIDs receive both public spending (though lower than in a city without BIDs) and private BID spending, total overall spending per BID establishment exceeds per-establishment spending in the city without BIDs.

These changes in spending are small. The average per-nonBID-establishment spending in the city with BIDs is less than 0.5 percent lower than average per-establishment spending in the city without BIDs. Average spending per BID establishment, including private BID spending, in the city with BIDs is $2,900 or $4,600 dollars more than in the city without BIDs. This difference is 3 or 6 percent of average public spending on nonBID establishments in the city with BIDs. Our figures, which overestimate per-establishment spending by assuming that all municipal spending goes toward establishments, make this number look disproportionately small. Suppose we allocate 30 percent of public spending toward establishments (the approximate share of commercial square feet in Los Angeles and New York), which yields average spending of about $27,000 per establishment in the city with BIDs. With this smaller denominator, the change in municipal spending per firm due to BIDs is 11 or 18 percent of per-establishment public spending. This is a somewhat larger figure, but may in fact be too large, because it assumes that only establishments, not residents, face lower spending in the city with BIDs.

CASE 2: BID SERVICES ARE COMPLEMENTS

We now present results for the case in which BID services complement municipal services. In this scenario, we assume no change in municipal spending. Therefore, average municipal expenditures in the city with and without a BID are $729 million. As in case 1, the average aggregate BID assessment across the 275 municipalities remains either $1.1 or $1.8 million.

Here we are interested in illustrating how expenditures vary across BID and nonBID establishments in cities with BIDs relative to cities without BIDs, and we present results in table 10.3. For cities without BIDs, the average per-establishment expenditure is $89,730 (as this figure is not a function of BID measures, we have only one estimate).

For cities with BIDs, per-establishment spending depends on BID presence. In cities with BIDs, nonBID establishments receive $89,500 or $89,360 in public expenditures. This amount is lower than what nonBID establishments receive in cities without BIDs by either $220 or $370; in either case, this is less than half

19. We directly observe total municipal expenditures for cities with BIDs. Thus, this number is not based on Los Angeles or New York data, which would yield bounds.

Table 10.3
Case 2: BID Services Are Complements to Municipal Public Goods

	Low	High
Estimated BID Revenues		
Total BID revenues in municipality *m* ($100,000s)	1,078	1,794
Expenditures per Establishment		
City Without BIDs		
Total municipal expenditures	729,953	729,953
Municipal expenditure per establishment		
NonBID establishment	89.73	89.73
BID establishment	89.73	89.73
City with BIDs		
Total municipal expenditures	729,953	729,953
Municipal expenditure per establishment		
NonBID establishment	89.50	89.36
BID establishment	92.63	94.32
BID establishment, plus BID expenditures	95.75	99.29

Note: Values are based on authors' calculations. All dollar figures are from 2002, expressed in thousands of 2006 dollars.

a percent of municipal per-establishment spending. BID establishments receive relatively more public spending in the city with BIDs. Specifically, BID establishments receive at least $92,630 and up to $94,320 in public expenditures, or between $2,900 and $4,590 in additional funds. BID establishments also benefit from private BID spending on services, which increases the per-establishment expenditures to amounts between $95,750 and $99,290. These expenditures are 3 or 5 percent higher than average per-establishment spending for the city without BIDs.

Despite the markedly different assumptions in cases 1 and 2, both find that BIDs are associated with negligible effects on nonBID establishments. In neither case does municipal per-establishment spending in cities with BIDs differ by more than 1 percent from spending in cities without BIDs.

CASE 3: BIDS INCREASE MUNICIPAL REVENUES

In the third and final scenario, we simulate the change in municipal revenues for cities with BIDs and examine how this change affects tax shares for BID and nonBID establishments. The results described in this section are in table 10.4. For our sample cities, property and sales tax revenues constitute about one-third of

Table 10.4
Case 3: BIDs Change the Distribution of Tax Share

	Low	High
BID and NonBID Establishment Shares of Tax Liability		
City Without BIDs		
NonBID tax share	0.949	0.791
BID tax share	0.051	0.209
City with BIDs		
NonBID tax share	0.942	0.749
BID tax share	0.058	0.251
Tax Revenues Attributable to BIDs		
Difference in sales tax revenues attributable to BIDs	1,639	3,817
As a share of total sales tax revenues	0.022	0.052
Difference in property tax revenues attributable to BIDs	866	6,092
As share of total property tax revenues	0.009	0.067
Per-Establishment Property Tax Liabilities		
City Without BIDs		
NonBID establishments	17.09	14.29
BID establishments	12.01	47.48
City with BIDs		
NonBID establishments	16.95	13.53
BID establishments	13.79	57.08

Note: Values are based on authors' calculations. All dollar figures are from 2002, expressed in thousands of 2006 dollars.

total municipal tax revenues (see appendix table A10.1), so they are a meaningful portion of municipal revenues that is potentially affected by BID presence.

We now turn to estimates of BID versus nonBID tax shares in cities with and without BIDs. We directly observe BIDs' share of tax payments in New York and Los Angeles, which we use to proxy for BID establishments' share of taxes in cities with BIDs. These figures are 25 and 5.8 percent, respectively, so that nonBID establishments in the city with BIDs account for 75 or 94 percent of the tax base. When we calculate tax shares in cities without BIDs, nonBID establishments consist of 79 or 95 percent of the total tax base, and BID establishments (establishments that would belong to BIDs were it a city with BIDs) account for 21 or 5 percent. This amounts to a shift of either 0.5 or 5 percentage points of the tax base toward BID establishments.

What does this mean for tax payments? We estimate that, due to the adoption of BIDs, the average municipality with BIDs has BID-attributable tax revenues of $2.5 or $10 million. Part of this variation is driven by the extent to which cities rely on the property tax: BID changes in property values account for as little as 1 percent or as much as 6.7 percent of total property tax revenues. The average amount of BID-attributable sales tax revenues in cities with BIDs is $1.6 or $3.8 million, or 2 or 5 percent of total sales tax revenues.

How does this translate into per-establishment tax liabilities? First, since we derive tax shares from observed property tax shares, we assume that the establishments in our sample are only liable for municipal property taxes.[20] Therefore, we multiply the tax shares from above by observed total property tax revenues for establishments in cities with BIDs and cities without BIDs. For cities without BIDs, we see that BID establishments on average pay as little as $12,010 and as much as $47,480. NonBID establishments, on the other hand, pay $17,090 or $14,290. For cities with BIDs, the tax liability for BID establishments is higher: $13,790 or $57,080. Since the tax share for nonBID establishments is lower in cities with BIDs, their tax liability is reduced to $16,950 or $13,530. For nonBID establishments, this lowered tax liability is about 1 or 5 percent of the nonBID tax liability in cities without BIDs. Not only does the tax liability shift in favor of nonBID establishments in cities with BIDs, but this change is also small compared to the 15 or 20 percent higher liability for BID establishments.

Since the assumption that BIDs are liable solely for property taxes is likely overly conservative, we also calculate per-establishment tax payments using the tax shares and own-source revenue.[21] Here we assume that BIDs' share of property taxes is equal to BIDs' share of own-source revenues. On average, the per-establishment BID tax liability is larger by a factor of four, and the relative shift in liability looks similar: nonBID establishments receive a tax benefit with a lowered tax liability of $500 or $2,846. In comparison, per-establishment BID tax liability is higher in the city with BIDs by either $6,600 or as much as $35,710.[22] Since commercial establishments likely assume more than just property tax liabilities, albeit at different rates than those applied to property assessments, we imagine that actual tax liabilities lie somewhere between the estimates based on property tax revenues and total own-source revenues.

LIMITATIONS

This section has focused on how the average city's finances fare with and without BIDs. This focus on the mean may obscure important fiscal effects at the

20. In addition, sales taxes (the other revenue source we consider) are levied on the consumer and do not directly contribute to the tax liability of the property owner.

21. These results are not shown in the tables.

22. Results from simulations using all own-source revenues can be obtained from the authors upon request.

tails of the municipal finance distribution. Unfortunately, our method relies on estimates derived from means in New York and Los Angeles data, combined with variation in municipal revenues, establishments, and tax bases. Because of this, our method does not generate much variance related to underlying municipal characteristics. For example, using our method, total BID expenditures vary by city due to variation in the number of BID establishments, and not as a function of other things that might also affect BID expenditures (neighborhood characteristics or quality of city services).

Given this, we are limited in what we can say about distributional effects. Appendix tables A10.2 through A10.4 replicate tables 10.2 through 10.4 but present 25th and 75th percentiles instead of citywide means. These appendix tables show no changes in the qualitative results we have presented: relative spending on BID and nonBID establishments in cities with and without BIDs differs little, and BID establishments may offer a small tax subsidy to nonBID establishments in cities with BIDs.

We offer two major caveats. First, our calculation of total spending per establishment entirely ignores BID assessments as a cost for BID firms. We believe this was appropriate for our focus in this chapter on the impact of BIDs on the municipal fisc, but it is not appropriate for any analysis of the effect of BIDs on BID establishments. We estimate BID taxes to be either 23 percent or 9 percent of municipal property tax liabilities, so they are not insubstantial.[23]

Our second caveat is that our estimates are based on cities that currently have BIDs. Thus, our results may not generalize to cities that switch from nonBID to BID status. Appendix table A10.1 shows that cities with BIDs are larger and slightly poorer than cities without BIDs. The two types of cities do not differ appreciably in the share of revenues that come from sales and property taxes, nor in the number of establishments per person, both of which could lead to substantial changes in our predictions.

Conclusions

Over the past two decades, BIDs have played an increasingly important role in the provision of local services. We have attempted to bound the extent of their effect on local spending and revenue generation by presenting stylized scenarios that depict the effect of BID presence on the municipal fiscal position and on the distribution of spending by BID and nonBID establishments. Theoretically, the effect of BIDs on local municipal expenditures and revenues is ambiguous. BIDs may be either substitutes or complements in local service provision, resulting surely in lowered public spending for nonBID establishments, and either lower

23. BID taxes are either 6 or 2 percent of total municipal tax liability.

or higher public spending for BID members. It is also possible that BIDs increase property values and the sales tax base, which could result in an implicit subsidy to nonBID firms from BID firms.

Our simulation results illustrate the fiscal implications of these three scenarios, and create upper-bound estimates of municipal- and firm-level changes in spending and tax liabilities. Overall, the results suggest that BID spending is small relative to average per-establishment public spending. In neither the secession of the successful nor the suction of the successful does per-establishment spending in cities with BIDs differ by more than 1 percent from spending in cities without BIDs. Were BID spending to constitute even 10 percent of total municipal expenditures, BIDs would need to be between 17 and 28 times larger than their current size. Simulation results in the case where BIDs increase the tax base illustrate that if nonBID establishments receive a tax benefit in cities with BIDs, it is less than 5 percent of the establishment's total tax payment. In sum, these modest effects on BID and nonBID properties alike should allay concerns that BIDs hurt nonBID members. Our results also suggest that, if BIDs do have substantial positive effects on neighborhoods, the BID solution relies heavily on other factors in addition to the dollars BID members spend.

This chapter offers three states of the world with BIDs. Which one is empirically relevant? As a matter of practice, we believe that there is a grain of truth to all the cases, and that the empirical reality lies somewhere in the middle. Some BID services substitute for municipal ones; some services complement municipal ones; and BIDs do increase the tax base, giving an implicit subsidy to nonBID firms. Thus, we believe it is likely that some of the negative repercussions of BIDs for nonBID firms discussed in the secession and suction of the successful cases may be mitigated by the beneficial effects of BIDs on nonBID firms discussed in the case where BIDs increase the tax base. On net, to believe that BID firms substantially harm public expenditures for nonBID firms, one must believe that BIDs effect changes in municipal expenditures many times the size of BID expenditures. This outcome, however, seems unlikely.

Although we illustrate modest impacts, we do not encourage the reader to interpret the role of BIDs as insignificant. By design, we do not investigate neighborhood-level impacts of BIDs, and neighborhoods are the level at which BIDs effect measurable changes on the physical and fiscal landscape of the city. BIDs are valuable not only for their ability to generate reliable streams of revenue, but also for their ability to meet localized demand. Moving forward, both features may be critical in addressing the needs of diversifying cities with diminishing public resources.

REFERENCES

Becker, Carol. 2008. Government without government: Alternatives to market and government failure. Ph.D. dissertation, Hamline University.

Briffault, Richard. 1999. Government for our time? Business improvement districts and urban governance. *Columbia Law Review* 99(2):365–477.
Brooks, Leah. 2007. Unveiling hidden districts: Assessing the adoption patterns of business improvement districts in California. *National Tax Journal* 60(1):5–24.
Brooks, Leah, and Claire Brennecke. 2008. Capitalizing on collective action: BIDs and property values in Los Angeles. University of Toronto working paper.
Cheung, Ron. 2008. The interaction between public and private governments: An empirical analysis. *Journal of Urban Economics* 63(3):885–901.
Diamond, Stephen. 1983. The death and transfiguration of benefit taxation: Special assessments in nineteenth-century America. *Journal of Legal Studies* 12(June): 201–240.
Downtown DC Business Improvement District. 2007. *Annual report*. http://www.downtowndc.org/_files/docs/bid_ar2007.pdf.
Ellen, Ingrid G., et al. 2007. The impact of business improvement districts on property values: Evidence from New York City. Brookings-Wharton Papers on Urban Affairs.
Helsley, Robert, and William Strange. 1998. Private governments. *Journal of Urban Economics* 69(2):281–304.
———. 2000. Social interactions and the institutions of local government. *American Economic Review* 90(5):1477–1490.
Houstoun, Lawrence O. 1997. *Business improvement districts*. Washington, DC: Urban Land Institute.
———. 2003. *Business improvement districts*. 2nd ed. Washington, DC: Urban Land Institute.
Hoyt, Lorlene M. 2006. Importing ideas: The transnational transfer of urban revitalization policy. *International Journal of Public Administration* 29(1–3):221–243.
Meltzer, Rachel. 2009. "Clean and safe" for all? Business improvement districts and the provision of local public services. The New School working paper.
Mitchell, Jerry. 2001. Business improvement districts and the "new" revitalization of downtown. *Economic Development Quarterly* 15(2):115–123.
———. 2008. *Business improvement districts and the shape of American cities*. Albany: State University of New York Press.
Norcross, Eileen, Kyle McKenzie, and Robert Nelson. 2008. From BIDs to RIDs: Creating residential improvement districts. Mercatus Policy Comment No. 20, 12 May.
Pack, Janet Rothenberg. 1992. BIDs, DIDs, SIDs, and SADs: Private governments in urban America. *Brookings Review* 10(4):18–21.
Reich, Robert. 1991. Secession of the successful. *New York Times Magazine*, 20 January.

BUSINESS IMPROVEMENT DISTRICT DATA SOURCES

Data on business improvement districts in New York City are obtained from the New York City Department of Small Business Services, the local agency responsible for overseeing BIDs. The department collects information on the member properties and revenues for every BID, since inception, in the city. Data on square footage and assessed values are available from the Real Property Assessment Dataset provided by the New York City Department of Finance.

The majority of data on city of Los Angeles Business Improvement Districts comes from publicly available city council files, archived at the City Records Center. The council keeps files for each matter before it. A file for a given district usually contains the district's management plan, which contains information on district expenditures and taxation. GIS maps of the districts themselves (to measure physical size) come from the Los Angeles city planning office.

APPENDIX

Table A10.1
BID and NonBID Cities

	BID Municipalities		NonBID Municipalities	
	Mean	**Standard Deviation**	**Mean**	**Standard Deviation**
Municipal Finances				
Total municipal expenditures	729,953	4,167,171	64,196	127,926
Total municipal expenditures per establishment	100	74	77	53
Total municipal expenditures per commercial establishment	279	221	203	138
Total BID-related municipal expenditures per establishment	31	16	24	13
Property tax share of total municipal revenues	0.212	0.138	0.207	0.146
Sales tax share of total municipal revenues	0.100	0.111	0.123	0.131
Demographics				
Population (2000)	222,923	608,330	41,423	50,225
Population rate of change, 1990 to 2000	0.126	0.215	0.148	0.263
Median family income	60	19	62	23
Number of establishments	5,099	13,369	924	1,237
Number of commercial establishments	1,753	4,449	340	429
People per establishment	46	17	52	23
People per commercial establishment	128	46	138	64

(continued)

Table A10.1
(continued)

	BID Municipalities		NonBID Municipalities	
	Mean	**Standard Deviation**	**Mean**	**Standard Deviation**
Municipalities	275		1,859	

Note: Municipal finance data are from 2002, and are expressed in thousands of 2006 dollars. Establishment numbers are from 2002 (2002 economic census). Median family income is from 1999 (2000 decennial census) and is expressed in thousands of 2006 dollars. BID-related expenditures include fire protection, housing and community development, parks and recreation, police protection, libraries, parking facilities, and solid waste management. Population change for BID cities is calculated for 274 observations; we do not observe 1990 population for one BID city.

Table A10.2
Case 1: BID Services Are Substitutes for Municipal Public Goods, 25th and 75th Percentiles

	Low		High	
	25th Percentile	**75th Percentile**	**25th Percentile**	**75th Percentile**
Estimated BID Revenues				
Total BID revenues in municipality *m*	165	1,026	275	1,707
As a share of total municipal expenditures	0.002	0.004	0.004	0.007
As a share of current municipal expenditures	0.002	0.006	0.004	0.009
Expenditures per Establishment				
City Without BIDs				
Total municipal expenditures	49,046	388,001	49,315	388,615
Municipal expenditure per establishment				
NonBID establishment	50.56	105.87	50.69	105.99
BID establishment	50.56	105.87	50.69	105.99
City with BIDs				
Total municipal expenditures	48,639	387,076	48,639	387,076
Municipal expenditure per establishment				
NonBID establishment	50.35	105.68	50.35	105.68
BID establishment	50.35	105.68	50.35	105.68

Table A10.2
(continued)

	Low		High	
	25th Percentile	**75th Percentile**	**25th Percentile**	**75th Percentile**
BID establishment, plus BID expenditures	53.47	108.80	55.31	110.65

Note: See notes for table 10.2. The 75th percentile values for total municipal expenditures reported in this table are lower than the means reported in table 10.2. This divergence is due to extreme outliers in the distribution of municipal revenues.

Table A10.3
Case 2: BID Services Are Complements to Municipal Public Goods, 25th and 75th Percentiles

	Low		High	
	25th Percentile	**75th Percentile**	**25th Percentile**	**75th Percentile**
Estimated BID Revenues				
Total BID revenues in municipality *m*	165	1,026	275	1,707
Expenditures per Establishment				
City Without BIDs				
Total municipal expenditures	48,639	387,076	48,639	387,076
Municipal expenditure per establishment				
NonBID establishment	50.35	105.68	50.35	105.68
BID establishment	50.35	105.68	50.35	105.68
City with BIDs				
Total municipal expenditures	48,639	387,076	48,639	387,076
Municipal expenditure per establishment				
NonBID establishment	50.15	105.50	50.04	105.37
BID establishment	53.27	108.62	55.00	110.34
BID establishment, plus BID expenditures	56.39	111.74	59.97	115.30

Note: See notes for table 10.3. The 75th percentile values for total municipal expenditures reported in this table are lower than the means reported in table 10.3. This divergence is due to extreme outliers in the distribution of municipal revenues.

Table A10.4
Case 3: BIDs Change the Distribution of Tax Share, 25th and 75th Percentiles

	Low		High	
	25th Percentile	**75th Percentile**	**25th Percentile**	**75th Percentile**
BID and NonBID Establishment Shares of Tax Liability				
City Without BIDs				
NonBID tax share	0.949	0.949	0.791	0.791
BID tax share	0.051	0.051	0.209	0.209
City with BIDs				
NonBID tax share	0.942	0.942	0.749	0.749
BID tax share	0.058	0.058	0.251	0.251
Tax Revenues Attributable to BIDs				
Difference in sales tax revenues attributable to BIDs	4	928	9	2,161
As a share of total sales tax revenues	0.026	0.026	0.062	0.062
Difference in property tax revenues attributable to BIDs	77	522	543	3,670
As share of total property tax revenues	0.009	0.009	0.068	0.068
Per-Establishment Property Tax Liabilities				
City Without BIDs				
NonBID establishments	7.77	18.34	6.50	15.35
BID establishments	5.58	13.71	22.04	54.16
City with BIDs				
NonBID establishments	37.75	80.40	30.11	64.18
BID establishments	29.50	66.16	122.08	273.79

Note: See notes for table 10.4. The 75th percentile values for municipal sales and property tax revenues reported in this table are lower than the means reported in table 10.4. This divergence is due to extreme outliers in the distribution of municipal revenues.