

Infrastructure Financing Models

A US Perspective

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Outline

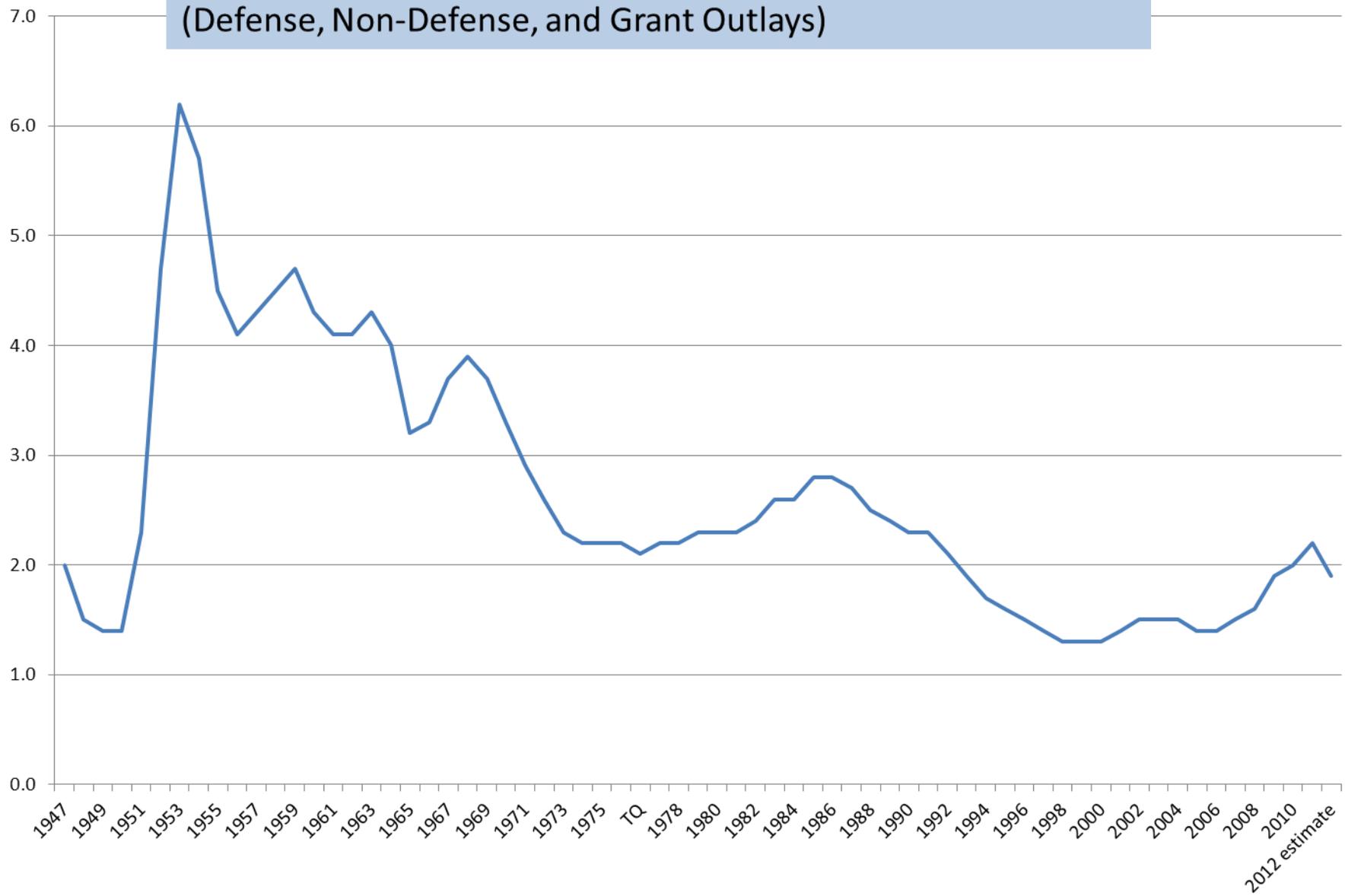
- Background
- General Observations on Municipal Financing
- Integration of Design and Financing
- Value Capture Model—Tax Increment Financing
- Concluding Remarks

Background

Rapidly changing fiscal and political context in which municipalities operate

- Steep federal government spending cuts for redevelopment activities
- Restrictions on tax-exempt bonds
- Devolution of urban policy to more local levels of government
- Tax-payer “revolts” leading to limits on property tax collections
- Heightened awareness of “corporate welfare”, leading to increased scrutiny of corporate tax breaks

Federal Spending on Infrastructure as Percentage of GDP (Defense, Non-Defense, and Grant Outlays)



Source: Office of Management and Budget

Spatialization and Revenue Structures

Why promote development or a certain type of development at a particular location?

Given a choice, parcels will be identified for development that maximize revenues or minimize costs. The 'mini-max incentive' embedded within the context of a city's revenue structure manifests itself spatially in the design, land-use designations and development patterns of the city, or the spatialization of revenue structure.

General Observations on Municipal Financing*

STRATEGIC BEHAVIOR OF PROPERTY-TAX CITIES

Property-tax cities think strategically about development based on the market value of the development and on the possibility of shifting service-delivery costs to other jurisdictions (fiscal externalities).

Characteristics:

- Concentric urban structure
- Clear physical and historic identity
- High-end residences close to center
- High-end office and retail in center

Examples: Most large US cities (e.g. Chicago)

*Adapted from Ann O'M. Bowman and Michael A. Pagano, *Terra Incognita: Vacant Land and Urban Strategies* (Washington, DC: Georgetown University Press, 2004).



STRATEGIC BEHAVIOR OF SALES-TAX CITIES

Sales-tax cities think strategically about development based on their mental constructs of “shopping sheds” and on which market transactions are taxable.

Characteristics:

- Development pressure at urban edge
- Tax dollars drawn across city borders
- Development formulaic
- Urban center languishes

Examples:

Cities where the cost of municipal services is greater than property tax levies
often in southern and southwestern US

Many suburban municipalities adjacent to large cities

STRATEGIC BEHAVIOR OF INCOME-TAX CITIES

Income-tax cities think strategically about development based on their assessment of the income growth potential of the individual or firm.

Characteristics:

- Development less formulaic
- Development locations idiosyncratic
- Results depend on from whom the tax is collected
 - Income tax—seeks employed, high income residents
 - Commuter tax—targets public development projects and pushes private job creation

Examples: Income tax--Most cities in Ohio

Commuter tax—Cities in Kentucky, Detroit, Philadelphia

Integration of Design with Financing*

Multi-functionality and multi-benefit designs *allow financing from multiple sources*

e.g. **“Complete streets”**: transportation , walkability, stormwater control

Transit-oriented development: public transit, mixed use residential/commercial

Sustainable designs: social equity, economic viability, environmental quality

Environmental justice: local employment, local expertise and firms, affordable housing, public art, “living walls”/green roofs

Enhance upstream financing

Infrastructure trusts, TIFs, Grants

Peel off downstream costs

Invest in efficiencies and integrate synergies

LEED certification

Conserve embodied energy

Life cycle costing

Tax advantages

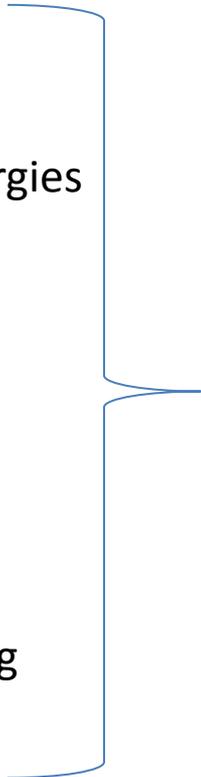
Solar, geothermal, wind credits

Accelerated depreciation

Innovative design-build contracting/benchmarking

Guarantee energy savings

Sourcing local/green materials



Free up long term capital

Complete Streets Chicago

Department of Transportation



Design Guidelines

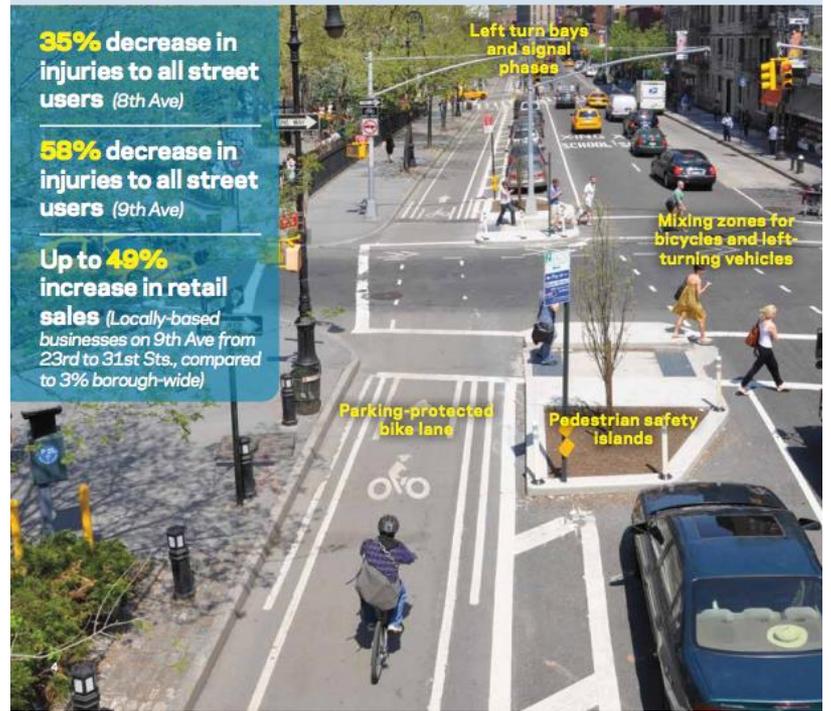
First protected bicycle lane in the US: 8th and 9th Avenues (Manhattan)

New York

35% decrease in injuries to all street users (8th Ave)

58% decrease in injuries to all street users (9th Ave)

Up to 49% increase in retail sales (Locally-based businesses on 9th Ave from 23rd to 31st Sts, compared to 3% borough-wide)



Left turn bays and signal phases

Mixing zones for bicycles and left-turning vehicles

Parking-protected bike lane

Pedestrian safety islands

Boston

Principles

- 1 Traffic Signals**
Signal cycle lengths should be kept to a minimum to reduce delay for all users. As technology advances, traffic signalization should move towards a smart system that provides adaptive pedestrian, bicyclist, transit, and motor vehicle to become more efficient, reducing delay and increasing safety for all users.
- 2 Intersections for all**
Intersection design should balance the need to drive motor vehicles efficiently with the need for safe and efficient movement of non-motorized users. Pedestrians and bicyclists are responsible for greater impact in the event of a crash with a motor vehicle. This applies to all aspects of intersection design, from determining the number of lanes, to the configuration of crosswalks, to the design of traffic signals.
- 3 Reclaim Space**
Intersections that contain wide, unobstructed areas of pavement that are not necessary for the efficient movement of motor vehicles provide opportunities to reclaim street space for pedestrians, transit users, and bicyclists.
- 4 Air Quality**
Opportunities should be explored to install sensors that monitor air quality at intersections to measure the impact of congestion reducing measures.
- 5 All-weather Access**
Intersections should function well for all users under all environmental conditions including rain and snow.
- 6 Reducing Runoff**
Clean street surfaces should be incorporated whenever possible to reduce runoff and reduce the amount of impervious surface at intersections and street corridors.
- 7 Obeying the Law**
Intersections should encourage drivers to obey all laws, and in particular laws that impact the safety of non-motorized users. Signals should be programmed in a consistent, predictable manner to help encourage good behaviors.
- 8 Balancing Environmental Concerns**
Intersections should encourage strategies of intersections, such as efficient signal design, should not discourage environmentally-friendly modes such as walking and bicycling.
- 9 "Tagging"**
"Tag" that allow mobile devices locate and log resources should be installed at intersections to help facilitate way-finding and inform the public about local facilities and businesses.

10 Traffic Management
Traffic signals should be controlled from the Boston Transportation Department's (BTD) Traffic Management Center. They may occasionally make modifications to the signal timing to respond to unusual situations in real-time.

11 Accessible
Present design principles should return all aspects of intersection design, including both geometry and signal timing. New national guidelines for accessible change in the public right of way should be followed with a commitment to achieving the best outcome for all users within the constraints of each site.

Please refer to BTD's Engineering Design Requirements and Special Operations Design Guidelines on the City of Boston's website. Also, see Chapter 8 Implementation for a description of the project planning and design process.

San Francisco



Street trees

Auto-free zone

At-grade crossing

Dedicated busway

Cycle track

Comfortable sidewalk

Not holding children's hands

Not a single helmet

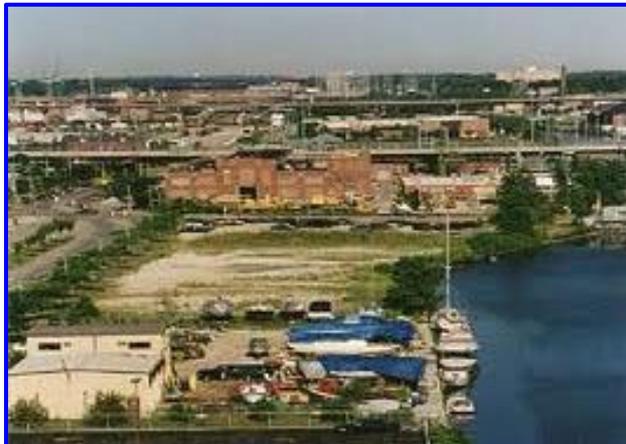
Cell phone + wrapping paper

Life Cycle Energy Expenditures—the Value of Transit-Oriented Development

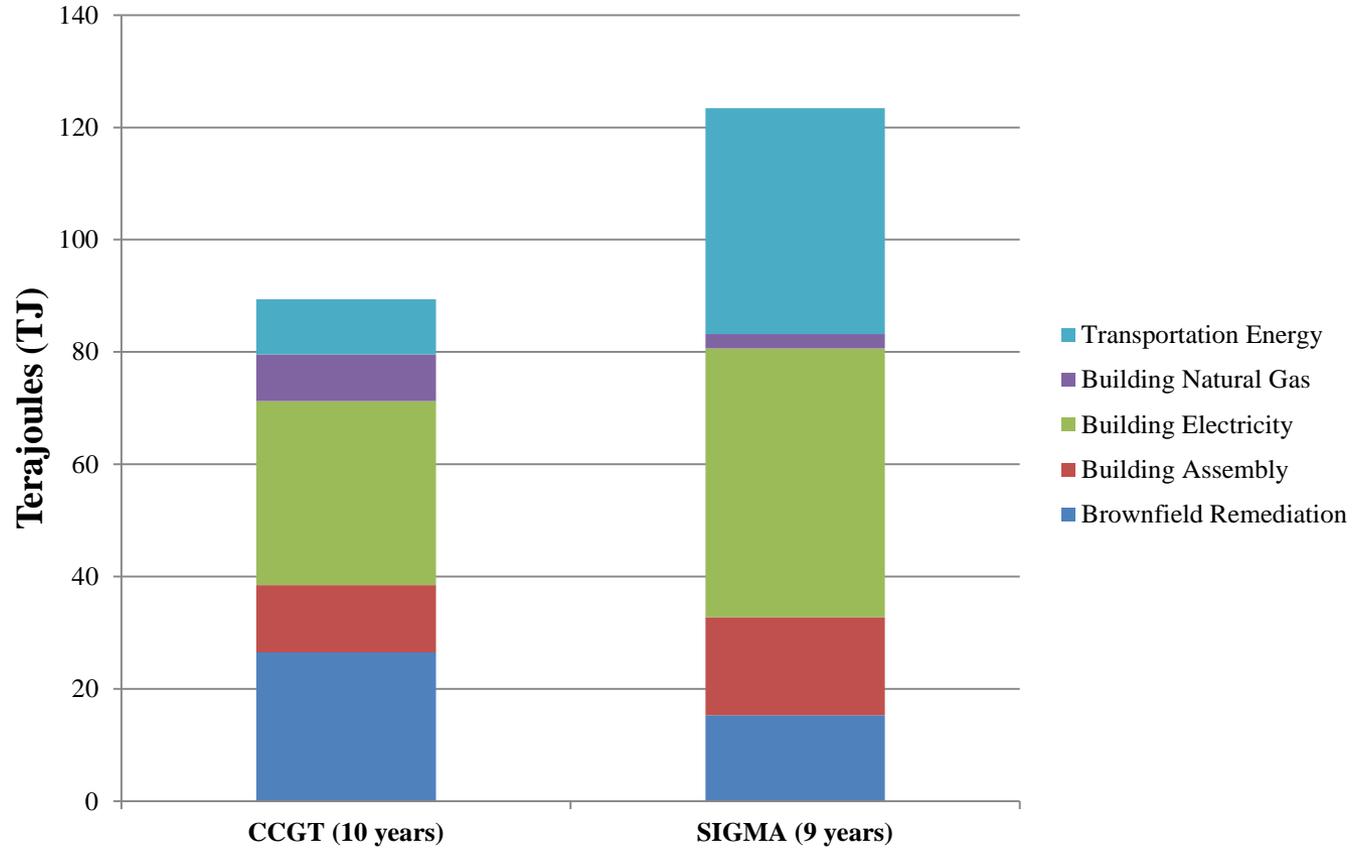
Chicago Center for Green Technology (CCGT)



Sigma Consulting—Milwaukee WI



Lifetime Embodied Energy Comparison

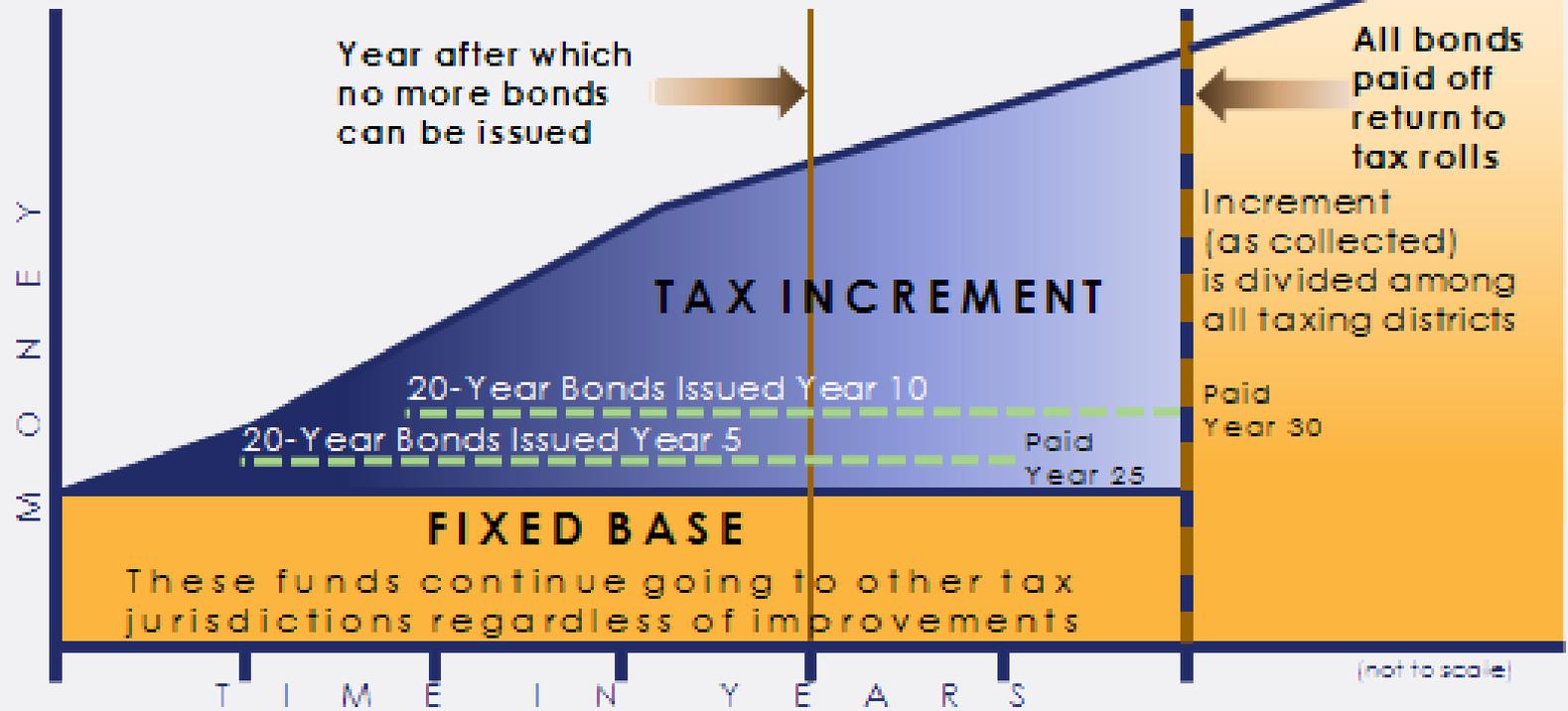


Tax Increment Financing (TIF)*

- TIF districts are designated by local authorities (under State-enabled legislation and according to local redevelopment plans) as “blighted”, i.e. normal development and occupancy are undesirable or impossible due to cessation of growth, deterioration of infrastructure, age or obsolescence of the area, character of occupancy, or presence of substandard buildings
- Reallocation of property tax revenues within a TIF district for approved project or projects
- Earmark future growth in *ad valorem* property tax revenues to pay for initial and ongoing development

*Adapted from: Weber, R. “Tax Incremental Financing in Theory and Practice” pp. 53-69 in *Financing Economic Development in the 21st Century*, 2nd edition, S. White, and Z. Kotval editors, ME Sharp (New York, 2013).

Tax Increment Financing



Mechanics of TIF

- Once designated, the initial assessed property valuation in the district is held constant (or nearly so) for a specific period of time (~20-25 years). This is the “base”.
- Municipal authority makes improvements in the area to attract private investors, (who may also receive TIF “incentives” —hence public-private partnerships).
- With private investment, assessed valuations are expected to rise, creating a “tax increment” which trickles in over time.
- This means that TIF increments are committed *in advance* of being generated, since most development costs accrue up front .
- Two major ways of financing TIF debt:
 - Revenue bonds issued by the redevelopment corporation, or in some instances general obligation bonds issued by the municipality
 - Developer financing (through lending institutions)

Popularity of TIF

In response local funding strategies have evolved that rely less on federal funds, circumvent state or locally imposed revenue and spending limits, and at least superficially do not resemble “give aways”. For “property tax-type” municipalities, TIF is a major element of these strategies:

- It is a locally derived, “self-financing” system

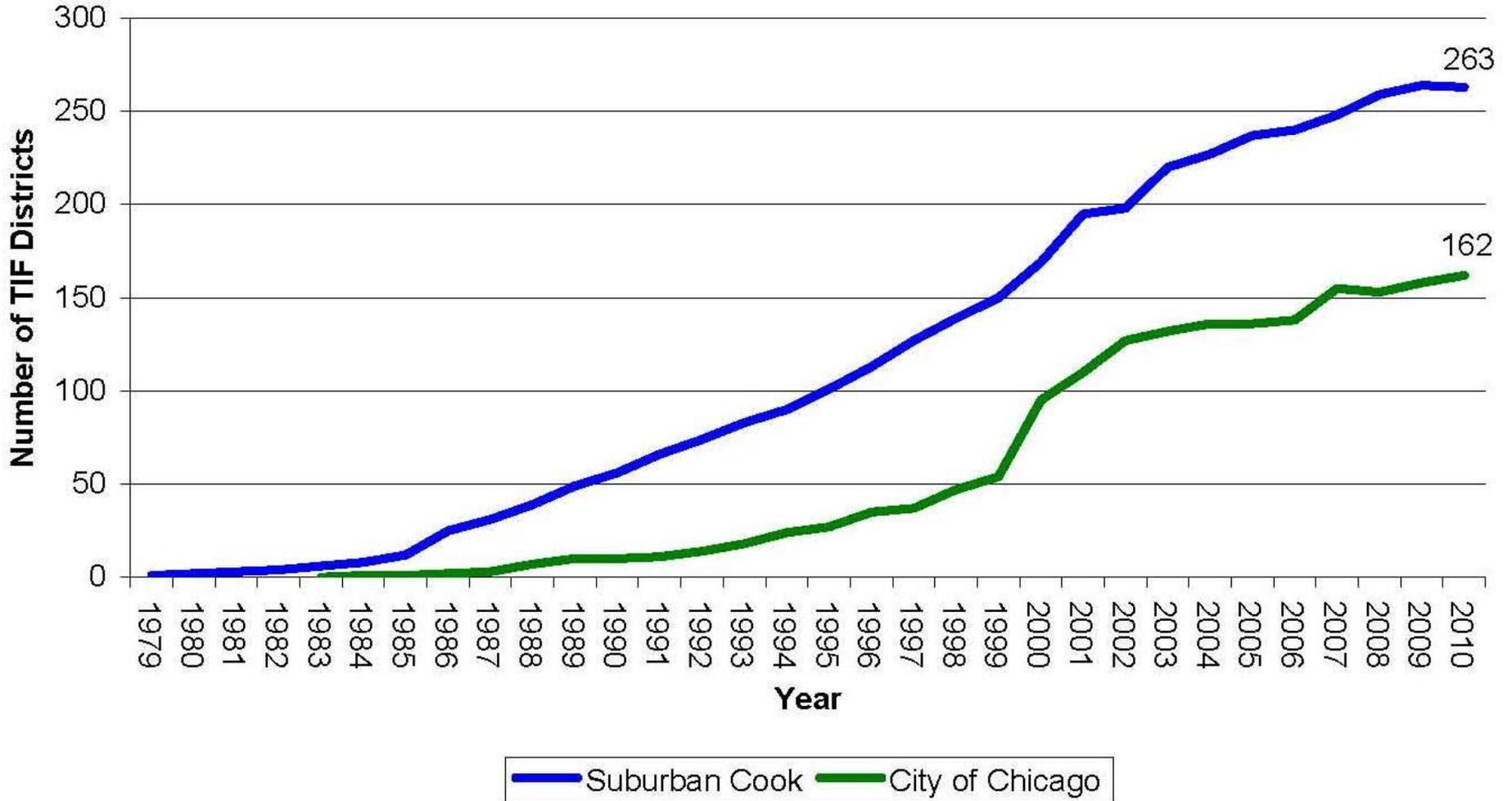
- Doesn't count against state-imposed debt limits

- Particularly useful for large redevelopment projects

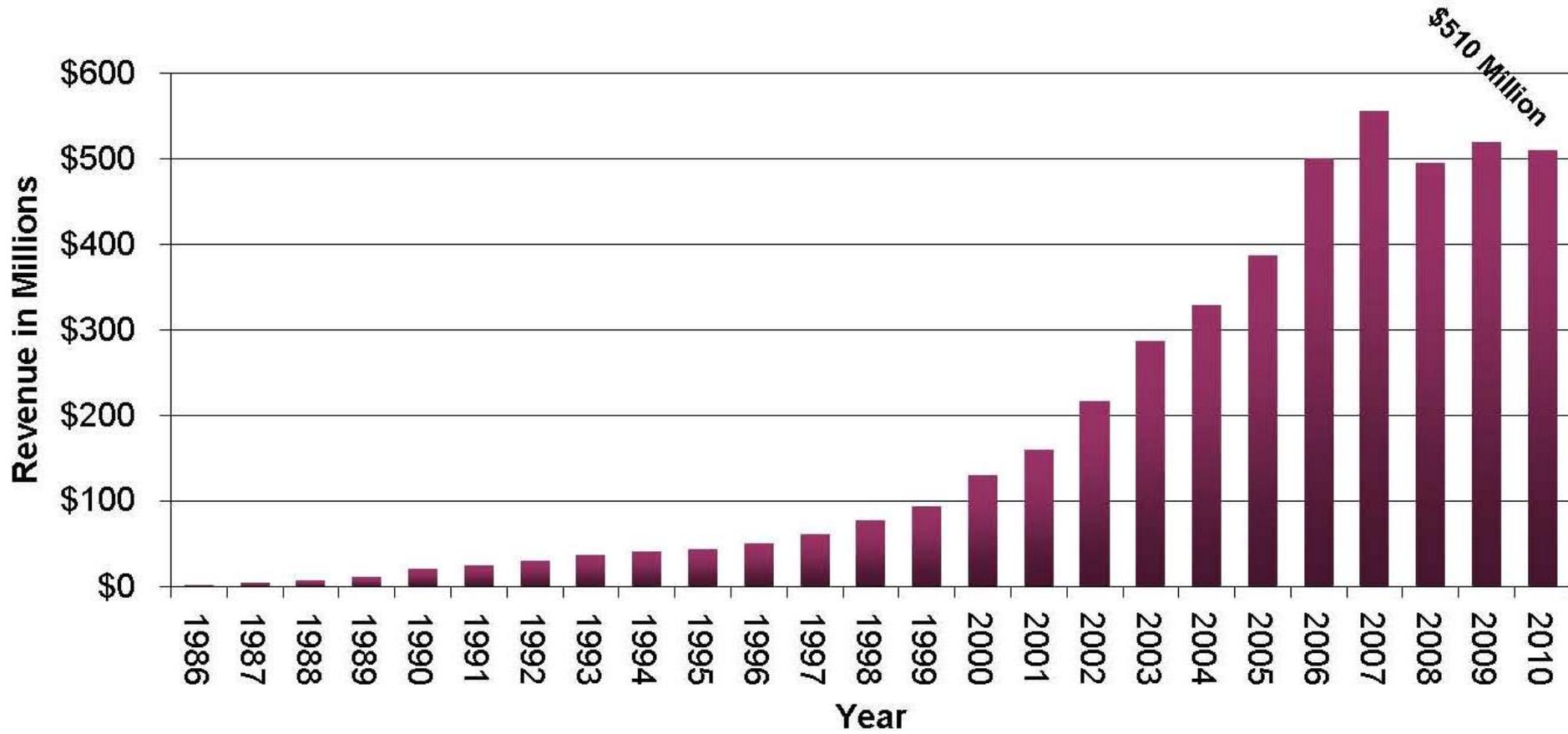
- Perceived as less of a drain on public resources

- Flexible tool (relative ease of initiating, can be used for a variety of development including human resource-focused)

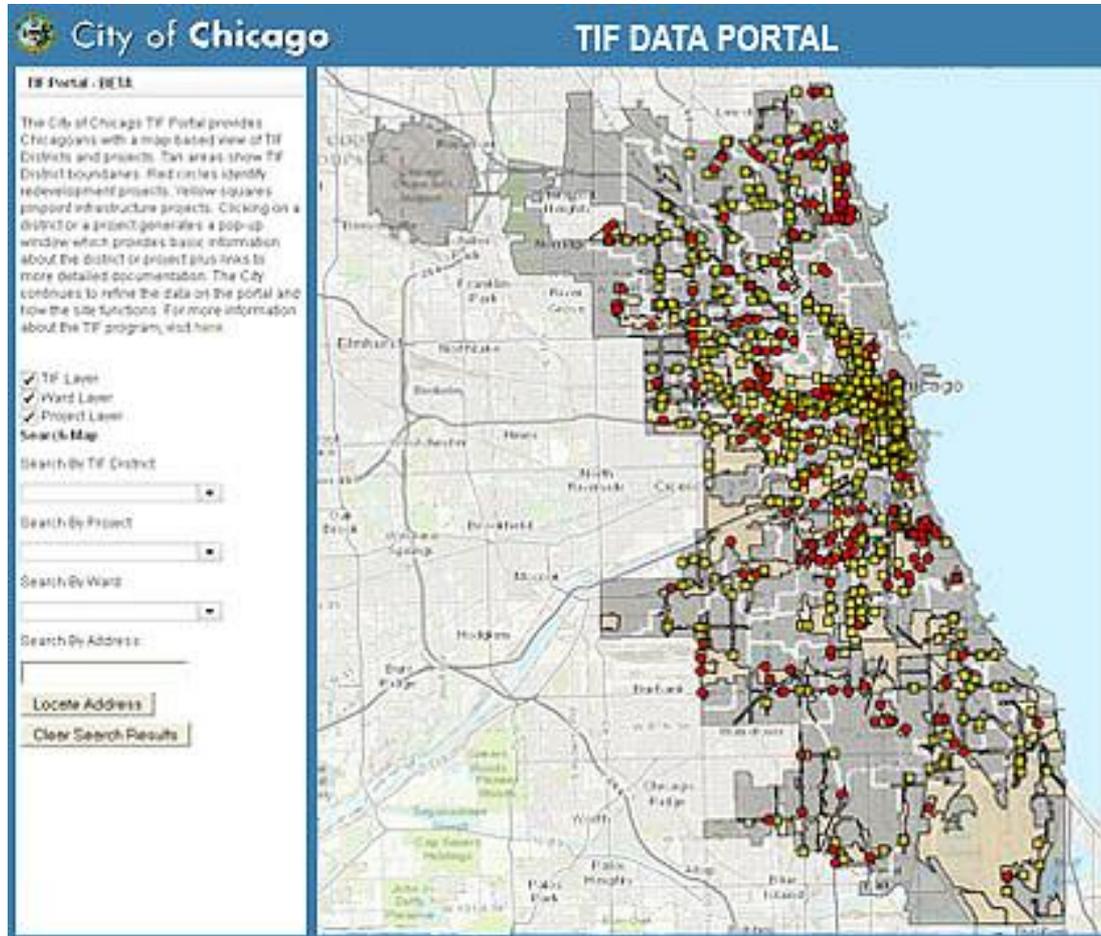
Number of TIF Districts by Year (1979-2010)



Chicago TIF Revenue by Year (1986-2010)



~ 30% of Chicago is now TIF-designated



<http://www.cityofchicago.org/city/en/depts/dcd/provdrs/tif.html>

Former US Steel South Works—Phase 1: \$97M TIF, \$300M private



But...there are disadvantages and problems

- Lower tax revenues for ongoing services and non-TIF projects (schools, parks, transportation, maintenance, housing, human resource programs)
- Possibility of lower growth of tax revenues in non-TIF regions
- Gentrification and the subsequent affordability of the area for existing residents
- Lack of oversight--arguable instances of excessive favorability to developers
- Other issues
 - Questionable degrees of “blightedness”
 - Overly rosy projections of tax increments
 - Poaching of retail from adjacent non-TIF areas
 - 20-25 year frozen tax base is excessive

