City of Louisville
COLORADO • SINCE 1878

City Council

Special Meeting Agenda

Tuesday, May 14, 2024
Library Meeting Room
951 Spruce Street
6:00 PM

Members of the public are welcome to attend remotely; however, the in-person meeting may continue even if technology issues prevent remote participation.

- *You can call in to +1 408 638 0968 or 833 548 0282 (Toll Free), Webinar ID #876 9127 0986.*
- *You can log in via your computer. Please visit the City's website here to link to the meeting: www.louisvilleco.gov/council*

The Council will accommodate public comments during the meeting. Anyone may also email comments to the Council prior to the meeting at Council@LouisvilleCO.gov.

1. CALL TO ORDER

2. FISCAL IMPACT MODEL OVERVIEW

3. STATE LEGISLATION IMPACTING LOCAL ZONING AUTHORITY

4. ADJOURN

Persons planning to attend the meeting who need sign language interpretation, translation services, assisted listening systems, Braille, taped material, or special transportation, should contact the City Clerk's Office (303.335.4536 or 303.335.4574) or ClerksOffice@LouisvilleCO.gov. A forty-eight-hour notice is requested.

Si requiere una copia en español de esta publicación o necesita un intérprete durante la reunión del Consejo, por favor llame a la Ciudad al 303.335.4536 o 303.335.4574 o email ClerksOffice@LouisvilleCO.gov.

SUBJECT: **FISCAL IMPACT MODEL OVERVIEW**

DATE: **MAY 14, 2024**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:
Staff is presenting an overview of the City's Fiscal Impact Model. The City uses fiscal impact analysis to inform some types of development review and for land use policy development. The Finance Committee reviewed the Fiscal Impact Model at their February 22, 2024 meeting. As a follow up to that review, and in anticipation of upcoming land use policy discussions as part of the Comprehensive Plan update project, this is an opportunity for all of Council to become more familiar with fiscal impact analysis methodologies, and the potential benefits and limitations of fiscal impact analysis in policy development.

BACKGROUND:
Fiscal impact analysis is a tool that a city uses to estimate revenues and costs that may result from new development or land uses changes. Different land uses, such as industrial, office, retail, and residential land uses, will have different impacts on city revenue and costs to provide services and infrastructure to those uses. Each land use scenario has different tax and fee structures and demands on city services. The fiscal impact analysis estimates city revenues from one-time fees such as permitting and development impact fees, and ongoing tax revenues anticipated from the development. The analysis compares those revenues to the estimated costs to the city to provide and expand services and public infrastructure when necessary, and provides the net result.

It is important to recognize that a fiscal model does not reflect market conditions that may or may not be present to support certain land use scenarios. For example, a city may want to promote commercial development for tax revenue purposes. A fiscal analysis of a primarily commercial development will show a net positive fiscal benefit to the city. However, if market conditions do not support commercial development in the location planned, such commercial development will likely not take place. If a city is promoting new development or redevelopment in these areas to achieve other city policies or goals, market feasibility should be a consideration in addition to fiscal analysis.

Additionally, policies that promote non-commercial development can provide secondary positive fiscal impacts to the city not captured in a fiscal analysis model. Such development may provide support to other existing sales tax generating developments or create demand for new sales tax generating development. There can also be

positive impact from “place making” and creating vibrant places that attract people to an area that fosters market demand but may not be viewed positively in a fiscal analysis.

While positive fiscal balance overall for the city is desired and necessary for a balanced budget, other policies goals related to affordable housing, economic vitality, equity, diversity, and inclusion, desired community character, and sustainability may also influence land use decisions. Individual developments that promote these policies may be desirable to the city to meet policy goals.

While fiscal balance overall for a city is necessary, land use is not the only factor in determining overall fiscal balance. Fiscal balance can also be achieved through budgeting, and decisions on capital projects, service levels, and fee and tax structure.

Attached for further background are two publications that provide a more in-depth discussion of fiscal analysis:

- ICMA IQ Report, Fiscal Impact Analysis: How Today’s Decisions Affect Tomorrows
- Planning Advisory Service Report, Fiscal Impact Analysis: Methodologies for Planners

CITY OF LOUISVILLE FISCAL IMPACT MODEL SUMMARY:

In 2014, the City hired TischlerBise, a consulting firm specializing in fiscal and economic planning, to develop a fiscal model for city staff to conduct in-house fiscal impact analysis. (Carson Bise, a Principal with TischlerBise, is the author of the two attached technical reports.) The fiscal model is a proprietary, Xcel-based programmed spreadsheet, and city staff are not permitted to share the model with the public as part of the agreement with the consultant.

TischlerBise originally developed two models for the City, one based on a marginal-cost approach, and another that is average-cost based but has some hybrid marginal-cost assumptions. The attached *Planning Advisory Service Report, Fiscal Impact Analysis: Methodologies for Planners* provides the following descriptions for each methodology.

> *Average-cost approaches assume a linear relationship and do not consider excess or deficient capacity of facilities or services over time. A per capita relationship—in which the current level of service per person in a community is considered to be the standard for future development—is an example of an average-cost approach (p. 23).*
>
> *Marginal-cost approaches describe the unique characteristics of a jurisdiction’s capital facilities. Although over the long term, average- and marginal-cost techniques will produce similar results, the real value of fiscal analysis is in the two- to 10-year time period, when a community can incur costs. Marginal-cost analysis is most useful in this time frame (p. 24).*

The City's marginal-cost model was developed for use in area-wide planning efforts and the average-cost model was developed for site-specific development review. Following the adoption of the City's *Program Based Budgeting* methodology, TischlerBise was no longer able to support the marginal-cost model due to the complexity of this budgeting methodology. Currently the City only utilizes the average-cost hybrid model for development review.

In 2018, the City updated its baseline assumptions for the model and created policies on what types of land use applications should trigger an analysis. This was developed in consultation with the City Council Finance Committee and the presented to and endorsed by the full City Council.

While the models are complex and much of the formulas have been set by TischlerBise in consultation with the City when the models where created, there are several direct model inputs that the City staff must consider when running the models. These inputs often come from the Census or other publications such as the Institute of Traffic Engineers Handbook. The City may also obtain some of the inputs from an applicant as part of a development proposal.

The following table provides a summary of the data source and the assumptions developed with the Finance Committee in 2018. An additional model assumption not included in these standards is the amount of household sales tax captured in the City. Staff recently increased the baseline assumption for residential sales tax capture from 40% to 60%. This increase was in consultation with TischlerBise and based new assumptions for online sales tax paid to the city. Both volume of online sales has increased and compliance and enforcement of payment of local taxes has increased significantly since the original assumption was determined.

Inputs	**Source/Assumption**
Persons/Unit	Census/American Community Survey
Unit/Construction Value	Developer/Market Research (staff also uses 60% value to sales price based on 2023 data from TischlerBise when developer does not have reliable data)
Residential Income	Developer/15% of Unit Value
Residential Income Spent on Taxable Items	35% of Income
Residential Spending Captured in City	40%
Vehicle Trips	Institute of Traffic Engineers

Employee Density	Institute of Traffic Engineers
Employee Spending	ICSC/Staff Assumption: Office = $5,000 & Retail = $1,200
Retail Tax/Sq. Ft.	<25K = $100 25K-50K = $200 > 50K = $300
Absorptions Rates (Time to Complete the Development)	Developer/Staff Assumption: 7 Year Residential & 20 Year Commercial

The policy created in 2018 also requires that the analysis include a “high” and “low” scenario to account for variability in how the development may proceed over time. The “high” scenario analysis is based on the inputs provided by the applicant and the other standard assumptions listed above. The “low” scenario adjusts values to 80% of the “high” scenario and typically doubles absorption rates. Staff will also adjust inputs and assumptions on a case-by-case basis when warranted and provides a summary of assumptions in the staff memo for the project.

The following images show the standard input section of the model for both residential and commercial development.

RESIDENTIAL DEVELOPMENT COMPONENT YES

Land Use Profile			Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed
Residential Low Density	2.57 Persons Per Unit	33 Lin. Ft. Lot Width	1,000 Units	Percent Absorbed	10 Units
Market Value:	$600,000 Per Unit	6.76 Vehicle Trips	50% Adj. Factor		10.00%
Construction Value	$300,000 Per Unit	$132,000 HH Income	35% on Taxables Items		
Residential Medium Density	1.26 Persons Per Unit	8 Lin. Ft. Lot Width	361 Units	Percent Absorbed	50 Units
Market Value:	$550,000 Per Unit	4.13 Vehicle Trips	50% Adj. Factor		14.00%
Construction Value	$275,000 Per Unit	$121,000 HH Income	35% on Taxables Items		
Residential High Density	1.38 Persons Per Unit	8 Lin. Ft. Lot Width	0 Units	Percent Absorbed	0 Units
Market Value:	$350,000 Per Unit	4.68 Vehicle Trips	50% Adj. Factor		30.00%
Construction Value	$175,000 Per Unit	$77,000 HH Income	35% on Taxables Items		

Land Use Profile			Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed
Retail <25k	78.33 Vehicle Trips	28% Adj. Factor	136,618 Sq. Ft.	Percent Absorbed	47,000 Sq. Ft.
Market Value:	$272 Per Sq. Ft.	Construction Value:	$194 Per Sq. Ft.		10.00%
Employment Density:	3.33 Per 1,000 Sq. Ft.	$150 Sales Per Sq. Ft.	$0 Spending per Emp.		
Retail 25-50k	61.46 Vehicle Trips	31% Adj. Factor	0 Sq. Ft.	Percent Absorbed	75,000 Sq. Ft.
Market Value:	$259 Per Sq. Ft.	Construction Value:	$185 Per Sq. Ft.		10.00%
Employment Density:	2.86 Per 1,000 Sq. Ft.	$200 Sales Per Sq. Ft.	$0 Spending per Emp.		
Hotel	6.33 Vehicle Trips	50% Adj. Factor	206,808 Sq. Ft.	Percent Absorbed	0 Sq. Ft.
Market Value:	$272 Per Sq. Ft.	Construction Value:	$194 Per Sq. Ft.		10.00%
Employment Density:	0.62 Per 1,000 Sq. Ft.	$52 Sales Per Sq. Ft.	$1,200 Spending per Emp.		
Office <25k	13.00 Vehicle Trips	50% Adj. Factor	0 Sq. Ft.	Percent Absorbed	0 Sq. Ft.
Market Value:	$272 Per Sq. Ft.	Construction Value:	$194 Per Sq. Ft.		10.00%
Employment Density:	4.13 Per 1,000 Sq. Ft.	$0 Sales Per Sq. Ft.	$5,000 Spending per Emp.		

As mentioned, staff will run a “high” and “low” development scenario. The following table is an example of assumptions that could be added to the model to show each scenario.

	High	Low
Residential Units	100	80
House Value	$600,000	$450,000
Construction Value	$300,000	$225,000
HH Income	$120,000	$67,500
Absorption	4 years	8 years
Office	20,000 sq. ft.	16,000 sq. ft.
Market Value	$300	$240
Construction Value	$200	$160
Worker Spending	$5,000	$4,000
Absorption	10 years	20 years
Retail	10,000	8,000
Market Value	$250/sq. ft.	$200
Construction Value	$180/sq. ft.	$144
Worker Spending	$1,200	$960
Sales Per sq. ft.	$100	$80
Absorption	10 years	20 years

The following table is an example of the summary output of the model, which shows revenue and expendeture by fund, as well as net fiscal impact of all funds. The model provide a 20-year total and can be broken into year-by-year analyis, either for the total revenues or by fund.

Cumulative Combined Funds Results (x$1,000) - Scenario Comparisons (x$1,000)
City of Louisville
Fiscal Impact Model

	SCENARIO			
Revenue by Fund	**High**	**%**	**Low**	**%**
General Fund	$2,416	60%	$1,003	52%
Open Spaces & Parks Fund	$309	8%	$152	8%
Lottery Fund	$0	0%	$0	0%
Historic Preservation Fund	$114	3%	$56	3%
Capital Projects Fund	$1,195	30%	$701	37%
TOTAL REVENUE	**$4,034**	**100%**	**$1,912**	**100%**
Expenditures by Fund				
General Fund	$1,891	62%	$883	52%
Open Spaces & Parks Fund	$93	3%	$42	3%
Lottery Fund	$0	0%	$0	0%
Historic Preservation Fund	$0	0%	$0	0%
Capital Projects Fund	$1,075	35%	$765	45%
TOTAL EXPENDITURES	**$3,060**	**100%**	**$1,691**	**100%**
NET FISCAL RESULT BY FUND				
General Fund	$525		$120	
Open Spaces & Parks Fund	$216		$110	
Lottery Fund	$0		$0	
Historic Preservation Fund	$114		$56	
Capital Projects Fund	$120		($64)	
NET FISCAL IMPACT	**$974**		**$222**	

Staff plans to provide a demonstration of the model at this meeting so that City Council has a better understanding of how staff operates the model and to help answer any questions about the model.

ATTACHMENTS:

1. ICMA IQ Report, Fiscal Impact Analysis: How Today's Decisions Affect Tomorrows
2. Planning Advisory Service Report, Fiscal Impact Analysis: Methodologies for Planners
3. Staff Presentation

ICMA PRESS

IQ Report

Volume 39/Number 5 2007

Fiscal Impact Analysis: How Today's Decisions Affect Tomorrow's Budget

Most states require local governments to prepare a balanced budget annually. However, most states do not require that jurisdictions conduct fiscal impact evaluations to help ensure that local officials understand the short- and long-term fiscal effects of land-use and development policies and of new developments that are approved. A fiscal impact analysis clarifies the financial effects of such policies and practices by projecting net cash flow to the public sector resulting from residential and nonresidential development. A fiscal impact analysis can enable local governments to address short- and long-term planning, budget, and finance issues.

This report discusses the applications of fiscal impact analysis and reviews common methodologies used to collect and analyze information. Five case studies illustrate how fiscal impact analysis can be used for a variety of purposes depending on local circumstances.

Contents

ICMA IQ Report
Volume 39/Number 5
Item No. E-43447

These reports are intended primarily to provide timely information on subjects of practical interest to local government administrators, department heads, budget and research analysts, administrative assistants, and others responsible for and concerned with operational aspects of local government.

IQ Reports are available as single copies or by subscription. Single-copy prices are as follows: Members $19.95 (online), $21.95 (print); nonmembers $24.95 (online), $26.95 (print); IQ Report Online annual subscriptions (six bimonthly issues) are $119 (members), $149 (nonmembers).

To order, call toll free 1-800-745-8780 in the United States, or 770-442-8631 ext. 377 if calling from outside the United States. Recent IQ Reports can be purchased and downloaded from the ICMA Bookstore at **bookstore.icma.org**.

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Fiscal Impact Analysis: How Today's Decisions Affect Tomorrow's Budget

Carson Bise, AICP, is president of TischlerBise, Inc., a Bethesda, Maryland, consulting firm specializing in fiscal impact analysis, impact fees, and revenue strategies. He has conducted fiscal evaluations in twenty-four states, ranging from evaluations of multiple land-use scenarios, specific development projects, annexations, urban service provision, tax-increment financing, and concurrency and adequate public facilities monitoring. He has also completed more than 125 impact fee studies for parks and recreation, open space, police, fire, schools, water, sewer, roads, and general government facilities. Mr. Bise has an MBA and is a member of the American Institute of Certified Planners.

This report is intended to help local officials understand what a fiscal impact analysis is, how the process can benefit them, what steps they should take to conduct fiscal impact evaluations, and how they can integrate fiscal impact evaluations with revenue strategies.

Defining Fiscal Impact Analysis

A fiscal impact analysis projects the net cash flow to the public sector (the local government and, in many cases, the school district) resulting from new development—residential, commercial, industrial, or other. It is important to distinguish a fiscal impact analysis from an economic impact analysis. A fiscal impact analysis projects the cash flow to the public sector, but an economic impact analysis projects the cash to the private sector as measured in income, jobs, output, and indirect impacts. A fiscal impact analysis is similar to the cash flow analysis a developer conducts in order to project costs and revenues likely to result from a proposed development for two to ten years in the future. Just as a household benefits by forecasting its long-term cash flow needs (incorporating anticipated expenses for higher education and other large-cost items) and setting money aside to pay for future outlays, local governments are better prepared to manage during changing financial circumstances if they anticipate and plan for future costs and revenues.

Fiscal analysis enables local governments to estimate the difference between the costs of providing services for new development and the taxes, user fees, and other revenues that will be collected as a result of new development. Fiscal impact analysis can be used to evaluate the fiscal effect of an individual project (such as a request for rezoning), of a change in land-use policies (such as increasing allowable densities for development), or of a proposed annexation.

It is important to keep in mind that the fiscal impact of development policies, programs, and activities is only one of the issues that local government officials should consider when evaluating policy or program changes relating to land use and development. Local government should not use the results of a fiscal impact analysis to practice "fiscal zoning," the practice of excluding or denying development proposals that are a financial drain or are less beneficial fiscally than other alternatives. While a fiscal impact analysis is an important consideration in planning decisions, it is only one of several issues to be considered, since the project may advance a community's goals related to affordable housing, economic diversity, and quality of life. Moreover, localities have a responsibility to consider other impacts as well. Court cases have suggested that, in addition to fiscal impacts, local governments need to evaluate environmental impacts, regional needs for housing and employment, and other concerns. Nevertheless, fiscal impact data can be used as part of a larger cost-benefit analysis to craft a land-use plan that incorporates the appropriate mix of land uses necessary to achieve fiscal sustainability or, at a minimum, fiscal neutrality.

Numerous factors influence the fiscal results for different land uses. These factors include but are not limited to the local revenue structure, local levels of service, capacity of existing infrastructure, and the demographic and market characteristics of new growth.

Local Revenue Structure

The key determinant in the calculation of the net fiscal results generated by new development is the local revenue structure. Every community relies on at least one predominant revenue source, and some communities rely on several. Common revenue sources include property tax, local sales tax, and local income tax.

An important component of the revenue structure is the formulas that are used for the distribution and collection of various taxes. With the exception

of property tax, the distribution and collection formulas for most revenues vary greatly from state to state. Some states where sales tax is collected allow communities to exact a local option sales tax, which is usually collected on a situs basis (point of sale). Other states collect sales tax at the state level and distribute the revenue to communities using a population-based formula. The same situation exists with income tax: some states allow a local income tax—a "piggyback" tax—on top of the state income tax. In certain states, as in Maryland, this tax is collected by place of residence. In others, as in Ohio, it is collected by place of employment.

Levels of Service

Another important factor in the fiscal equation is the levels of service currently being provided in a community. The existing level of service is defined as the facility or service standard currently funded through the budget. Examples of level of service standards are pupil-teacher ratios (for example, one teacher per twenty-four students) and acres of parkland per capita. This is an important factor because levels of service vary from community to community.

Capacity of Existing Infrastructure

The capacity of existing infrastructure in a community also has a bearing on the fiscal sustainability of new development. One community, for example, may have the capacity to absorb a large number of additional vehicle trips on its existing road network and a significant number of additional students in its high school. This community can absorb more growth than a community without excess capacity, without making additional infrastructure investments.

Demographic and Market Characteristics of New Growth

Next to a community's revenue structure, no other factor has as great an impact on the net fiscal results as the demographic and market characteristics of different land uses. Examples of demographic and market variables for residential development include average household size, pupil generation rate, market value of housing units, trip generation rate, density per acre, and average household income. Important demographic and market characteristics for nonresidential development include square feet per employee, trip generation rate, market value per square foot, sales per square foot (retail), and floor area ratio.

The relative importance of the various demographic and market factors depends on a community's revenue structure. For example, Figure 1 shows the annual net fiscal results for nine residential land uses. Data are from a TischlerBise study prepared for Holly Springs, North Carolina, where property tax is the largest source of revenue, accounting for almost 54 percent of general fund revenue in fiscal year 2000. The next largest source of revenue, the sales tax, provided 14 percent of total revenue. Because of this revenue structure, market value is the primary determinant of the fiscal results.

Only two of the nine residential prototypes generate annual net revenue to the city of Holly Springs. To understand the importance of market value in these fiscal results, one need look no further than the two five-dwelling-unit-per-acre prototypes, which include an "upscale" prototype as well as a "starter home" prototype. The demographic characteristics are the same for both of these residential prototypes; however, there is a difference of $115,000 in the market value (tax

Figure 1 Annual Net Fiscal Results for Nine Residential Land Uses in Holly Springs, North Carolina, Fiscal Year 2000, Dollars per Unit

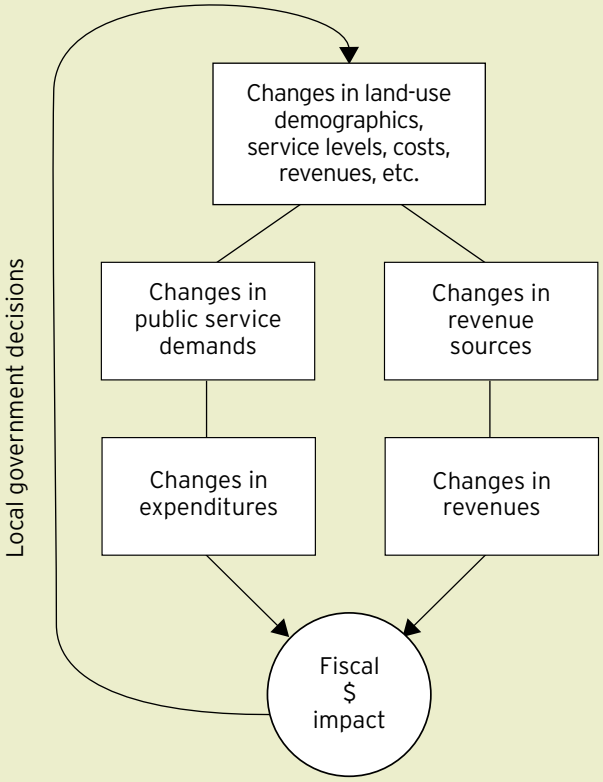
Source: TischlerBise, Inc.

value), resulting in substantial net deficits on a per unit basis for the starter home prototype and modest net revenues for the upscale version of the prototype.

The dynamics of fiscal impact are shown in Figure 2. To assess accurately the fiscal impacts of changing land use or demographics, the local government must first define an acceptable level of service for all relevant government services (for example, police, fire, public works, recreation). When evaluating the costs associated with providing the acceptable levels of service, the local government should consider existing unused capacities of public services and programs, especially of capital facilities. The new development, or new demand, will be expressed in terms of changes in population, employment, or land use projected to result from the scenarios being evaluated.

Using local information, and perhaps comparing it with regional or national average-cost information, the local government next estimates future capital costs, operating expenses, and special and general revenues that will result from providing the acceptable level of service to the potential new development. In other words, the local government projects the annual costs—department by department—of servicing new development, the annual revenues generated by the new development, and the net surplus or deficit.

Figure 2 The Dynamics of Fiscal Impact



Source: Tischler & Associates, Inc.

The information can help local officials estimate a new development's specific impact on tax rates, bonding capacity, and bonding margin. If local officials are thinking about changing land-use policy, fiscal impact analysis alternatively can help them determine whether the proposed regulatory revisions will result in a fiscal surplus or in a deficit. If new infrastructure must be built early to serve growth, then local officials can estimate the size of the short-term deficit and determine when revenues generated by growth should begin to enter the local government's budget.

Because a fiscal analysis will indicate whether and when a jurisdiction could face deficit budgets, the local government is able to weigh land-use policy decisions, acceptable levels of service, plans for capital investments, and long-term borrowing needs. In addition, a projected fiscal deficit can prompt local officials to evaluate current and future revenue sources. If a fiscal evaluation indicates a surplus, the local government may wish to change its use of revenue sources to fund infrastructure replacement or higher levels of service.

Population and Service Demand

Let's look at a specific example of fiscal impact analysis: evaluating how an increase in population will increase the demand for a service such as recreation. A developer requests the rezoning of a 300-acre parcel from a density of one unit per acre to four units per acre. First, as part of the process of ascertaining an acceptable level of service, the services provided by the recreation department must be defined. In this case, the level of service for a community park might be described in terms of the number and type of housing units or in terms of population. For instance, an acceptable level of service might be defined as one community park for every 3,000 single-family detached housing units, or for every 7,500 people.

After the level of service is defined, the cost and revenue factors are determined. It is desirable to define the costs as precisely as practical. In our example, the capital costs for a community park could be defined in terms of acres of land required, plus equipment and other improvements per park. Operating expenses could be defined in terms of program personnel, materials, supplies, and other related items used every year. The process might also consider the existing capacity of nearby parks, the different thresholds at which new services would be added to the existing parks, and the date when additional parkland would be required.

Another step is the projection of any dedicated capital revenues associated with providing the service. In our example, the local government must anticipate impact fee revenue.

Types of Fiscal Impact Analyses

Most fiscal impact analyses conducted in the United States fall into one of the following three categories:

Cost-of-land-uses analysis The first type of analysis can be classified as a cost-of-land-uses fiscal impact analysis. The characteristics of various residential (single family, townhouse, apartment) and nonresidential (1,000 square feet of retail, industrial, office) prototypes are defined, and the annual costs and revenues are then determined for each prototype in order to show the generalized impacts each land use independently has on a local government's budget. Typical factors used to define these prototypes include persons per household, equivalent dwelling units, road frontage, employment per 1,000 square feet, vehicle trips, and assessed value. Table A shows an example of inputs used in defining residential land-use prototypes.

Table A Residential Land-Use Prototypes, Cost-of-Land-Uses Fiscal Analysis, Lawrence, Kansas

Prototype	Persons per household[1]	Taxable value per unit[2] (dollars)	Vehicle trips per unit[3]	Trip adjustment factor[3] (percent)	Minimum lot frontage (feet)[4]
Single-family detached, suburban (RS-2 district)	2.65	31,377	9.57	50	60
Single-family detached, urban (RS-2 district)	2.65	29,740	9.57	50	50
Duplex (RMD district)	2.08	23,370	5.86	50	30
Apartment (PRD district)	1.83	9,038	6.72	50	10

Source: TischlerBise, Inc.

Notes:
1 Based on 2000 U.S. census data.
2 Based on a sample of assessment data from recent construction by city staff.
3 Based on *Trip Generation,* 7th ed. (Washington, D.C.: Institute of Transportation Engineers, 2003).
4 Based on information provided by city staff; apartment information from TischlerBise experience.

Project analysis The second type of fiscal impact analysis, a project analysis, is the most common type of fiscal analysis conducted by local governments. In this type of analysis, one or multiple development schedules are evaluated for their fiscal impact over a specified period of time. Whereas a cost-of-land-uses fiscal impact analysis evaluates the impact of individual land uses, a project analysis evaluates the overall fiscal impacts of all land uses combined. However, as most project-level analyses are prepared in conjunction with specific development proposals, this type of analysis is incremental in that it addresses the impacts of only one development project at a time, usually in isolation.

Areawide analysis The third type of fiscal impact analysis, an areawide analysis, can be applied to a neighborhood; several contiguous neighborhoods; or to an entire city, county, or region. This type of analysis is cumulative in that it evaluates the fiscal impacts of all anticipated development within the analysis area over a defined period, usually between ten and twenty years. In this type of analysis, it is common to evaluate different development scenarios. These scenarios can include variations in absorption schedules, a comparison of alternative land-use plans, or a comparison of alternative development patterns. Table B shows an example of annual scenario projections for residential and nonresidential land uses.

Table B Example of Annual Scenario Projections for Residential and Nonresidential Land Uses

Land uses	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Office (sq. ft.)	0	158,000	183,000	225,000	0	112,500	225,000	112,500	225,000
Retail (sq. ft.)	75,000	47,000	0	0	0	0	0	0	0
Industrial (sq. ft.)	0	0	0	0	0	0	0	0	0
Other (sq. ft.)	0	0	0	0	0	0	0	0	0
Multifamily units (no.)	398	398	152	0	0	0	0	0	0
Single-family attached units (no.)	360	319	0	0	0	0	0	0	0
Single-family detached units (no.)	114	150	0	0	0	0	0	0	0

Source: TischlerBise, Inc.

Applications for Fiscal Impact Analysis

Fiscal impact analysis is helpful in short- and long-range land-use policy planning and finance planning. Its applications for decision making are discussed below.

Planning Issues

The six applications below indicate how fiscal analysis can be an effective policy tool for long-range planning.

Land-use policies Should a jurisdiction encourage higher-density land use or allow an overlay district in a certain area? Are fiscal benefits associated with development that incorporates "new urbanist" principles? Do a jurisdiction's current land-use policies make sense? If costs as well as other factors are to be considered, a fiscal impact evaluation will help in the decision-making process. Land-use requirements and regulations, including zoning, can be viewed from many different perspectives. Fiscal impact analyses help local officials translate land-use changes into service costs, revenues, and net cash flow to the public sector. They can explain how the delivery or cost of services and facilities will be affected by new development: Will new roads be needed? New parks?

Demographic-economic changes Many elected and appointed local government officials can tell interested parties how they think their community will look in ten or twenty years in terms of population, housing, and employment. But very few can say what the fiscal impact will be: whether service levels will remain the same or deteriorate under pressure from a growing population. What happens if the current residential base ages in place versus if residents move elsewhere and contribute to continued housing turnover? Either scenario has implications for a community in terms of the number of schoolchildren as well as the age demographics, which can affect the demands on social services and recreation services and facilities. Similarly, understanding the alternative development scenarios helps local officials explain the financial pros and cons for the community of maintaining or changing the demographic and economic status quo.

Rezonings Fiscal analysis can be helpful in local government-developer negotiations. Some rezonings require expansion of public infrastructure to support more intensive development, causing high costs for the local government early on. If a well-designed and supportable fiscal analysis indicates local government investment will be required, the local government is in a strong position to negotiate with the applicant to help pay for those front-end infrastructure costs.

Annexation Many communities perceive annexations as cash cows because they focus on the additional revenues that will accrue as a result of annexation and do not consider the costs. Fiscal impact analysis can ascertain the costs of improving the services and facilities in the area proposed for annexation in order to make them comparable with the annexing jurisdiction's existing level of service. For example, local streets originally constructed to a rural standard may need upgrading to meet a city's standards. The analysis can calculate whether an annual fiscal surplus or deficit will result from the proposed annexation during each year of the forecast period. The analysis can be expanded to look beyond the issues associated with bringing the existing level of service in annexed areas up to community standards; it can also look at the fiscal impact of anticipated development in the annexed area as part of the process of evaluating land-use policies. Factors that influence the fiscal sustainability of annexations are numerous and include the development potential on vacant land, the timing or staging of development potential, assessed value of the existing development base, local and state revenue structures, local levels of service, and the remaining capacity of existing capital facilities.

Infrastructure planning A good fiscal analysis forecasts infrastructure needs to meet anticipated changes in a community. Any change in land use, population, or employment will have an impact on a number of capital-intensive services, including streets and utilities. The fiscal impact process requires that local officials specify the types of infrastructure provided by the community (for example, local roads) and the level of service to be provided (for example, provision of sidewalks and street lighting on all local roads). The analysis will indicate how much new infrastructure will be required to serve an anticipated level of new development. Costs can then be projected for land, equipment, improvements, and operating expenses for maintaining the new infrastructure.

It is important to consider whether existing infrastructure seems to have unused capacity in order to determine whether it should be considered as part of the analysis. If there is significant unused capacity, it will be available to serve new development, thus reducing the need for new infrastructure.

On the revenue side, the analysis will take into consideration special revenues from user fees or other sources such as impact fees, improvements to be made by the developer, and general fund revenues to be allocated to infrastructure development, as appropriate. A similar type of analysis is done for utilities because land-use changes can result in changes in the demand for water and sewer service, which may in turn affect the costs and revenues of various distribution and treatment approaches. Changes in water and sewer service have an effect on one-time revenue sources such as connect or hookup charges as well as on operating revenues.

Leveraging public dollars Fiscal evaluations can help local officials who are considering how to promote

economic growth decide how to invest limited funds so as to maximize the return. For example, different economic development strategies can be evaluated for their impacts on land use. Land use in turn affects services, costs, and revenues. A fiscal impact analysis helps identify the economic development strategy that makes the most fiscal sense.

Finance Issues

A fiscal impact analysis focuses on change, generally over a two- to ten-year period. Although the accuracy of the projections diminishes over time, the analysis can help to raise budget and finance policy issues and suggest alternative approaches for addressing them. A fiscal impact analysis differs from traditional local government revenue and budget forecasting: local government budgets are primarily revenue driven. That is, the budgeted operating and capital expenditures are fiscally constrained by the amount of revenue forecast. In other words, a local government backs into the budgeted appropriation as it tailors spending to income.

In contrast, a fiscal impact analysis projects the demand for services and facilities (usually based on current levels of service) without regard for expected revenue. If projected revenue does not cover projected expenditures, obviously a deficit will be incurred. Further, a fiscal impact analysis links changes to costs and revenue to specific land uses. For example, if community decision makers implement a shift in land-use policy that results in the need for public safety capital facilities and associated operating expenses sooner rather than later, a simple cost projection based on a 5 percent annual increase could potentially understate future public safety costs. Following are five ways in which fiscal impact analysis can be applied to finance issues.

Capital improvement programming Individual departments seldom incorporate market forces or land-use plans into their capital improvement program (CIP) requests. Fiscal analysis enables a local government to forecast the need for additional capital facilities as well as the most appropriate locations for investments in public facilities, based on projected increases in population or employment in various areas of the community. A fiscal impact analysis also clarifies the timing of infrastructure improvements. By incorporating future demographic and economic projections, the fiscal analysis will indicate the demand for capital facilities in the near term as well as the longer term.

Revenue forecasting For purposes of this discussion, a revenue forecast defines the projected change in revenues (assuming existing rates) that is caused by land-use or demographic changes in the community. The revenue forecast is one of the results of a fiscal evaluation. Specific revenues such as building permit fees, connection fees, and other user fees are considered, as are intergovernmental transfers and general revenue sources such as sales taxes and ad valorem taxes.

Projected revenues are compared under different development scenarios. For example, the projected number of new detached houses and apartments multiplied by their estimated market value and then by their assessment rate will result in a projection of the additional property tax revenues from each development scenario. Nonresidential square footage will also generate additional ad valorem taxes, so a similar analysis can be done for that type of projected development. One-time fees, particularly utility connection fees, can also be important, and the revenues from them will vary by alternative and by year.

Fiscal planning Budget planning usually focuses on only the next budget year, but fiscal planning focuses on change and uses a two- to ten-year time frame. Fiscal planning provides local officials a long-term perspective in which to consider plans and policies that affect costs and revenues associated with each department and activity of the local government. If the fiscal analysis shows deficits in the early years of the projection period, local officials may decide to postpone infrastructure maintenance, development, or expansion or to modify some revenue assumptions or land-use policies. In contrast, if the fiscal analysis shows a deficit in the later years of the analysis, local officials may increase their annual investment in reserves to escrow funds that will be needed in the future, plan to expand revenue sources, or begin thinking about how changes in land-use policies could mitigate the anticipated fiscal problems.

Budget projections Because fiscal impact analysis can project the demand for departments' services, it is helpful in preparing and evaluating departmental budget requests. An increase in the intensity of land use, for example, will generate a higher level of demand for police services. The fiscal analysis offers a budget projection for the police department on the basis of these changes and specified service levels over the forecast period. Local officials can look at this information for alternative levels of service and project the effects of those alternatives on the budget.

Level-of-service changes One of the main variables considered during fiscal impact analysis is the level of service. The question to be asked is: What is the cost of providing different levels of service? The evaluation of existing levels of service provides a baseline for reviewing community level-of-service goals in light of fiscal constraints. After the current level of service is determined for each activity, the costs of new development can be easily evaluated. If the recreation department's level of service is determined to be one neighborhood park per ten thousand persons, then projected population growth can be tied to estimated

costs for purchasing parkland and equipment, making necessary improvements to facilities, and meeting annual operating expenses.

Some communities may want levels of service that are nearly impossible to achieve because they are not able to raise enough revenues to provide them. Other communities may be experiencing pressure for higher levels of service from newer residents who have relocated from larger communities. Another interesting phenomenon is pressure on city or town levels of service from what are sometimes called "shadow citizens." Shadow citizens are those located in the unincorporated county, on the fringes of a city or town, who think of the municipality as their primary service provider. In other words, they use the municipal parks, community center, and recreation programs, but they pay no direct taxes to fund these services. A fiscal impact analysis can provide useful background information for addressing all of the above situations.

Fiscal impact analysis also can help determine realistic assessments to be made against new development. New development cannot be charged for facilities that will provide a higher level of service than already exists in a community. Furthermore, user fees and other development impact fees collected from new development cannot be used to upgrade facilities for existing development. Quantifying existing levels of service and the costs of different service levels can help all parties understand the fiscal consequences of changing the level of service.

Methodologies

There are two basic approaches to fiscal evaluations: using average costs and using marginal costs.[1] Average-cost approaches are simpler and more popular: costs and revenues are calculated on the basis of the average cost per unit of service multiplied by the demand for that unit. Average-cost approaches assume a linear relationship and do not consider excess or deficient capacity of facilities or services over time. A per capita relationship is an example of an average-cost approach.

Marginal-cost approaches describe the unique characteristics of a jurisdiction's capital facilities. Over the long term, average- and marginal-cost techniques will produce similar results, but the real value of fiscal analysis is in the two- to ten-year time period. Marginal-cost analysis is most useful in this time frame. Because average-cost techniques are generally simpler to use, some local governments may prefer them for relatively small development projects with modest impacts or a long time frame. Local governments may also find it worthwhile to use more than one analysis approach and compare the assumptions and results as part of the decision-making process.

In communities where facilities in specific geographic areas already are insufficient, the average-cost approach will underestimate costs, and the marginal-cost approach will more accurately project the short- to mid-term costs of infrastructure that will be required to accommodate the new development. The average-cost approach would divide the expenditure for school services, for example, by the number of students in order to arrive at a figure of, say, $2,135 per student. This cost would occur regardless of any spatial distribution of new homes and resulting schoolchildren.

The marginal-cost approach, in contrast, would reflect the current enrollment versus the capacity in each school. If new residential growth were to occur in areas where elementary schools have excess capacity, the only real cost increase would be for operating costs. If new residential development were to locate in an area with no elementary school capacity, costs would be incurred for additional school capacity as well as the associated operating expenses.

Average-Cost Techniques

Three of the five commonly used fiscal impact analysis techniques are average-cost approaches.

Per capita multiplier The most popular average-cost technique is the per capita multiplier. This is obtained by taking the budget for a particular service, such as parks, and dividing by the current population in order to estimate the service cost per person. Under the per capita approach it is assumed that each service level will remain as existing and that each additional resident will generate the same level of costs to the jurisdiction as each existing resident currently generates. For example, if a parks department budget were $450,000 and the population of the town were 45,000, the average cost would be $10 per capita. This figure would then be used to estimate additional costs resulting from new development.

The per capita approach is easy to use but has the disadvantage of being less accurate than some other approaches if local officials want to look beyond the broad level of overall costs and expenditures.

Service standard A second average-cost approach is the service standard method. This approach estimates the future costs of development according to the average staffing and capital facility service levels for municipalities of similar size and geographic location as reported in data collected by the U.S. census of governments. This methodology assumes that service levels for both personnel and capital facilities are, to a large extent, a function of a jurisdiction's total population; therefore, communities of a similar size will have similar service levels (especially within a geographic region). Using the service standard approach, the local government estimates increased police personnel costs by taking the service

ratio, say 2.5 police officers per 1,000 persons, and multiplying it by the average operating cost per police officer for the jurisdiction (obtained from local data). Then, with average capital-to-operating-ratio data obtained from the U.S. census, capital costs can be estimated. Because a fundamental assumption of this method is that personnel growth within one community is equivalent to average growth in the region, a community that is not perfectly

Benefits of Fiscal Impact Analysis

Fiscal impact analysis has many benefits, whether the analysis is used for budgeting or for land-use or capital or financial planning.

Encourages anticipation of change One of the major benefits of fiscal impact analysis is that it describes what happens to a jurisdiction when change occurs. The fiscal analysis measures the impact of growth (or decline) on a local government's services, including capital facilities, and the resulting costs and revenues. This is different from the preparation of the next year's budget. In most cases, a fiscal analysis does not replicate the budget; it projects marginal changes in the budget given possible land-use, demographic mix, and employment changes.

Helps define achievable levels of service To quantify levels of service, department heads and managers must choose an indicator as a basis: the number of residents or jobs in the community, the number of average daily trips on local roads, or some other appropriate denominator. Defining the level of service promotes discussion about the adequacy of services and enables the local government to determine through fiscal analysis whether the community can afford various levels of service, in terms of both the costs of new or expanded capital facilities and the annual operating costs.

Projects capital facility needs A fiscal impact analysis can incorporate information on the available capacity of current capital facilities and project when additions or new facilities will be needed for each development alternative being evaluated.

The evaluation of capital facilities needs can be helpful in developing or revising the local government's CIP. The costs and staging of facilities included in the CIP are often based on independent best estimates of the departments whose activities or programs are affected by the proposed capital improvements. In some cases the projections made by the different departments affected by growth are similar; at other times they vary widely.

Clarifies development policy impacts In most cases, fiscal impact analysis focuses on the effects of growth or development, which are usually defined in a development scenario. Many local governments never translate their policies or major land-use plan changes into estimates of annual revenues and expenditures. The process of describing in narrative form how and why the numbers were developed is a very important aspect of a fiscal impact analysis that provides local officials with information to evaluate the logic of the assumptions underlying policies or proposals.

Under an optimistic development scenario, for example, a community may project population growth of 25,000 over a twenty-year period. The fiscal impact analysis can be used to project how the various types of housing that could accommodate this growth (garden apartments, townhomes, single-family homes, and condominiums) would affect the need for services over time. Because this scenario projects job growth as well, the fiscal analysis could also assess the fiscal impact of alternative job growth pictures (for example, mostly offices with some retail versus industrial growth with some office and retail). Using this process, local officials can review existing and proposed policies from a more informed perspective.

Calculates revenues; helps in the development of revenue strategies A fiscal analysis can show the magnitude of the revenues that would be collected under different development scenarios and can show whether there would be a surplus or deficit of revenues over expenditures on an annual as well as a cumulative basis for each alternative considered. This enables local officials to consider alternative sources of revenues.

Fiscal impact analysis presents a wealth of information that a local government can use to develop revenue strategies. Obviously, if the fiscal analysis indicates that existing plans for the community's growth will result in a deficit, the plans may need to be adjusted to arrive at a neutral or positive position. The first area to evaluate is the structure of rates for various revenue sources. Revenue formulas that are used to set user fees, utility rates, and property taxes should be reviewed as part of developing a revenue strategy. Possible new revenue sources can also be evaluated.

Encourages "what if" questions A good fiscal impact analysis with a narrative explaining all assumptions and inputs encourages managers to ask a number of "what if" questions. Alternative scenarios can be described for service levels, for the cost and revenue factors, for growth itself, or for almost any other aspect of the analysis. Decision makers find that major benefits of fiscal analysis are the definition of all the different service level factors and cost and revenue factors as well as the ability to change assumptions and quickly see the impact of the changes. This makes fiscal analysis an effective policy tool.

average in terms of services, costs, and demographics will come up with figures that are erroneous to the degree that the community deviates from the average.

Proportional valuation The third average-cost approach is the proportional valuation method; it is usually used for evaluating the fiscal impacts of nonresidential growth. This methodology first allocates a share of the jurisdictional costs to nonresidential uses. This is primarily determined by the relationship of nonresidential property value to the total property valuation of the jurisdiction. For example, if the nonresidential real property value is $40 million, and the total local real property value is $160 million, the proportion is .25. Also included as part of the analysis are refinement coefficients, which are intended to prevent significant differences in the value of residential and nonresidential property from skewing cost relationships. The total number of nonresidential land parcels is divided by the total number of land parcels, and this figure is used to select the area of a refinement coefficient curve. This approach is infrequently used because most analyses include a residential component and because selecting a refinement coefficient for each public service is a subjective process.

Marginal-Cost Techniques

Two commonly used fiscal impact analysis methodologies employ marginal-costing techniques.

Local case study The most thorough of the approaches uses locally based case information. This case study approach assumes that every community is unique and that the assumptions regarding levels of service and cost and revenue factors should reflect what is occurring in that community. To collect information, interviews are held with department representatives regarding existing public facilities and service capacities. Local information on excess park capacity, for example, makes it possible to predict when new facilities, programs, and personnel may be needed. This method also allows communities to include more detail if desired (for example, communities can make estimates based on the costs of specific facilities and programs such as pools, softball leagues, or tennis courts).

Some communities using the case study method use some average-cost data where it is difficult to get marginal-cost information. For example, estimating the increase over time in some general government operating expenses may be most efficiently done with a per capita or a per capita–per employee relationship. This is an average-cost approach. In contrast, local interviews could indicate that the cost for a particular local government service is fixed (not affected by growth) or is semivariable by population (affected by growth but not fully variable on a per capita basis). The primary drawbacks of the case study approach are that it can require a significant amount of time and that the accuracy of the data depends somewhat on the accuracy of each department's estimates.

Comparable city The second marginal-cost approach looks at costs in comparable jurisdictions. This approach usually relies on data from the U.S census of governments. Data are organized by population and by growth rate. This approach assumes that growth will affect expenditure patterns and includes that effect in projecting future costs. A city with a population of 110,000, for example, will have an operating expenditure multiplier of 1.95 for public safety services, based on the U.S. census of governments. With a projected increase in population of up to 5 percent over the next ten years, the postgrowth expenditure multiplier is 2.25. The difference will be 15 percent (2.25/1.95). This 15 percent figure is applied against current annual expenditures per person to obtain projected future annual expenditures per person. If the current per capita cost for public safety services is $6.00, then the new cost would be $6.90 per capita, multiplied by the number of new residents projected. A similar approach would be used for capital costs. Without the rate of population increase or decrease reflected in the tables, this methodology would be very similar to the service standard approach. This methodology is infrequently used.

Selecting a Methodology

To get the most accurate information from a fiscal impact analysis, most local governments find the case study approach preferable. Although comparisons with regional and national standards can be helpful, each community has its own levels of service, geographic service boundaries, cost and revenue factors, and available capacity of existing capital facilities. The potential benefits of fiscal impact analysis make it worth the time and effort to use the case study approach. Where data are not readily available or where it is difficult to define the service level relationship on a true marginal basis, it makes sense to use the per capita average-cost approach to supplement departmental estimates. The local government may wish to refine the data with marginal-cost data if and when more detailed information becomes available.

Case Studies

This section discusses five cases that illustrate different applications of fiscal analysis. The first three case studies look at growth alternatives that reflect different mixes of land uses, alternative development patterns, and socioeconomic and demographic changes. In addition to evaluating growth alternatives, the fourth case study also addresses revenue and implementation strategies. The last study explains a basic cost-of-land-uses fiscal impact

analysis that can be applied to smaller, rural communities that want to have a basic understanding of the fiscal issues that affect their communities.

Germantown, Tennessee: Evaluation of Land-Use and Annexation Alternatives

Germantown, a suburb of Memphis with a population of about 40,000, evaluated the fiscal impact of four land-use alternatives: a trends scenario based on the existing land-use plan, a higher-density scenario that assumed a higher mix of townhouse and senior living units, and two nonresidential scenarios that assumed the city would be more successful at capturing office development and, to a lesser extent, retail development. The two nonresidential scenarios differed from each other in the amount of "class A" versus "class B" office development that is captured (see Figure 3).

The study confirmed that Germantown was in a good position to accommodate new growth within the existing city limits under its current land-use pattern that emphasized low-density, single-family housing. This was a result of several factors:

- No major capital expenditures other than parks were required to serve new development
- The new development had higher market values
- The revenue structure benefited from higher market values (property tax) and population growth (state revenue sharing).

The analysis also indicated that Germantown would clearly benefit from attracting additional economic development (nonresidential square footage) and encouraging higher-density housing.

Germantown also analyzed the fiscal impact of annexation of two new areas: subareas B and D. Subarea B was primarily residential. Analysis showed that the remaining land that could be developed in subarea B had the potential to yield 349 additional single-family units, with 1,130 additional persons, and that 311,000 square feet of retail space would be developed between 2000 and 2010. A second scenario projected this growth to occur by 2005.

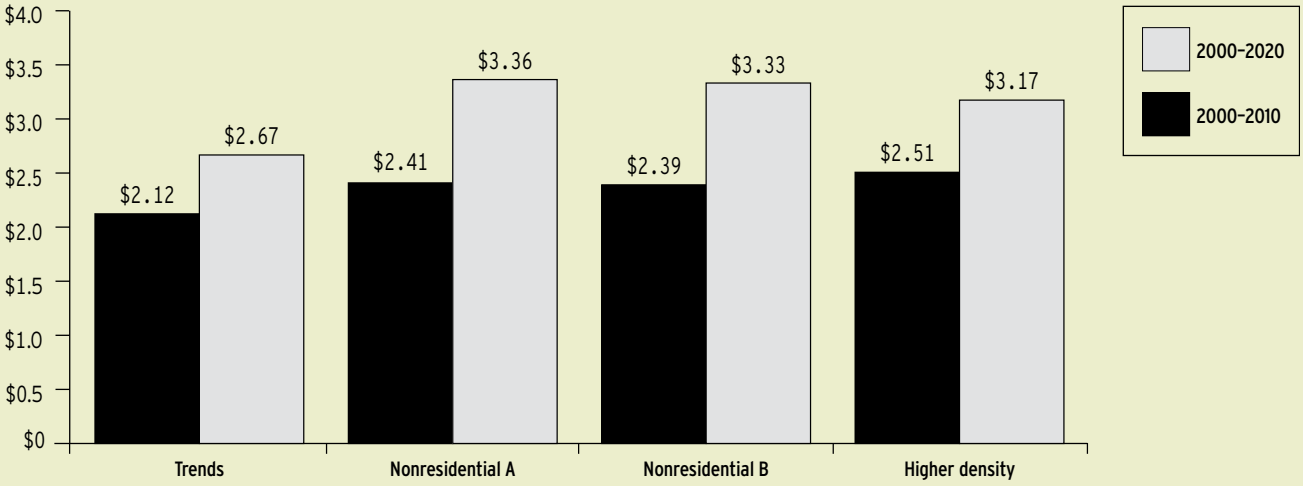
Subarea D was projected to accommodate 5.8 million square feet of office space and 2.7 million square feet of retail space by 2020. Three less-optimistic scenarios were developed showing absorption of 75 percent, 50 percent, and 25 percent of the by-right office space.

Annexation of subarea B would represent a net loss of revenue for the city unless new revenue sources were found, existing rates increased, or different zoning put in place. Annexation of subarea D was projected to generate average annual net revenues over the long term under all four scenarios although costs might outweigh revenues in the short term.

Howard County, Maryland: Planning for Buildout

Howard County, Maryland, a suburban county located between Baltimore, Maryland, and Washington, D.C., conducted a two-phase fiscal impact analysis as part of its 2000 comprehensive plan. Phase 1 determined whether revenue generated by four different growth scenarios between 1999 and 2020 would cover the costs for additional services and facilities. Phase 2 added the costs and revenues generated by the existing development base and evaluated how various economic, socioeconomic, real estate, infrastructure replacement, and related factors would affect county

Figure 3 Evaluation of the Fiscal Impact of Four Land-Use Alternatives, Germantown, Tennessee, in Millions of Dollars



Source: TischlerBise, Inc.

finances as the county approaches buildout. This was done in the context of two growth scenarios: aging in place and high mobility.

The number of housing units is the same under both scenarios, but as shown in Table 1, the population increase under the high-mobility scenario is 30,460 persons greater than under the scenario of aging in place.

Although the Phase 1 analysis indicated that new growth would bring net surpluses to the county, the Phase 2 analysis (which looked at the county's overall fiscal structure and policies) indicated average annual net deficits. The primary reason was that the county relies partly on income tax revenues. Although strong financial markets boosted these revenues and contributed to a $26.4 million surplus in the county's FY 1999 budget, the fiscal analysis could not assume similar revenue levels for the future. (In March 2000, shortly after this analysis was prepared, the stock market took a nosedive, confirming the wisdom of the analysis.) Meanwhile, however, capital program costs would continue because the county is required to maintain the current level of service. The modest annual net surpluses generated by new growth indicated in Phase 1 were not enough to sustain the FY 2000 level of spending.

The analysis also showed that, if the national trend of an aging population and decreasing household size continues in Howard County, the costs will be less than if household sizes remain the same (Figure 4). The loss of income tax revenue and higher aging-related costs are more than offset by lower education costs if fewer school-age children are generated. This is an important fiscal finding.

These net deficits increase when an infrastructure replacement program is factored in to reflect costs to maintain or replace county buildings and facilities, roads, stormwater infrastructure, sidewalks, curbs and gutters, and parks and recreation facilities.

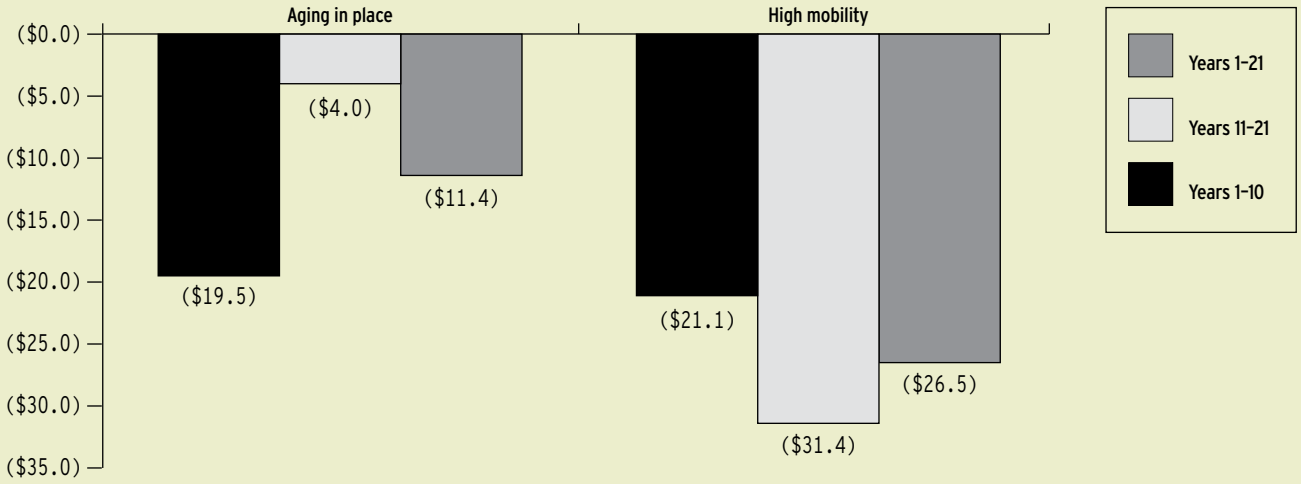
This fiscal impact evaluation resulted in recommendations that the county adjust the ratio of debt versus pay-go funding for capital projects, enhance the economic vitality of older areas (by combating crime and blight), and monitor the direction and magnitude of demographic shifts and county revenue patterns so that it can develop policies to address future budgetary and service-level impacts.

Table 1 Population Increases in Howard County, Maryland, 2000–2020

	Fiscal analysis zone					
Scenario	Columbia	Elkridge	Ellicott City	Southeast	West	County, total
Aging in place	420	7,100	11,670	13,960	10,730	43,880
High mobility	10,740	10,970	18,280	18,690	15,660	74,340

Source: TischlerBise, Inc.

Figure 4 Fiscal Analysis of Average Annual Net Results for Two Scenarios in Howard County, Maryland, in Millions of Dollars



Source: TischlerBise, Inc.

Metropolitan Council (Minneapolis-St. Paul Metro Area): Regional Impact Analysis

The Metropolitan Council is the regional planning agency serving the Twin Cities seven-county metropolitan area. In a first-of-its-kind regional fiscal impact study, eight cities in the metro area were selected to serve as prototypes reflecting communities at different stages of development. The eight included two outlying suburbs with a considerable amount of vacant land (Cottage Grove and Shakopee), two maturing suburbs (Coon Rapids and Apple Valley), two fully developed, first-ring suburbs (Richfield and Roseville), and the region's two central cities (Minneapolis and St. Paul). Two growth scenarios were analyzed for each city, and the results allowed comparison of the fiscal impacts associated with new development in the suburban areas with the fiscal impacts of redevelopment and reinvestment in the central cities and fully developed communities.

The study examined marginal costs, that is, expenditures necessary to build new facilities and provide additional services to accommodate growth beyond existing municipal capacities. This approach reflects variations in the timing of development and in its geographic location. The revenues examined include property taxes as well as one-time, construction-related fees for permits, administrative charges, and special assessments.

The net fiscal benefits were compared under two scenarios. One scenario assumed that growth would occur in spread-out patterns that reflect current trends. The other projected a more compact pattern and higher-density development. Both scenarios assumed that each community would achieve affordable-housing goals set under the Metropolitan Council's Livable Communities program.

Although each community is unique, a number of common themes emerged from the study:

- Compact development is less costly to provide with municipal infrastructure, such as streets, sewers, and water lines, than spread-out development.
- The Minnesota local government revenue structure seems to be structured well to pay for growth.
- Affordable housing is not a fiscal drain on the overall community.
- The existing system of paying for infrastructure costs primarily through enterprise funds passes those costs to consumers in the form of higher home prices.
- Tax-increment financing (TIF) works best for mature communities because the marginal cost to accommodate growth is small.
- Retail activity does not generally provide strong fiscal benefits, but it is nonetheless important for a balanced community.
- Property valuations and service costs for industrial and office space vary significantly, but generally the fiscal impacts are positive to neutral.

Queen Creek, Arizona: Evaluating the Total Cost of Growth

The town of Queen Creek, a Phoenix suburb with a current population of 20,479, is expected to increase by more than 55,000 persons within the next fifteen years. As a first step in evaluating the total cost of growth, the town had an impact (development) fee analysis prepared for the municipal facilities and equipment, police, parks, recreation, roads, library, and fire. Existing development fees when first implemented represented the highest in the Phoenix area, at $10,200 per single-family housing unit.

Because operating expenses usually comprise 70–80 percent of a community's budget, the town's fiscal impact analysis included all revenues, capital costs, and operating expenses. Queen Creek did not have a property tax, and its major revenue source, as in most Arizona communities, is situs-based (point of sale) sales tax. Many "big boxes" and a regional mall are just outside the town's boundaries, making it unlikely that the town will capture significant new retail space.

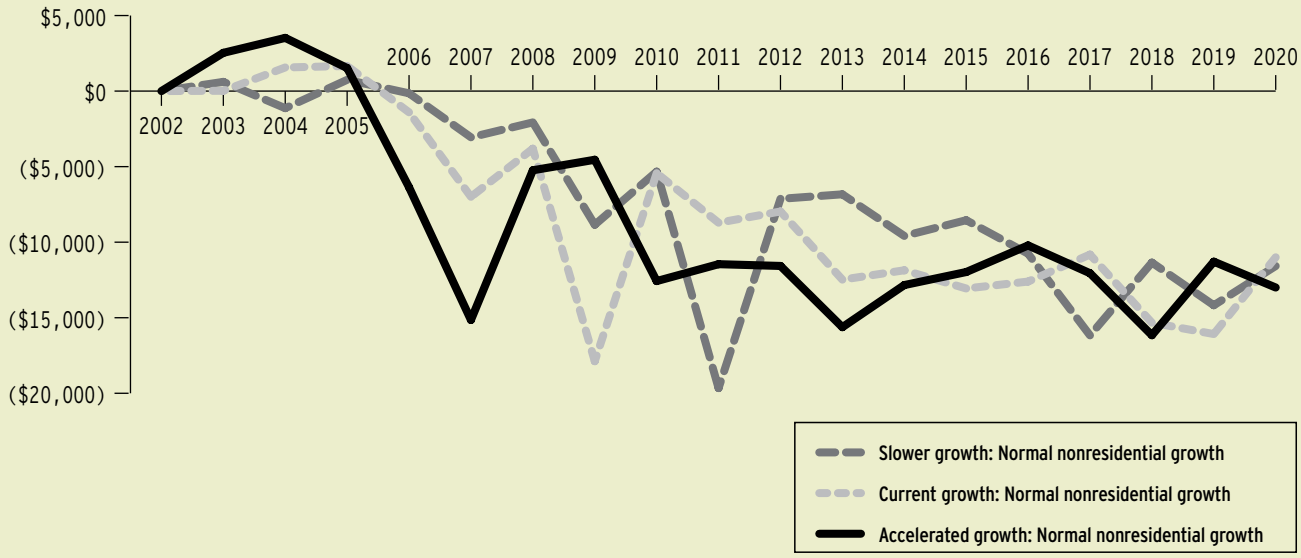
While the impact fee study calculated new growth's fair share of future capital facilities, the fiscal impact analysis indicated that new growth would generate insufficient revenue to cover associated operating expenses. This is an important consideration given the fact that by collecting the impact fees the town is committing itself to construct and operate the facilities. Although Arizona requires the local planning process to consider the cost of development, most jurisdictions use a calculation based on average cost per capita. Queen Creek chose instead to evaluate several growth alternatives that varied the pace of residential and employment growth. Equally important for this analysis was using the case study–marginal approach to model the associated operating costs of new capital facilities as well as the fiscal impacts on an annual basis.

The alternatives evaluated reflected three different rates of residential growth:

- Accelerated growth: Average annual growth of 1,500 housing units
- Current growth: Average annual growth of 1,000 housing units
- Slower growth: Average annual growth of 750 housing units.

For each of the three scenarios, two nonresidential growth rates were evaluated to depict the impact of slowed commercial development. The fiscal impact analysis indicated that, under all scenarios, the town will begin to incur deficits in about the fifth year, when additional capital facilities are needed and the associated operating costs for those facilities are incurred. The case study–marginal approach used in this analysis forecast the timing and cost of new capital facilities (see Figure 5). Construction of these facilities will trigger additional operating expenses.

Figure 5 Fiscal Impact Analysis of Queen Creek, Arizona, for Three Scenarios, 2002–2020



Source: TischlerBise, Inc.

Note: Surplus/deficit × $1,000.

This fiscal impact analysis led to several important policy discussions. First, town officials reviewed the levels of service the town could provide. Then they reviewed and recalculated some of the proposed impact fees because the modified levels of service meant fewer capital facilities would be required. They also created a revenue strategies committee to continue discussion on the findings of this study. The study helped the town educate its citizens on the need for additional revenues to maintain levels of service, with the prime candidate being a property tax.

Davie County, North Carolina: Evaluating the Cost of Growth in a Small Community

In small communities with limited resources, a cost-of-land-uses fiscal impact analysis can provide a comprehensive overview of the link between land use and fiscal health. A good example is Davie County, North Carolina, a rural county with a population of approximately 40,000.

The county had a cost-of-land-uses fiscal impact analysis prepared that evaluated seven residential prototypes: single-family large lot, single-family medium lot, single-family medium value, single-family small lot, manufactured housing, townhouse, and multifamily apartments. It also evaluated three nonresidential prototypes: retail, office, and industrial.

All seven residential prototypes and the industrial prototype generated annual net deficits to the general fund, and all ten land-use prototypes generated deficits to the capital fund. An important finding from the analysis was that several current revenue sources are unlikely to increase as a direct result of new growth. Another important finding was that there is insufficient money to adequately fund capital facilities needed for growth.

Davie County saw that it needed a long-term financial plan to address the capital needs of new growth in addition to the routine replacement of existing capital facilities. This plan can be used to facilitate discussions and subsequent policy decisions about financing alternatives and standards for community facilities and infrastructure. It will be important for maintaining a viable economic base and providing amenities for the well-being of current and future citizens.

Conclusion

Fiscal impact analysis helps a jurisdiction address financial management and planning issues. Whether the product is an evaluation of a change in level of service, a forecast of capital facilities to be replaced or added, or a picture of upcoming budget changes caused by new development, fiscal impact analysis can be adopted as a regular procedure to improve management decisions.

1 This section briefly summarizes the basic methodologies used for fiscal impact analysis. For a more detailed explanation, see *The Fiscal Impact Guidebook: Estimating Local Costs and Revenues of Land Development* (Washington, D.C.: U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 1979). This resource was used in the preparation of this section.

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Fiscal Impact Analysis:
Methodologies for Planners

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American Planning Association

Planning Advisory Service
Report Number 561

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FISCAL IMPACT ANALYSIS:

METHODOLOGIES FOR PLANNERS

L. Carson Bise II, AICP

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Preface

Most states require local governments to prepare a balanced budget on an annual basis. However, most states do not require that jurisdictions conduct fiscal impact evaluations to help ensure that local officials understand the short- and long-term fiscal effects of land-use and development policies and of new developments that are approved. A fiscal impact analysis (FIA) clarifies the financial effects of such policies and practices by projecting net cash flow to the public sector resulting from residential and nonresidential development. Such an analysis can enable local governments to address a number of short- and long-term planning, budget, and finance issues. The results from the analysis can also be used to inform community discussions about growth-related policy, such as the benefits of compact or infill development within the urban core and methods for incentivizing these types of development.

This PAS Report discusses the benefits of FIA and reviews common methodologies used to collect and analyze information. Five case studies are provided to illustrate how FIA can be used in different situations. The report concludes by recommending an approach for conducting fiscal impact evaluations.

CHAPTER 1

Introduction

Fiscal impact analysis (FIA) has been used by planners in one form or another for more than 75 years (Burchell 1978). Its origins can be traced to back to the 1930s when planners began using FIA in attempts to fully justify investments in public housing and urban renewal programs. The analyses compared revenues that would result from the new land uses to revenues that would have resulted from the old land uses. The scope of fiscal impact analysis broadened over time to consider both the costs and revenues associated with proposed land-use developments. In the 1940s and 1950s FIA was used to evaluate the impact of urban renewal.

In 1974, Real Estate Research Corporation's *The Costs of Sprawl: Detailed Cost Analysis* had a major impact on fiscal impact analysis and land use planning in the United States. This well-known study—prepared by the Real Estate Research Corporation for the Council on Environmental Quality; the Office of Policy Development and Research, U.S. Department of Housing and Urban Development; and the Office of Planning and Management, U.S. Environmental Protection Agency—compared the costs of six hypothetical community types with 10,000 dwelling units each and concluded that high-density development was less costly than lower-density alternatives. Cost was evaluated in terms of four key indicators: (1) energy cost, (2) environmental impact, (3) capital cost, and (4) operating cost. This is generally considered to be the first FIA study that analyzed the fiscal impacts of alternative development patterns.

Due in part to the increased visibility afforded the discipline by the publication of *The Costs of Sprawl*, by the mid-1970s FIA had become widely used by local government planners. Technology played a role as well, making fiscal impacts easier to model and represent visually. During the latter part of the 1970s, FIA began to proceed along two somewhat different paths (Fishkind 2002). Sternlieb, along with Burchell and Listokin, advanced average-cost modeling techniques, which are based on per capita costs and revenues. Westinghouse Corporation, and later Tischler and Marcou, focused on marginal-cost techniques, which rely heavily on detailed site-specific data that model existing infrastructure capacities.

The use of FIA by planning professionals continued to increase in the 1980s and 1990s. Meanwhile, researchers kept using FIA to explore fiscal impacts of varying development patterns. Duncan (1989) and Frank (1989) studied the infrastructure costs of sprawl development compared to compact development in the State of Florida using engineering relationships. In 1998, Burchell et al. published *The Costs of Sprawl—Revisited*, a comprehensive review and synthesis of the literature on sprawl and its impacts, through the Transportation Research Board. The follow-up to that document, *The Costs of Sprawl—2000*, attempts an objective analysis of the costs of two alternative development patterns—controlled and uncontrolled growth (sprawl)—over a 25-year period for the nation as a whole.

The Costs of Sprawl—2000 demonstrates the value of FIA in analyzing the fiscal implications of the choices we make in shaping our communities. The study found that sprawl is the dominant form of growth occurring in major metropolitan areas and that the effects of sprawl growth are mixed. The data suggest there are more costs than benefits of sprawl growth, and many of these costs are measurable. There are fewer quantifiable benefits to sprawl development, which consumes land and various types of infrastructure to a level that compact development does not. It also provides fewer positive fiscal impacts (more costs and less revenue) than compact development provides.

FIA has further evolved in the last decade as academics continue to explore the fiscal impacts of alternative development patterns and practitioners continue to expand the use of fiscal impact analyses. Until recently, practitioners tended to limit their analyses to the evaluation of specific development proposals and community-wide analyses of land-use scenarios. Over the last 10 years, however, there has been increased use of FIA for evaluating the fiscal viability of special districts and tax increment financing (TIF) district proposals.[1]

Another new trend in FIA is the evaluation of both the direct and indirect fiscal impacts of land uses. For example, an evaluation of the fiscal impacts of a semiconductor plant that is locating in a community would typically examine the direct impact on the community of the taxes paid by the plant and the costs associated with the workers. Analysts are now taking FIA one step further by considering "indirect impacts," such as the number of workers who will reside in a community and who will in turn pay taxes on their housing but also generate costs.

Increasingly, market analysis is being used in tandem with FIA. Prior to completing the fiscal impact analysis, market analysis is used to determine the market feasibility of development proposals or proposed land-use changes, which refines the inputs into the fiscal impact analysis and reduces the need to create multiple land-use or absorption schedules (which show the pace at which infrastructure capacity will be used or filled over time).

Finally, in addition to its traditional application to new growth, fiscal analysis is now being used to evaluate existing development. The fast-growing suburbs of the post–World War II era, along with their original infrastructure—such as schools, roads and bridges, water, and sewer—are beginning to age. Several recent fiscal studies have contained overlays to reflect the costs and revenues associated with existing residents, the costs of replacing deteriorating infrastructure, and the costs and revenue associated with new growth. These studies are used to support the requirements of Governmental Accounting Standards Board Statement No. 34 (GASB 34), which states that governments must report all capital and infrastructure assets in their financial statements. In most instances, these assets are required to be depreciated, which is something local governments have not traditionally done. Given the deteriorating state of infrastructure in communities across the country, there is clearly a growing need to measure the fiscal impact of replacing existing infrastructure. This use of FIA helps present a truer picture of the future budgetary equation.

FISCAL IMPACT ANALYSIS IN PRACTICE

Fiscal impact analysis is one of many tools that can be used by planners to make informed decisions about changes to land-use regulations or proposed development projects. Rapid growth rates experienced for the better part of this decade, coupled with increasing service costs and resistance to tax increases, are leading communities to more thoroughly explore the relationship between local budgets and land uses. An increasing number of local governments are requiring an FIA as part of development proposal review. Some local governments have even gone so far as to establish policies that new development be "fiscally neutral," or result in a net zero or net positive impact on the local government's budget. The majority of planning-related fiscal impact analyses are prepared for specific development proposals.

In addition to evaluating and approving rezoning proposals, subdivision plans, and other development-related applications, planning departments are responsible for preparing long-range comprehensive plans. Most comprehensive plans include components or elements for public facilities and economic development. However, although planners are generally aware of the negative fiscal impacts of sprawling development (such as higher costs of infrastructure provision), most comprehensive plans do not directly address fiscal sustainability. Many plans contain language related to "sustainable development" and "balanced growth" but go no further than recommending that new growth should pay its own way or suggesting that there is a need to attract the appropriate mix and balance of land uses. Without conducting an FIA as part of the planning process, how does a community know what the appropriate mix of land uses is, or whether the proposed land-use plan will generate revenue that is at least equal to required expenditures?

It is clear from the number of sessions devoted to FIA at the American Planning Association's National Planning Conferences and the growing body of work in academia that planners are familiar with the concept of FIA, yet local policymakers and planners often find it difficult to approach fiscal issues when making land-use decisions. At the most basic level, planners may not understand the state and local contexts that determine revenues and costs and how these are tied to land use and economic development. Planners may also be familiar with fiscal impact analyses but not how these studies can be tailored to achieve planning goals for development.

In 2007, Mary M. Edwards from the University of Wisconsin published an insightful paper in the *Journal of Planning Education Research* that contained a survey of planning professionals and their views on FIA. (These were elaborated on in Edwards and Huddleston 2010.) From the responses, it is clear that planning professionals think it is important for planners to understand fiscal and financial issues including impact fees, linkage fees, and tax incentives, especially since they must be able to explain these concepts to the general public.[2] Yet despite the perceived importance of knowledge about FIA, planning professionals also feel that planners have an inadequate understanding of the subject. Edwards reports, "While 94 percent of planning directors may feel that planners should understand the local budgeting process, only 20 percent of them responded that every one of their staff members has an adequate understanding of the process. Most directors report that a quarter or half of their staffs have such knowledge" (Edwards 2007). Edwards's survey also revealed that while planning students have extensive access to basic instruction on fiscal and financial issues, not all subjects receive extensive treatment.

It is clear that professional planners in leadership positions recognize the importance of understanding principles of FIA and public finance. Many feel, however, that they and members of their staff received inadequate training on the subject. This raises the question of whether planning graduate students should be required to take more courses in economics or finance and whether more elective course work on these topics should be offered.

WHY IS FISCAL IMPACT ANALYSIS AN IMPORTANT TOOL FOR PLANNERS?

Urban planning by definition is a multidisciplinary field. Planners interact frequently with other departments within local government and are usually involved in the preparation of the capital improvements plan (CIP), which outlines a community's schedule for upcoming capital projects and identifies sources to pay for the projects. Planners typically incorporate environmental and transportation impacts into their analyses, so it is a logical extension of the profession for a planner to have an interest in fiscal issues, such as how a particular development project will affect a local government's costs and revenues or what the most fiscally efficient development pattern is.

Fiscal impact analysis can be helpful to planners when done comprehensively for a larger area and in concert with other traditional planning-related analysis. With FIA, planners evaluate options and alternatives in an attempt to achieve, at a minimum, fiscal neutrality from new development. FIA thus provides the public with information required to make informed decisions with respect to development and puts planners in better positions to help communities meet their long-term needs.

A fiscal impact analysis can also help planners and their communities better understand their values. When coupled with a traditional visioning or community outreach effort that occurs as part of the development of the comprehensive plan, levels of service or development

values can be evaluated from a fiscal perspective. For example, one of the objectives that may come out of the public participation process is to increase a community's amount of parkland. Planners can use FIA as a way to quantify how increasing this level of service could affect the tax rate. This information can then be used in the public participation process to gauge the willingness of the community to pay for service-level enhancements.

THE FISCALIZATION OF LAND USES AND OTHER CRITICISMS OF FISCAL IMPACT ANALYSIS

FIA is not without its detractors. One criticism of FIA is that it only considers impacts on a jurisdiction's budget while ignoring social or environmental costs and benefits, which may be of significant value to citizens. Projects with a negative net fiscal impact could have large potential nonfinancial benefits and be in the best interest of the community to pursue. Conducting an FIA can lead communities to base land-use decisions entirely upon fiscal considerations at the expense of achieving a healthy and balanced quality of life. This is referred to as fiscal zoning or the fiscalization of land uses. Communities must take care to consider all of their priorities, in addition to fiscal impacts.

Another criticism relates to multiple services providers and overlapping jurisdictions. A development project is usually serviced by more than one government agency, such as an independent school district or water district. Most fiscal impact analyses measure the impacts on a single jurisdiction, typically the one conducting or requiring the analysis. Critics claim this does not present an accurate picture of the impacts. A frequent example cited is a development in a city or county that contains an independent school district. Critics point out that since the largest cost for residential units is generally the cost associated with educating school-age children, focusing on a single jurisdiction without taking such a district into account can mean failing to deal with the largest costs. This is certainly a valid criticism, but it may be infeasible to address, given the myriad of local government structures, which vary from state to state. This is one reason why it is important for an FIA to be very explicit about what it is and is not evaluating.

The most common criticism of FIA has to do with the "inherent limitations" associated with any modeling technique (Holzheimer 1998). In other words, the outputs are only as reliable as the modeling effort's inputs. This is a concern given the high degree of inherent subjectivity in defining the assumptions related to cost and revenue factors and level-of-service standards. Different assumptions and scopes can yield very different results among analyses performed on the same development. Therefore, it is important that planners take care in making assumptions and choosing factors. Further, a written report detailing those assumptions and the FIA process should accompany the final results. (See Chapter 3.)

DEFINING FISCAL IMPACT ANALYSIS

An FIA projects the net cash flow to the public sector (the local government and, in many cases, the school district) resulting from new development, whether residential, commercial, industrial, or other. An FIA is similar to the cash-flow analysis a developer conducts in order to project costs and revenues likely to result from a proposed development over two to ten years. Just as a household benefits by forecasting its long-term cash-flow needs (incorporating anticipated expenses for higher education and other expensive items) and setting money aside to pay for future outlays, local governments are better prepared to manage community needs during changing financial circumstances if they anticipate and plan for future costs and revenues.

Fiscal analysis enables local governments to estimate the difference between the costs of providing services for new development and the taxes, user fees, and other revenues that will be collected as a result of new development. FIA can be used to evaluate the fiscal effect of an individual project (such as a request for rezoning), a change in land-use policy (such as increasing allowable densities for development), or a proposed annexation.

It is important to keep in mind that the fiscal impact of development policies, programs, and activities is only one of the issues that local government officials should consider when evaluating policy or program changes related to land use and development. Land uses that are a financial drain or are less beneficial financially than other alternatives should not necessarily be excluded, since they may be necessary to the community's goals related to affordable housing, economic diversity, quality of life, and so on. Moreover, localities have a responsibility to consider other impacts, too. Court cases have suggested that, in addition to fiscal impacts, local governments need to evaluate environmental impacts, regional needs for housing and employment, and other concerns. Nevertheless, fiscal impact data can be used as part of a larger cost-benefit analysis to craft a land-use plan that incorporates the appropriate mix of land uses necessary to achieve fiscal sustainability or, at a minimum, fiscal neutrality.

TYPES OF FISCAL IMPACT ANALYSES

The majority of fiscal impact analyses conducted throughout the country fall into three categories. The first type of analysis can be classified as a cost-of-land-uses FIA. In this type of analysis, the characteristics of various residential (single family, town house, apartment) and nonresidential (retail, industrial, office) "prototypes" are defined and the annual costs and revenues associated with each prototype are determined. This reveals the generalized impacts that each land use has independently on a local government's budget. Factors used to define these prototypes typically include persons per household, equivalent dwelling units, road frontage, employment per 1,000 square feet, vehicle trips, assessed value, and so on.

Table 1.1 shows an example of inputs used in defining residential land-use prototypes. In this analysis, the inputs are used to derive a variety of cost and revenue factors. For example, persons per household are used to determine many of the basic general government cost factors. Taxable value is used to determine the amount of property-tax revenue that is generated by each land-use type. Vehicle trips and associated trip-adjustment factors are used to determine road-related capital and maintenance costs. (Trip-generation rates are adjusted to avoid double counting each trip at both the origin and destination points.) Finally, minimum lot frontage is often used to derive cost factors for snow removal costs, which are typically influenced by the number of road miles.

TABLE 1.1. RESIDENTIAL PROTOTYPES: CITY OF LAWRENCE, KANSAS

Prototype	Persons Per Household[1]	Taxable Value Per Unit[2] ($)	Vehicle Trips Per Unit[3]	Trip Adjustment Factor[3] (%)	Minimum Lot Frontage[4]
SF-Detached - Suburban (RS-2 District)	2.65	31,377	9.57	50	60
SF-Detached - Urban (RS-2 District)	2.65	29,740	9.57	50	50
Duplex (RMD District)	2.08	23,370	5.86	50	30
Apartment (PRD District)	1.83	9,038	6.72	50	10

Source: TischlerBise

(1) Based on 2000 Census data. See Section III of the report for details.

(2) Based on a sample of assessment data from recent construction by city staff.

(3) Based on *ITE Trip Generation*, 7th ed.

(4) Based on information provided by city staff. Apartment information from TischlerBise.

The second type of FIA, project analysis, is the most common type of fiscal analysis conducted by local governments. In this type of analysis, one or multiple development schedules are evaluated for their fiscal impact over a specified period of time. Whereas a cost-of-land-uses fiscal impact analysis evaluates the impact of individual land uses, a project analysis evaluates the overall fiscal impacts of all land uses combined. As most project-level analyses are prepared in conjunction with specific development proposals, this type of analysis is incremental in that it addresses the impacts of only one development project at a time, typically in isolation from other potential development.

The third type of FIA, an areawide analysis, can be applied to a neighborhood, several contiguous neighborhoods, or an entire city, county, or region. This type of analysis is cumulative in that it evaluates the fiscal impacts of all anticipated development within the analysis area over a defined period, usually between 10 and 20 years. In this type of analysis, it is common to evaluate multiple development scenarios. These scenarios can include variations in absorption schedules, comparison of alternative land-use plans, or comparison of alternative development patterns. Table 1.2 provides an example of annual scenario projections for number of new residential units by type and projected increase in square footage of nonresidential land uses.

TABLE 1.2. PROJECTED RESIDENTIAL AND NONRESIDENTIAL GROWTH SCENARIO, 2006–2015, OKLAHOMA CITY, OKLAHOMA (*in dwelling units and square footage*)

Residential Land Uses	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
Rural Single Family	14	14	14	14	14	10	10	10	10	10	**120**
Duplex	22	22	22	22	22	15	15	15	15	15	**185**
Multifamily	225	225	225	225	225	170	170	170	170	170	**170**
Single Family	214	214	214	214	214	159	159	159	159	159	**170**
Total Units	**475**	**475**	**475**	**475**	**475**	**354**	**354**	**354**	**354**	**354**	**645**
Nonresidential Land Uses											
Retail	54,866	54,886	54,886	54,886	54,886	84,942	84,942	84,942	84,942	84,942	**699,140**
Industrial	188,179	188,179	188,179	188,179	188,179	139,392	139,392	139,392	139,392	139,392	**1,637,855**
Office	5,227	5,227	5,227	5,227	5,227	0	0	0	0	0	**26,135**
Institutional	61,855	61,855	61,855	61,855	61,855	46,174	46,174	46,174	46,174	46,174	**540,145**
Total Square Footage	**310,147**	**310,147**	**310,147**	**310,147**	**310,147**	**270,508**	**270,508**	**270,508**	**270,508**	**270,508**	**2,903,275**

Source: TischlerBise, City of Oklahoma City, and BWR

HOW DOES A FISCAL IMPACT ANALYSIS DIFFER FROM AN ECONOMIC IMPACT ANALYSIS?

It is important to distinguish a fiscal impact analysis from an economic impact analysis. Whereas an FIA projects the cash flow to the public sector, an economic impact analysis focuses on the cash flow to the private sector, measured in income, jobs, output, indirect impacts, and so on.

The terms "economic impact" and "fiscal impact" are often misused, particularly in public meetings of bodies such as town or city councils, county commissions, and planning commissions. In meetings where development proposals are considered, representatives of the building community frequently present studies on behalf of their developments asserting that the projects in question pay for themselves. Many of these studies are economic impact studies and not fiscal impact studies, though sometimes they are a combination of both. It is important for planners and elected or appointed officials to understand the difference, because project impacts on the public sector can be very different than those on the local, regional, or state economy as a whole. Much of the positive cash flow demonstrated in an economic impact analysis does not make its way into local government coffers, and the economic impact analysis does not take into consideration the costs of services that the local government will need to provide for the new development.

For example, consider a mixed use project consisting of 5,000 residential units, 250,000 square feet of retail space, and 150,000 square feet of office space. An economic analysis will typically evaluate the following impacts:

Direct Spending. This represents dollars spent within the local economy by residents of the development as well as expenditures for goods and services by the nonresidential users.

Construction Phase Spending. This represents the wages, salaries, and purchases of construction materials during the construction of the project.

Indirect Effects. These consist of the "respending" of the direct expenditures. Indirect spending arises from the need of one industry to purchase goods or services from other industries to produce its output. For example, when residents purchase food at a local restaurant, the restaurant must purchase goods from producers and manufacturers in order to maintain inventory levels. To the extent that this respending occurs in a community's economy, the initial dollars spent with the restaurant have secondary effects on the local economy. In this example, indirect impacts occur in various industries including:

- The wholesale industry, as purchases of food and merchandise products are made;
- The transportation industry, as the products are shipped from purchaser to buyer; and
- The manufacturing industry, as products used to service the restaurant are produced.

Induced Effects. These represent all of the additional economic benefits that are driven by the local spending of household income. The increased activity in the construction sector will boost incomes for construction workers. Some of this income will be spent locally on retail trade, health care, entertainment, housing, and so on. As firms in these industries see a boost to their sales, the employees of these firms will also see additional income that can be spent locally.

Income. Income consists of wages and salaries, other labor income, proprietor's income, rental income, personal dividend income, personal interest income, and transfer payments, less personal contributions for social insurance. The greatest source of personal income comes from salary and wages, which vary by industry.

Jobs. An analysis will estimate the number of direct and secondary full- and part-time jobs that are supported as a result of direct spending activity related to the development project. An example of the number of jobs generated from different land-use types is shown in Table 1.3. Direct and indirect, or "spinoff," employment is shown.

Although the economic benefits associated with a development proposal are an important consideration for a community, it is crucial to understand how the development proposal will affect a local government's bottom line.

Many economic impact studies focus on job creation, sales tax revenue generated, and the income resulting from the development project. These studies rarely acknowledge that job increases within a community lead to an increased need for nonresidential services and facilities, which will be paid for by the local government. In addition, the costs to serve places of employment can vary by the type of nonresidential activity. For example, it is typically more expensive to provide government services for retail development than to do so for office or industrial development. This is due to factors such as vehicle trip generation, number of public safety calls, and others. These costs are typically not addressed in an economic impact analysis.

Depending on a local government's revenue structure (discussed in the next section), the amount of sales tax or income generated from a development project may or may not result in direct revenue to the municipality. In evaluating sales tax and income-generation numbers, it is important to understand how revenues generated by economic activity filter down to the local government's general fund. For example, unless a local government receives sales tax based on point of sale, the amount of sales tax generated by a development project is irrelevant from a fiscal perspective, as

TABLE 1.3. DIRECT AND SPINOFF EMPLOYMENT PER 1,000 SQUARE FEET, SARASOTA COUNTY, FLORIDA

		Operating Phase Impacts		
Nonresidential Category	Prototype	Direct Employment (per 1,000 square feet)	Direct Employment (per 1,000 square feet)	Total Employment
Agriculture (1)	Taylor Ranch	1.74	0.23	**1.97**
Electronics Equipment, Except Computers	Teleflex, Inc.	3.38	3.34	**6.72**
Instruments/Related Products	Environmental Products USA	1.65	0.74	**2.39**
Construction	McIntyre, Doherty, Elwell	9.52	3.44	**12.96**
Finance, Insurance, and Real Estate	World Savings & Loan	1.47	1.47	**2.94**
Insurance Carriers, Agents, Brokers, and Services	FCCI Mutual Insurance.	4.35	2.94	**7.29**
Eating/Drinking Places	Don Pablo's	6.99	1.58	**8.57**
Other Retail Trade	Glengarry Shops	1.79	0.56	**2.35**
Services	One-digit SIC category	3.00	0.77	**3.77**
Hotel	Hampton Inn	0.67	0.22	**0.89**
Business Services	Arthur Andersen Technology	5.65	0.83	**6.48**
Health Services	Doctor's Hospital	4.06	0.92	**4.98**
Legal, Engineering, Management, and Miscellaneous Services	Wilson Miller Bartow Peek	4.32	1.65	**5.97**
Educational Services	Out-of-Door Academy	0.38	0.01	**0.39**

Source: TischlerBise and Sarasota County

(1) Results are per 1,000 acres.

the general fund receives no direct benefit. However, in certain states (e.g., Florida) sales tax revenue goes to the state, with a portion redistributed to local governments under a formula that is heavily weighted toward population. Therefore, some portion of the sales tax that goes to local government from a development project should go to the jurisdiction in which the project is located.

A similar situation exists with the income generated from a development project. Unless a local government receives income tax by place of employment (e.g., Ohio) or by place of residence (e.g., Maryland), the amount of income generated does not have a direct impact on a jurisdiction's general fund revenue base. Table 1.4 shows an example from Lincoln, Nebraska, of income generated from a development project. In this example, the amount of salaries and wages generated by this project is more of a concern to the State of Nebraska, which collects income tax. Local governments in Nebraska do not receive income tax, so the City of Lincoln does not receive direct revenue from the salaries and wages generated by this project.

TABLE 1.4. INCOME GENERATED FROM PROJECT DEVELOPMENT IN LINCOLN, NEBRASKA

Allocation Construction Costs	Gross Salaries and Wages ($)	Average Annual Wage or Salary ($)	Person-Years of Work
Labor for All Project Elements			
Hard Construction	127,928,465	34,910	3,664.50
Soft Construction	79,955,291	64,717	1,235.50
Total Labor Expenditures	207,883,756		4,900.00
Materials			
Hard Construction		143,919,523	
Soft Costs		5,330,353	
Total Material Expenditures	149,249,876		
Overhead and Profit	**69,294,585**		

Source: Robert Pass & Associates; Leib Advisors, LLC

FISCAL IMPACT ANALYSIS VERSUS BUDGET FORECASTING

How is a fiscal impact analysis different from what a budget or finance department does as part of its long-term financial planning or annual budgeting process? First, local government budgets are fiscally constrained. That is, most local government budget and finance personnel look to past trends in order to project revenue going forward. As a result, operating and capital expenditures are constrained by the amount of revenue available. A fiscal impact analysis does just the opposite. It projects operating and capital costs without consideration of whether revenue is sufficient. The analysis then compares the revenue to costs to determine the fiscal impact.

Operating and capital costs are projected differently in a fiscal impact analysis as compared to a budgeting process or long-term financial planning. In an FIA, operating and capital costs are typically projected based on maintaining the jurisdiction's current levels of service for all facilities and services. This is an important assumption, as most local governments are not maintaining current levels of service across the board. Most local governments walk an annual budget tightrope, requiring a substantial amount of compromise in order to balance the budget. In some cases, levels of service in one program area are reduced in order to increase levels of service in another. Another common way in which local governments compromise is by delaying growth-related capital facility projects or deferring capital maintenance items (e.g., street resurfacing).

Many fiscal analyses use adopted levels of service for projecting operating and capital costs. For example, the analysis may project additional park needs based on a parks master plan that contains an adopted level-of-service goal of 1.5 acres per 1,000 persons. However, the jurisdiction is currently providing a level of service of 0.09 acres per 1,000 persons. Assuming the adopted level of service in this case will drastically distort the results of the analysis because it unfairly assesses higher costs to new growth than what is currently being provided to existing residents. More important, it ignores the substantial cost for bringing the existing development base up to this adopted, or desired, level of service. Properly assessing operating and capital costs requires considerable care.

CONCLUSION

Fiscal impact analysis has evolved over time, both in the scope of the evaluations and the level of sophistication. Although FIA is not employed as widely as other types of impact analysis (e.g., traffic, environmental, or economic), recent research has shown an increasing number of local governments are utilizing it as part of the analysis of development proposals and analyses related to sustainability. Certainly, it offers new perspectives on how planners throughout the country can address planning issues in a broader and more substantial way, through an integrated approach that encompasses land-supply analysis, economics, and fiscal issues. But while a fiscal impact analysis is an important tool in making planning decisions, fiscal impact analyses should not be used in isolation from other kinds of analysis.

ENDNOTES

1. Tax increment financing is a public financing tool that uses future tax revenue increases (theoretically resulting from development within a district) to fund current development improvements to that district.

2. Impact fees are charged to new development by public entities to cover public-sector infrastructure expenses that are expected to be caused by the new development. Linkage fees are similar to impact fees in that they charge new development for additional expenses expected to be borne by the public sector, but the types of costs they cover are specific to social needs, such as environmental or affordable housing programs.

CHAPTER 2

Fiscal Impact Analysis as a Decision-Making Tool

The overwhelming majority of fiscal impact analyses prepared in this country are prepared for development-related projects. Most are prepared on behalf of a developer. Fiscal impact analysis occurs on a very limited level in local government decision making. When local governments undertake fiscal impact analyses, the focus tends to be on land-use-related issues and the evaluation of specific development projects. Recent research reveals that planners' use of fiscal impact analysis as an analytical and decision-making tool is growing (Edwards and Huddleston 2010). However, depending on the planning issue under consideration, the sophistication of the analysis ranges from quick-and-dirty, back-of-the-envelope analysis to extensive, in-depth, and in many instances expensive case studies (Edwards and Huddleston 2010). At the same time, the expectations that local officials and the general public have for precise fiscal analysis are beginning to grow as well.

Although this PAS Report focuses on using fiscal impact analysis in short- and long-range land-use policy planning, an FIA also lends itself to other planning-related and finance and budget applications, which this chapter will discuss.

PLANNING APPLICATIONS

The six applications below indicate how fiscal analysis can be an effective policy tool for long-range planning.

Land-Use Policies and Development Patterns

Fiscal impact analysis is one of many tools that can be used by planners to make informed decisions about changes in land uses and amendments to land-use regulations and policies. The emergence of smart growth and sustainability has led many communities to ask more questions about the relationship between local budgets and land-use policies. For example, should a jurisdiction encourage higher-density land use or allow an overlay district in a certain subarea? Are there fiscal benefits associated with development that incorporates traditional neighborhood design? Do current land-use policies make sense? If costs, as well as other factors, are to be considered, then a fiscal impact evaluation will help in the decision-making process.

Land-use requirements and regulations, including zoning, can be viewed from many different perspectives. Fiscal impact analyses help local officials translate land-use changes into service costs, revenues, and net cash flow to the public sector. They can explain how the delivery or cost of services and facilities will be affected by new development. Will new roads be needed? How many new parks?

Over the past several decades, there have been numerous studies analyzing the costs of development, especially comparing and contrasting alternative development patterns. The majority of these studies examine whether low-density, auto-dependent growth patterns (sprawl) are more costly than development patterns incorporating smart growth principles. Development reflecting smart growth principles usually has higher densities, contains a mix of land uses, is pedestrian friendly, and strives for an efficient use of land resources by taking advantage of existing infrastructure and service capacity. Studies vary in terms of the definitions of sprawl, methodologies, and findings, but most of them do conclude that costs are generally higher with sprawl-type development than with compact development or smart growth. The Real Estate Research Corporation's *The Costs of Sprawl* (1974), noted in Chapter 1, is widely cited as a seminal piece of work in its isolation of density and location as key variables in the cost of development.

Other studies addressing the cost of different land-use patterns include *The Cost of Sprawl—Revisited* (Burchell et al. 1998) and *The Cost of Alternative Development Patterns: A Review of the Literature* (Frank 1989), among others. For the most part, the literature concludes that sprawl is more costly than compact development, and that the greatest cost savings for compact development or smart growth occur in the category of capital facility costs. Moderate savings occur for operations and maintenance. There are several other findings from a review of the literature that are worth noting.

- Uncontrolled growth leads to greater costs for land consumption and physical infrastructure and creates fiscal costs that exceed revenue. There are also more personal travel costs due to the auto-dependence of sprawl development (Burchell et al. 2002).
- The cost to provide public infrastructure and services for a specific population in new sprawling development is higher than to service that same population in a smart growth or infill development (Coyne 2003).
- Daily vehicle-miles traveled per capita and average vehicle ownership were found to be higher in sprawl areas.
- Sprawl is associated with greater water and energy usage as compared to compact development.

The studies referenced above were generally prepared by academics and typically evaluated the cost of alternative development patterns by analyzing existing developments. They also focused largely on capital costs. Many local and regional governments have conducted their own fiscal impact studies that evaluate alternative development patterns. One example is the Metropolitan Council, the regional planning agency serving the Minneapolis–St. Paul seven-county metropolitan area. The council adopted a Regional Growth Strategy in 1996 based, at least partially, on the premise that more compact development would save both local governments and the region money.

The council calculated rough estimates of regional and local infrastructure costs for two growth scenarios: current trends and compact development. Cities were to play a major role in implementing this growth strategy, and it was assumed that they would want to grow more compactly because of the cost savings. But the council did not have a complete picture of local costs associated with compact development. Since the impact of development and redevelopment on municipal finances can play an important role in a community's decisions about how it should grow, the Metropolitan Council hired a private consultant to conduct a first-of-its-kind regional fiscal impact study, which represented a major step in clarifying the relationship between growth and its costs.

The study was a systematic examination of the local revenues and costs associated with two different development patterns for eight cities in the Twin Cities metropolitan area, measuring local fiscal impacts of these patterns over a 20-year period. The results allowed the council to compare the fiscal impacts associated with new

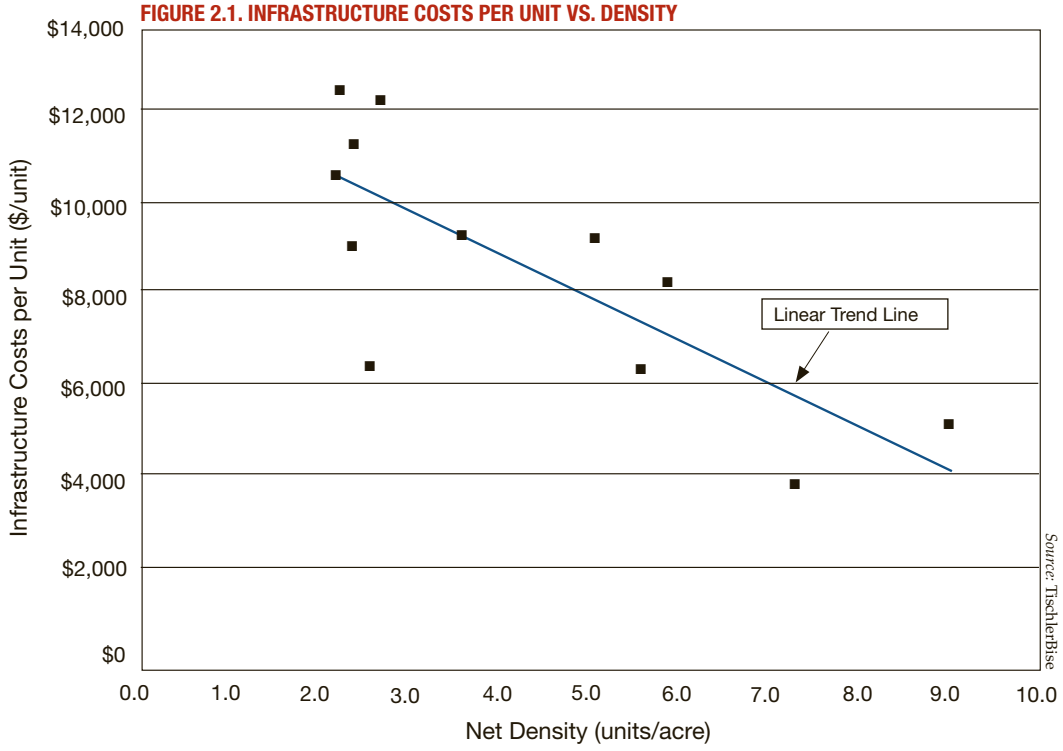
development in the suburban areas to the fiscal impacts of redevelopment and reinvestment in the central cities and fully developed communities. The cities selected for the study represented four stages of development: central cities (Minneapolis and St. Paul), fully developed suburbs (Richfield and Roseville), mostly developed suburbs (Coon Rapids and Apple Valley), and the suburban edge (Cottage Grove and Shakopee).

The study examined "marginal costs"—that is, expenditures necessary to build new facilities and provide additional services to accommodate growth beyond existing municipal capacities. This approach reflects variations in the timing of development and its geographic location. As noted, the net fiscal benefits were compared under two scenarios. One scenario assumed that growth would occur in spread-out patterns similar to current trends. The other projected a more compact pattern and higher-density development. Both scenarios assumed that each community would achieve affordable housing goals set under the Metropolitan Council's Livable Communities Program.

A number of common themes across communities emerged from the study:

- Compact development is less costly to provide with municipal infrastructure, such as streets, sewers, and water lines, than spread-out development. Infrastructure costs decline as the number of housing units per acre goes up—ranging between $10,000 and $12,000 for 2.5 units per acre to between $4,000 and $5,000 for 8 or 9 units per acre. (See Figure 2.1.)
- When the tax capacity (i.e., total amount of tax revenue that can be generated) of housing units is compared to infrastructure costs, compact development generates greater tax capacity for the dollars invested. Tax capacity per housing unit goes down as density goes up, primarily because development moves from single-family to town houses, which are of lesser value. But more such units can be accommodated on the same amount of land, producing greater total tax capacity as the number of units per acre increases. The present value of tax capacity represents the 20-year value of tax revenues generated by the property.
- Affordable housing is not a fiscal drain on the overall community.
- The existing system of paying for infrastructure costs primarily through enterprise funds passes those costs to consumers in the form of higher home prices.
- Tax increment financing (TIF) works best for mature communities because the marginal cost to accommodate growth is small.
- Fewer miles of very congested peak-hour travel and more miles of less congested peak-hour travel are more likely under compact development than under the current-trends scenario.
- Under compact development, transit trips are expected to make up a growing share of total person-trips by 2020.

FIGURE 2.1. INFRASTRUCTURE COSTS PER UNIT VS. DENSITY



Data from the Metropolitan Council's regional fiscal impact study showing that infrastructure costs decrease as housing density increases.

- A compact-development scenario produces much less runoff pollution than the current-trends scenario because it would create only half the area of impervious surfaces.

- The mismatch between housing and job locations are mitigated in a compact mixed use-development scenario by job gains in urban areas and improvements to transit access.

Demographic and Economic Changes

Many elected and appointed local government officials can tell interested parties how they think their community will look in 10 or 20 years in terms of population, housing, and employment. But very few can say what the fiscal impact will be—whether service levels will remain the same or deteriorate under pressure from a growing population. What happens if the current residential base ages in place? Or what if there is substantial housing turnover? Either scenario has implications for a community in terms of the number of schoolchildren generated as well as age demographics, which can influence the demands on social services and on recreation services and facilities. Similarly, understanding alternative development scenarios helps local officials explain the financial pros and cons for the community of maintaining or changing the demographic and economic status quo.

Economic Development Incentives

State and local competition for business expansions and new plants has grown fierce in recent years. Both state and local governments are offering businesses a wider variety of incentives—not only property tax abatements but also wage subsidies, worker training, new roads, and land. Incentive packages are getting larger. For example, Volkswagen was the recipient of a $577 million state, federal, and local incentive package to locate an assembly plant in Chattanooga, Tennessee. This included $106 million in state tax credits based on jobs created, as well as nearly $169 million in infrastructure to ready the site and build roads to it. The plant is expected to generate 2,000 direct jobs and 9,500 indirect, or support, jobs (WKRN 2008). When the state and local contributions totaling $275 million are weighed against the 11,500 direct and indirect jobs created, the incentive cost per job is $23,913. State officials estimate that $55 million in tax revenue will be generated annually because of this investment.

The use of these incentives to attract economic development projects can result in significant financial risk for local governments. A local government can mitigate this risk considerably by incorporating fiscal impact analysis into the decision-making process; the analysis will assess whether the fiscal benefits outweigh the public service and facility costs.

Economic assessments prepared in conjunction with economic development projects are helpful in documenting the increase in local government revenue. But what are the costs that the local government will incur? When a new business locates in a community, it will create an influx of new workers who will generate increased vehicle-trips on the road network and require greater capacity in the water and sewer system. Depending on the number of worker-residents, there will be additional numbers of schoolchildren generated, housing constructed, and park facilities and libraries needed. An economic analysis will not capture these local government service and facilities costs. Therefore, it is critical that local government officials and decision makers understand the fiscal implications as well as the economic implications of these choices.

Rezonings and Specific Development Projects

Rezonings that result in large development projects almost always place additional burdens on existing infrastructure such as parks, libraries, and main arterial roads. They also create additional service costs for police, fire protection, and building inspections. This burden is felt particularly on the front end, before the development begins contributing to the community's tax base. Some developments may also require specialized services, such as schools or specialized public-safety services, which increase costs. Fiscal analysis can be helpful in local government–developer negotiations for rezoning and specific development project applications. If a well-designed and supportable fiscal analysis indicates local government investment will be required, the local government is in a strong position to negotiate with the applicant to help pay for front-end infrastructure costs.

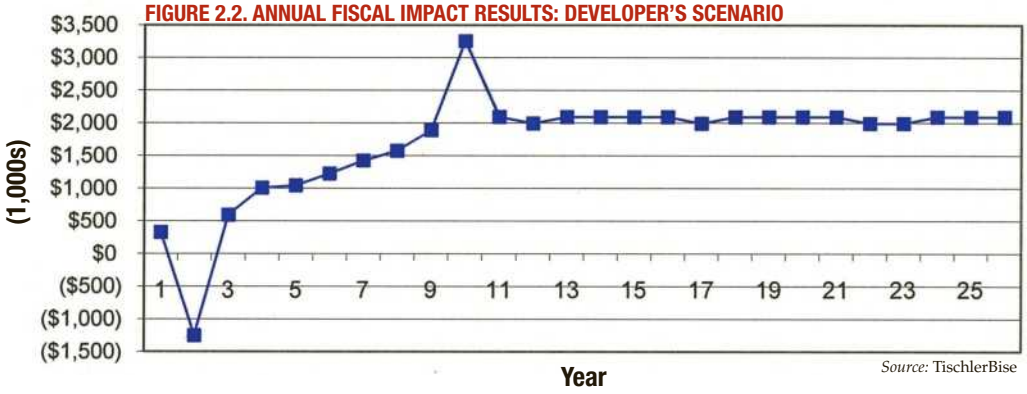
The first step in evaluating a rezoning request or an application for a large development is to determine the development's type and magnitude. Will the project result in mixed use development or will it be entirely residential? Once the development type has been determined, the number of development units (i.e., the number of housing units by type, the amount of nonresidential development by type, etc.) must be defined. The type of development will, for the most part, determine both the revenue generated and the required services and facilities. Gathering as much information as possible about the expected development will help generate more accurate projections. Defining the amount and type of development that will occur as a result of a rezoning can be difficult, as oftentimes the applicant is simply requesting a change in allowed use and will market the parcel to a prospective developer at a value that reflects its highest use. In these cases, the local government should perform a series of sensitivity analyses reflecting the types of uses that could be allowed.

Once the development potential has been defined, the project's expenditure and revenue characteristics can be determined. A fiscal impact study must account for all service costs over the analysis period. Costs should include any expense the government would incur if the development moved forward. Similarly, any costs that would have occurred without the development should not be included.

ing a specific development proposal. Understanding the fiscal impacts associated with various absorption schedules or scenarios can enable a community to negotiate a development agreement in which risks are shared between the local government and the developer.

The results from this type of evaluation for a residential development project in Draper, Utah, are shown in Figures 2.2 and 2.3. Figure 2.2 depicts the annual fiscal

FIGURE 2.2. ANNUAL FISCAL IMPACT RESULTS: DEVELOPER'S SCENARIO



Source: TischlerBise

Annual fiscal impact results over 25 years under the developer's proposed 10-year absorption schedule, with net surpluses shown after year 3.

Timing of Impacts

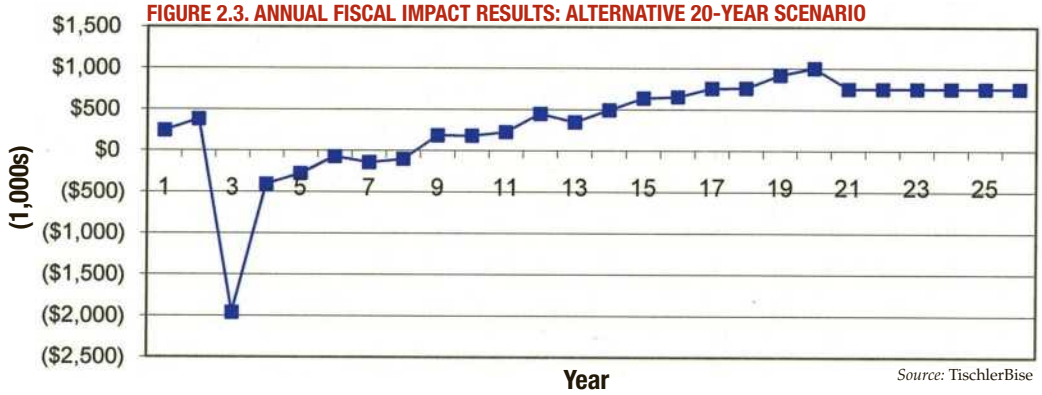
The importance of evaluating development projects over an extended period of time on a year-by-year basis cannot be stressed enough. Too many fiscal analyses just indicate the cumulative impacts over the development period, which is typically 20 to 25 years. One important consideration for fiscal impact analysis is the timing of any additional cost or revenue stream. While a project may ultimately have a positive net effect on government finances, initially it may not. Therefore, it is important that local government decision makers understand the cash flow between years one and 25. Often, developments take years to realize benefits, while costs are incurred early in the project.

It is also in the local government's best interest to evaluate multiple scenarios. Local governments often accept a developer's absorption schedule at face value without considering alternatives. It is important for a community to understand the risks involved in approving a specific development proposal.

impact results of a 25-year analysis under the absorption schedule proposed by the developer, which was projected for 10 years. As the figure illustrates, the project will generate a net deficit of approximately $1.35 million in the second year as a result of the need to construct a fire station and police substation. After this initial capital outlay, net surpluses are generated throughout the remaining years.

Figure 2.3 shows the fiscal results for one of several alternative absorption schedules that were evaluated as part of this analysis. Draper's exposure and risk is quite different if development does not occur as the developer anticipates. The scenario shown in Figure 2.3 assumes a 20-year absorption schedule, and only 75 percent of housing units anticipated by the developer are constructed. Under these assumptions, the project does not begin to generate net surpluses to the city until year 15. As a result, existing city taxpayers will be forced to subsidize this development project.

FIGURE 2.3. ANNUAL FISCAL IMPACT RESULTS: ALTERNATIVE 20-YEAR SCENARIO



Source: TischlerBise

Annual fiscal impact results for alternative 20-year absorption schedule, with net surpluses delayed until year 15.

Annexation

Annexation is the process by which a city extends its municipal services, regulations, voting privileges, and taxing authority to new territory. Cities annex territory for a variety of reasons. A city's ability to annex land from its surrounding county can be a primary determinant of its fiscal health, and in an age of urban sprawl proponents argue that municipal annexation remains the nation's most successful urban policy (Rusk 2006). Cities also annex to provide urbanizing areas with municipal services and to exercise regulatory authority necessary to protect public health, safety, and welfare. In addition, annexation is a means of ensuring that residents and businesses outside a city's corporate limits who benefit from access to the city's facilities and services (sometimes known as "shadow citizens") share the tax burden associated with constructing and maintaining those facilities and services. Annexation may also be used as a technique to manage growth.

Annexation is attractive to many communities that perceive annexations as cash cows because they focus on the additional revenues that will accrue as a result of annexation and do not consider the costs. Because of the fiscal implications of annexation, the costs of providing municipal services must be estimated and weighed against the anticipated revenues of areas proposed for annexation. Fiscal impact analysis can ascertain the cost of bringing the levels of service and facilities in the area proposed for annexation up to par with the annexing jurisdiction's existing level of service. The services and facilities analyzed typically include police protection, fire protection, water service, sewage collection and disposal, garbage disposal, street maintenance, street lighting, storm sewers, animal control, planning, building inspection, public health protection, recreation, and library services.

Annexation Plan-for-Services Analyses. A fiscal impact analysis is critical in states (e.g., North Carolina) that require a formal annexation service plan documenting how existing city levels of service will be extended to the newly annexed area or areas. These plans are typically required to identify the affected municipal services and establish a schedule for extending them to the new areas. People in an annexed area are to be treated in all respects like other residents of the city as soon as is reasonably possible.

The first step is to consider the cost of extending all services provided in the city. For example, local streets originally constructed to a rural standard may need upgrading to meet a city's standards. If the FIA indicates that the full package of services exceeds the city's financial capability, relative priorities should be established, and each service should be extended when it is financially possible. Services that will require no extensive capital outlay, such as street maintenance and cleaning, may be provided within a short time. Police protection is typically required immediately. Fire protection is also typically provided as soon as possible, either by the city or by arrangement with the appropriate fire-protection district. In many cases, providing the desired level of fire protection may require an additional fire station, fire truck, or other equipment and personnel.

The FIA prepared as part of a service plan will indicate the cash flow (annual surplus or deficit) to the city as a result of annexation. A deficit cash flow will inform the city of the extent to which it must subsidize the introduction of a new service or improvement of an existing service in the annexed area. Such subsidization might be desirable or necessary if there is a serious service deficiency requiring immediate capital expenditures. Or it may be politically desirable for the city to assume the cost of immediate improvements in certain services if it is confident that over a longer period of time the costs will prove to be a good investment.

The analysis can be expanded to look beyond the issues associated with bringing the existing level of service in annexed areas up to community standards. It can also examine the fiscal impact of anticipated development in the annexed area as part of the process of evaluating land-use policies. Factors that influence the fiscal sustainability of annexations are numerous and include the development potential on vacant land, the timing or staging of development potential, the assessed value of the existing development base, local and state revenue structures, local levels of service, and the remaining capacity of existing capital facilities.

It is important to note that preparing a fiscal impact analysis does not mean that only areas with positive cash flow should be annexed. There will be instances when health, safety, environmental, or other factors will override fiscal considerations; an area may need to be annexed despite a negative fiscal impact. Other areas may have negative short-term financial impacts but may be in the long-range best financial interest of the city. For example, many cities choose to annex areas in order to control the type of development that occurs. This is especially true in situations where there is a large disparity between the densities and development standards required by a city and those required in the unincorporated county.

Infrastructure Planning

New development typically requires infrastructure investment. Roads, schools, water and sewer, public safety (fire and police), general government buildings, parks, and library systems are typical infrastructure categories. A good fiscal analysis forecasts infrastructure needs to meet anticipated changes in a community. Any change in land use, population, or employment will have an impact on a number of capital-intensive services required in a community. The fiscal impact process requires that

local officials specify the types of infrastructure provided by the community (e.g., local roads) and the level of service to be provided (e.g., provision of sidewalks and street lighting on all local roads). The analysis will indicate how much new infrastructure will be required to serve an anticipated level of new development. Costs can then be projected for land, equipment, improvements, and operating expenses for maintaining the new infrastructure.

It is important to consider whether existing infrastructure seems to have unused capacity in order to determine whether it should be considered as part of the analysis. If there is significant unused capacity, it will be available to serve new development, reducing the need for new infrastructure.

On the revenue side, the analysis should take into consideration special revenues from user fees or other sources such as impact fees, improvements to existing infrastructure to be made by the developer, and general fund revenues to be allocated to infrastructure development, as appropriate. A similar type of analysis can be done for utilities, since land-use changes can result in changes in the demand for water and sewer service, which may in turn affect the costs and revenues of various distribution and treatment approaches. Changes in water and sewer service have an effect on one-time revenue sources, such as connection or hook-up charges, as well as on operating revenues.

Leveraging of Public Dollars

Fiscal evaluations can help local officials who are considering how to promote economic growth decide how to invest limited funds so as to maximize the return. For example, different economic development strategies can be evaluated for their impacts on land use. Land use in turn affects services, costs, and revenues. A fiscal impact analysis helps identify the economic development strategy that makes the most fiscal sense.

FINANCE APPLICATIONS

An FIA focuses on change, generally over a 10- to 20-year period. Although the accuracy of the projections diminishes over time, the analysis can help to raise budget and finance policy issues and suggest alternative approaches for addressing them. An FIA differs from traditional local government revenue and budget forecasting in that local government budgets are primarily revenue driven. That is, the budgeted operating and capital expenditures are "fiscally constrained" by the amount of revenue forecasted. In other words, a local government "backs in" to the budgeted appropriation, tailoring spending to income.

In contrast, an FIA projects the demand for services and facilities (usually based on current levels of service) without regard for expected revenue. If projected revenue does not cover projected expenditures, a deficit will be incurred. Further, an FIA links cost and revenue changes to specific land uses. For example, if community decision makers implement a shift in land-use policy that results in the immediate need for public-safety capital facilities and associated operating expenses, a simple cost projection based on a 5 percent annual increase could potentially understate future public-safety costs. Ways in which fiscal impact analysis can be applied to finance issues are discussed below.

Capital Improvement Programming (CIP)

Individual departments seldom incorporate market forces or land-use plans into their CIP requests. Fiscal analysis enables a local government to forecast the need for additional capital facilities and the most appropriate locations for those facilities based on projected increases in population or employment in various subareas of the community. An FIA also clarifies the timing of infrastructure improvements. By incorporating future demographic and economic projections, the fiscal analysis will indicate demand for capital facilities in both the near and longer terms.

The demand generator used in the analysis, such as population, employment, housing type, or nonresidential square footage, will drive the measurement of the need for the capital facility. Say, for instance, that population is the demand generator. Given a projected population increase and the existing capacity of a neighborhood park, the analysis can show when a new park will be needed. It can also indicate the available and excess capacity, the construction schedule, the additional acreage needed, and the associated operating expenses. Changing any variable generates a new capital improvement forecast. Repeating this process for all the facilities in a jurisdiction will give local officials a good grasp of current and future demand for capital facilities.

Capital improvement programming can also be used to calculate the cost and timing for replacing existing infrastructure. An inventory of existing capital facilities and their related future costs can be obtained by estimating the remaining useful life of each facility and its replacement or rehabilitation cost.

Revenue Forecasting

For purposes of this discussion, a revenue forecast defines the projected change in revenues (assuming existing rates) due to land-use or demographic changes in the community. The revenue forecast is one of the results of a fiscal evaluation. Specific revenues such as building permit fees, connection fees, and other user fees are considered, as are intergovernmental transfers and general revenue sources such as sales taxes and ad valorem taxes (based on the value of real estate or personal property).

Projected revenues are compared under different development scenarios. For example, the projected number of new detached houses and apartments multiplied by their estimated market value and by their assessment rate will result in a projection of the additional property tax revenues from each development scenario. Nonresidential square footage will also generate additional ad valorem taxes, so a similar analysis can be done for that type of projected development. One-time fees can also be important, particularly utility connection fees, and the revenues from them will vary by alternative and by year.

Fiscal Planning

Budget planning usually focuses on only the next budget year, while fiscal planning focuses on change and uses a 10- to 20-year time frame. Fiscal planning provides local officials a long-term perspective from which to consider plans and policies that affect costs and revenues associated with each department and activity of the local government. If the fiscal analysis shows deficits in the early years of the projection period, local officials may decide to postpone an aspect of the project (such as an expansion) or to modify an assumption (such as a land-use policy that is projected to be too costly). On the other hand, if the fiscal analysis shows a deficit situation in the later years of the analysis, local officials may increase their annual investment in reserves to escrow funds that will be needed in the future, plan to expand revenue sources, or begin thinking about how changes in land-use policies could mitigate the anticipated fiscal problems.

Budget Projections

Since fiscal impact analysis can project the demand for departments' services, it is helpful in preparing and evaluating departmental budget requests. For example, an increase in the intensity of land use will generate a higher level of demand for police services. The fiscal analysis offers a budget projection for the police department that is based on land-use changes assuming specified service levels over the forecast period. Local officials can look at this information for alternative levels of service and project how those alternatives will affect the budget.

Level-of-Service Changes

A growing number of local governments are finding it useful to focus policy discussions on the basic levels of public services that citizens want and are willing to pay for. The increasing use of impact fees and user fees also makes it important to clearly identify a level-of-service standard so that appropriate fees can be set and collected.

One of the main variables used in fiscal impact analysis is the level of service. What are the costs of providing different levels of service? Existing levels of service provide a baseline for reviewing community level-of-service goals in light of fiscal constraints. Once the current level of service is determined for each activity, the costs of new development can be evaluated easily. If a recreation department's level of service is determined to be one neighborhood park per 10,000 persons, then projected population growth can be tied to estimated costs for purchasing parkland and equipment, for making necessary improvements to facilities, and for annual operating expenses.

Some communities may want levels of service that are nearly impossible to achieve because they are not able to raise enough revenue to provide them. Other communities may be experiencing pressure for higher levels of service from newer residents who have relocated from larger communities. Another important consideration is the impact of "shadow citizens" on city or town levels of service. As noted above, shadow citizens are those located in the unincorporated county on the fringes of a city or town who use the municipality as their primary service provider. In other words, they take advantage of municipal parks, community centers, recreation programs, and so on, but they pay no direct taxes to fund these services. A fiscal impact analysis can provide useful background information for addressing all of the above issues.

Fiscal impact analysis also can help determine realistic levels for assessments against new development. By law, new development cannot be charged for facilities that will provide a higher level of service than already exists in a community; it may be charged only its proportionate share of the cost at existing service levels. Furthermore, user fees and other impact fees collected from new development cannot be used to upgrade facilities that serve existing development. Fiscal impact analysis can quantify existing levels of service and project the costs of servicing new development at those levels. Furthermore, it can be used to estimate the fiscal consequences of level-of-service improvement (e.g., adding teachers and lowering class size, widening a thoroughfare).

Cost and Revenue Changes

Computer models for fiscal impact analyses make it easy for an FIA analyst to explore and test various cost and revenue assumptions. Such work will inform policy and purchasing decisions. Police cars, utility plant additions, salaries, and fringe benefits are just some of the items that can be reviewed for their financial impact at various rates. In a similar fashion, revenue rates and sources can be modified using various assumptions.

CHAPTER 3

Strategies for Successful Fiscal Impact Analysis

Planners have many opportunities in the planning process and in their day-to-day work to influence the fiscal sustainability of their community. Whether reviewing an application for a large, mixed use development project or preparing a future land-use plan, planners should consider how proposed changes in land use and new development projects affect their communities' bottom lines.

There are many possible approaches to conducting a fiscal impact analysis and planning a revenue strategy based on its findings. This chapter highlights six important steps in the process. These strategies should also be communicated to those who may not be as familiar with the planning and community development process.

ASSIGN OVERALL AUTHORITY TO ONE DEPARTMENT

It is important to give one department overall responsibility for the fiscal impact analysis. The department in charge will need support from the manager or chief administrative officer in order to gain sufficient cooperation from other departments.

The three departments most likely to manage a fiscal impact analysis are planning, finance or budget, and the chief administrator's office. The planning department is the most common choice because most planning departments develop and regularly update forecasts of land uses, and planners are familiar with many of the data sources used in completing fiscal impact analyses.

But even though planning departments are usually well-versed in long-range planning, they are not always staffed with people who are familiar with fiscal impact analysis. Because of the analytical skills of its staff, the finance or budget department can be of particular use in the process as well, as it deals with revenues and expenses and usually forecasts the local government's short- to mid-term revenue.

It is also helpful to have the county or city manager's office involved. This office is able to coordinate a team of staff from different departments, or it may have its own staff of analysts. A number of the findings generated by fiscal impact studies are of value to the jurisdiction's management staff. Also, this office may be more efficient in gaining cooperation from other departments in gathering the necessary information about service levels, costs, and revenues.

Regardless of which department has the responsibility for pulling together the analysis, it will need the cooperation of the entire local government. Other departments will need to provide information about current levels of service and current cost and revenue factors, usually in one or two interviews taking a few hours in total. Most departments will cooperate readily, provided that the purpose of the project is explained to them in advance and they are encouraged to help develop appropriate estimators.

Elected officials and appointed committees may be involved in reviewing and acting on the results of the fiscal impact analysis. It is important that these officials be involved in early discussions of the process the local government will follow, the alternative scenarios that will be evaluated, and preliminary results of the analysis (after staff review). The staff can draft a proposed set of recommendations to submit to elected officials to ensure that the fiscal impact analysis is used effectively in policy making.

IDENTIFY TASKS TO BE COMPLETED

Identifying Alternative Scenarios

Before much work can be conducted, the analyst must identify the alternatives to be evaluated. In most cases, the alternative land uses or development scenarios will be defined by changes in population, employment, housing units, or nonresidential square footage. When reviewing a specific development proposal, a scenario may be provided by the developer. However, as discussed in Chapter 2, the planning staff should insist on reviewing alternative scenarios. A written description of the assumptions regarding the scenarios will explain the basis for the alternatives. Different levels of service can also be chosen as alternatives. Again, the assumptions underlying the choice of service levels should be explained.

Defining the Level of Service

The second task is usually defining the level of service. In most cases, this is the explicit or implicit level of service currently being provided. An example from a fiscal impact analysis prepared for Anchorage, Alaska, as part of its comprehensive plan indicates that the municipality owns 841.75 acres of community parkland. Table 3.1 indicates the existing level of service in terms of community parkland per capita for the entire municipality, as well as for each of the five fiscal analysis zones within it. When community parkland is assessed relative to the estimated population of the region as a whole (216,500), we see that there are 0.0038 acres of community parkland per capita.

TABLE 3.1. COMMUNITY PARK EXISTING LEVELS OF SERVICE BY FISCAL ANALYSIS ZONE, ANCHORAGE, ALASKA

FAZ	Acres	Population	Level of Service
Northwest	73.94	47,800	0.0015 acres per capita
Northeast	304.81	72,200	0.0042 acres per capita
Central	70.00	38,600	0.0018 acres per capita
Southwest	373.00	36,000	0.0104 acres per capita
Southeast	20.00	21,900	0.0009 acres per capita
Total	**841.75**	**216,500**	**0.0038 acres per capita**

Source: TischlerBise

Collecting Local Cost and Revenue Factors

Once the level of service is defined, the cost and revenue factors pertaining to that particular service must be collected. For a community park, some of the capital costs are the cost of the land, the cost of the equipment, and the cost of other improvements. Operating expenses include maintenance, staff costs, and personnel for specific programs. The revenues include any specific revenues accruing to parks and recreation from this park, such as program revenues and user fees.

Preparing Clear Explanations of the Factors

Plans for the collection and use of the quantitative information should be written in narrative form so that they can be easily understood by the average person. Such a narrative will help staff understand the input data and will help elected officials explain the study to constituents.

Table 3.2 shows an example from the assumptions prepared as part of a fiscal impact analysis for the City of Champaign, Illinois. The table shows operating expenses and staffing for the Traffic and Lighting Division of the city's Public Works Department. We see that nonsalary operating expenses are projected to increase with additional vehicle trips. In terms of staffing, three of the four position types are considered variable, or growth-related, expenditures. These positions are also projected to increase with the number of vehicle trips on the city's transportation network. As trips are added to the transportation network, the Traffic and Lighting Division will be required to provide a greater capacity for maintenance of the city's signs, signals, and lighting.

Calculating Results

Applying the relevant numbers for each scenario against the level of service and cost and revenue factors for each department will yield the fiscal results. The more simplistic approaches use average costs; the marginal-cost approach may be more helpful if there are existing capital facility capacities not being used or differences in services among geographic subareas. (See Chapter 4.) For example, using a marginal-cost approach, one can calculate the annual available and excess capacity for capital facilities and reflect construction lag time as well as associated operating expenses regardless of capacity that occur once the facility opens.

Table 3.3 shows the assumptions for community parks developed as part of a fiscal impact analysis for Oklahoma City, Oklahoma. The table indicates the inventory of community parks (538), the citywide level of service (0.0010 acres per capita), the number of demand units served per community park (19,788 persons), the prototype community park size (20 acres), and the cost to purchase the 20-acre

TABLE 3.2. BASE YEAR BUDGET AND FACTOR PROJECTION METHODOLOGY INPUTS, CHAMPAIGN, ILLINOIS

Traffic and Lighting

Expenditure Name	FY 2009 Budget Amount ($)	Project Using Which Demand Base?	Demand Unit Multiplier	Projection Methodology	Annual Change (+/–)	Level-of-Service Standard $ per Demand Unit
Personnel Services	729,339	See Below	1.00	Constant	0	0.00
Commodities	129,930	Vehicle Trips	1.00	Constant	0	0.48
Contractual Services	464,040	Vehicle Trips	1.00	Constant	0	1.73
Capital Outlays	88,000	Vehicle Trips	1.00	Constant	0	0.33
Transfers	0	Fixed	1.00	Constant	0	0.00
TOTAL	**1,411,309**					

Traffic and Lighting Staffing Input

Category	FY 2009 FTE Positions	Project Using Which Demand Base?	Current Demand Units Served per Position	% Estimate of Available Capacity	Remaining Capacity/Initial Hire Threshold	Estimated Service Capacity per Position
Traffic and Lighting Supervisor	1.0	Fixed	0	0	0	0
Electrical Technician	4.0	Citywide Vehicle Trips	67,173	50	33,587	60,456
Traffic and Lighting Technician	1.0	Citywide Vehicle Trips	268,693	20	53,739	161,216
Sign Maintenance Worker II	3.0	Citywide Vehicle Trips	89,564	50	44,782	78,369
	9.0					

Salaries

Category	Average Salary/ Staff Member ($)	Benefits Multiplier (%)	(%) Inflation Adjustment (+/– Base)	Level-of-Service Standard Total Cost ($)
Traffic and Lighting Supervisor	73,725	37	0	101,003
Electrical Technician	49,889	37	0	68,348
Traffic and Lighting Technician	53,955	37	0	73,919
Sign Maintenance Worker II	46,717	37	0	64,002

Source: TischlerBise

TABLE 3.3. CAPITAL FACILITIES STANDARDS AND COSTS, OKLAHOMA CITY, OKLAHOMA

Facility Type	Base Year Inventory		Need for Facility Based on:	Citywide Level of Service by Capital Facility
Community Parks	Acres	538	Park Population	0.0010
			Capacity Factors:	
			Prototype Facility Size (acres): 20	
Useful Facility Life:	New Facility (years)	30	Estimate of Available Facility Capacity: 30%	
Lag/Lead Time:	Funding to Delivery (years):	0	Remaining Capacity/ Initial Construction Threshold (acres): 6	
Funding Method: Percent Bonded: 100				

park ($1,000,000). Table 3.3 also contains assumptions related to capacity and funding. For example, it is estimated that there is available capacity of 30 percent in the park system. Based on this assumption, the city can absorb demand for an additional 6 acres before a new 20-acre park is constructed. It is further assumed that the new park will have a useful life of 30 years and will be funded entirely by debt financing.

Analyzing Findings

After comparing the results for each alternative, the local government might want to do some sensitivity analysis ("what if") to evaluate the implications of changes in different factors.

Presenting Report Findings

A clear, concise fiscal impact report should be prepared, explaining the annual as well as the cumulative fiscal results and the reasons for them. An executive summary is desirable. A presentation of the major findings to department personnel and elected officials gives them an opportunity to ask questions about the process. If people do not understand the process and product, they are less likely to use the results to guide policy.

Evaluating Revenue Strategies

Assuming that the fiscal impact analysis reveals fiscal problems, the next step is to identify strategies to raise revenues. The fiscal analysis should also evaluate how anticipated changes will affect revenue sources, and it will be the analyst's job to investigate new revenue sources.

Revenue sources include user fees specific to a public service (such as park fees), general revenues, and one-time fees. Major general revenues include property tax, sales tax, and intergovernmental revenues. To calculate increases in property tax revenues due to new development, the assessment value is applied to new development or to any expected increase in market value, not to the average assessed value, which includes the value of older development. Homestead and other exemptions should also be considered. Sales tax revenues, which can be an important general revenue source, are usually projected using population or retail space or both. Intergovernmental transfers frequently are dependent on changes in the jurisdiction vis-à-vis other jurisdictions in the state.

One-time fees can be important in a jurisdiction's revenue picture. For example, transfer taxes and various permit fees can be among the largest revenue sources. Various types of exactions, such as impact fees, may also be significant in some jurisdictions. (Impact fees do not reflect operating expenses.) Of course, these one-time fees are most susceptible to changes in the rate of development.

SUBSEQUENT STRATEGIES

Determine Whether to Hire a Consultant

Whether a consultant is involved in the FIA process, and in what capacity, is dependent on the local government's time frame, cost, personnel resources, approach, alternatives, and politics. A consultant can provide expertise that does not exist on staff and can offer impartiality. Fiscal impact evaluations can be controversial since they deal with land-use policies and tax rates. If a local staff conducts the analysis, it may be accused of bias in favor of or in opposition to vested interests. Communities that use marginal-cost approaches may find the help of an outside expert valuable, because these approaches work best when those obtaining the data on local service levels and local costs and revenues have a good knowledge of fiscal impact analysis procedures. It may be more cost-effective and less time-consuming to use a consultant in such cases. Communities using average-cost approaches with per capita multipliers may find it easy to have local staff handle the work; the analysis is straightforward and comes from compiled sources.

Use Local Data

Every community is unique. The general location of the jurisdiction and its boundaries, road network, demo-

Current Demand Units Served per Facility	Current Cost/Unit ($000s)	(%) Inflation Adjustment (+/–)
19,788	1,000	0

Source: TischlerBise

Fiscal analysis focuses on the demands for services and the resulting costs and revenue needs beyond a one-year period, showing decision makers whether there are sufficient revenues from existing sources.

graphic characteristics, housing types, nonresidential activity, fiscal situation, and political philosophy are some of the factors that will influence levels of service and cost and revenue factors. Since these conditions can vary widely from community to community, it is crucial that analysts use local data, rather than regional or national averages.

Make All Assumptions Explicit

Once the analysis is completed, a concise report should be prepared that includes an executive summary. The report should make all assumptions explicit and describe how alternatives were chosen. The levels of service and cost and revenue factors should be clearly defined. The report should discuss the major findings of the capital improvements forecast, the major impacts on the departments, the annual and cumulative fiscal impacts, and the major conclusions in terms of land use or other policies.

Develop a Revenue Strategy

With the completion of the fiscal impact analysis, the user will know the surplus or deficit forecasted for each alternative on an annual basis. The next step is to develop a revenue strategy that recommends ways to fund alternative growth scenarios. The revenue strategy is then presented to the decision makers for further refinement.

Fiscal analysis allows decision makers to address a variety of issues; revenue strategy is perhaps the most critical among them. Fiscal analysis focuses on the demands for services and the resulting costs and revenue needs beyond a one-year period, showing decision makers whether there are sufficient revenues from existing sources. If there are not, the process encourages decision makers to evaluate likely sources of additional revenue.

The fiscal analysis should itemize the projected revenue stream by source and rate. Then, depending on political feasibility, decision makers can consider changing various rates. Perhaps more important, they can calculate the impacts of changes in rates, as well as the impact of the addition of new revenue sources. Impact fees, system development fees, user fees, and many other revenue categories are candidates for inclusion in a revenue strategy.

The completion of the revenue strategy addressing the local government's longer-term fiscal needs will also complete the fiscal analysis effort. Then the local government has the opportunity to conduct further sensitivity evaluations reflecting changes in any of a number of variables.

CHAPTER 4

Common Methodologies

This section briefly summarizes the basic methodologies used for fiscal impact analysis.[1] There are two basic approaches to fiscal evaluations: using average costs and using marginal costs. Average-cost approaches are simpler and more popular; costs and revenues are calculated based on the average cost per unit of service multiplied by the demand for that unit. Average-cost approaches assume a linear relationship and do not consider excess or deficient capacity of facilities or services over time. A per capita relationship—in which the current level of service per person in a community is considered to be the standard for future development—is an example of an average-cost approach.

Marginal-cost approaches describe the unique characteristics of a jurisdiction's capital facilities. Although over the long term, average- and marginal-cost techniques will produce similar results, the real value of fiscal analysis is in the two- to 10-year time period, when a community can incur costs. Marginal-cost analysis is most useful in this time frame. However, average-cost techniques are generally simpler to use, so for relatively small development projects with modest impacts or impacts that are realized over a long time frame, they may be preferred. Some local governments may find it worthwhile to use more than one analysis approach and compare the assumptions and results as part of the decision-making process.

In communities where facilities in geographic subareas already are insufficient, the average-cost approach will underestimate costs, whereas the marginal-cost approach will more accurately project the short- to mid-term costs of infrastructure required to accommodate new development. For instance, if an analysis examined school services costs, the average-cost approach would divide the expenditure for school services by the number of students to arrive at a figure—say, $2,135 per student. This analysis would not consider any spatial distribution of new homes and the resulting schoolchildren. The marginal-cost approach would consider both current school enrollment as well as capacity in each school. If new residential growth were to occur in areas where schools have excess capacity, the only real cost increase will be for operating expenses, whereas if new residential development was to locate in an area with no school capacity, costs would be incurred for additional school capacity (capital costs) as well as the associated operating expenses.

Whichever methodology is used, the analysis results may be affected by inflation. This effect can be calculated after the development alternative is selected, when "what if" evaluations are being conducted. Using inflated dollars at an earlier point will make it difficult for political leaders and others to compare land-use alternatives objectively. This assumption is in accord with budget data and avoids the difficulty of speculating on inflation rates and their effects on cost and revenue categories. It also avoids the problem of interpreting results expressed in inflated dollars over an extended period of time.

In general, including inflation is complicated and unpredictable. This is particularly the case given that some costs, such as salaries, increase at different rates than other operating and capital costs, such as contractual and building construction costs. And these costs, in turn, almost always increase in relation to the appreciation of real estate, thus affecting the revenue side of the equation. Using constant dollars avoids these issues.

Burchell and Listokin (1978, 1980) identify FIA methods that may be appropriate for different contexts, depending on the type of community, the type of proposed development, and the existing service capacity in the municipality and school district. In general, in moderate-sized cities (10,000 to 50,000 people) with relatively stable growth patterns and some excess service capacity, average service-cost methods do a reasonably good job of projecting expenditures associated with "typical" business development and housing projects. In larger, older cities, or in rapidly growing suburban or urban communities that have either significantly excessive or deficient capacity, marginal service-cost methods are more suitable. Marginal-cost methods are also appropriate where the project would be considered atypical with respect to employment or household patterns within the community.

AVERAGE-COST TECHNIQUES

Three of the five commonly used fiscal impact analysis techniques are considered average-cost approaches.

Per Capita Multiplier

The most popular average-cost technique is the per capita multiplier. This is obtained by dividing the budget for a particular service, such as parks, by the current population, yielding an estimated service cost per person. Under the per capita approach, it is assumed that each service level will be maintained into the future and that each additional resident will generate the same level of costs to the jurisdiction as each existing resident currently generates. For example, if a parks department budget was $450,000 and the population of the town 45,000, then the average cost would be $10 per capita. This figure is then used to estimate additional costs resulting from new development.

The per capita approach is easy to use but has the disadvantage of being less accurate than other approaches if local officials want to look beyond broad levels of overall costs and expenditures.

Service Standard

A second average-cost approach is the service-standard method. This approach estimates the future costs of development based on average staffing and capital facility service levels for municipalities of similar size and geographic location, based on data collected by the U.S. Census of Governments. This methodology assumes that service levels for both personnel and capital facilities are, to a large extent, a function of a jurisdiction's total population, and that communities of a similar size will therefore have similar service levels (especially within a geographic region).

Using the service-standard approach, a local government estimates increased police personnel costs, for example, by taking the service ratio—say, 2.5 police officers per 1,000 persons—and multiplying it by the average operating cost per police officer for the jurisdic-

tion (obtained from local data). Then, using average capital-to-operating ratio data obtained from the U.S. Census of Governments (www.census.gov/govs), capital costs are estimated.

Since a fundamental assumption is that personnel growth within one community is equivalent to average personnel growth in the region, to the extent that a community is dissimilar to the "average" in terms of services, costs, or demographics, the figures will be in error.

Proportional Valuation

The third average-cost approach is the proportional-valuation method; it is typically used for evaluating the fiscal impacts of nonresidential growth. This methodology assumes that assessed property values are directly related to public services costs. For example, if the nonresidential real property value is $40 million, and the total local real property value is $160 million, the proportion is 0.25, and therefore nonresidential development is assumed to account for 25 percent of the jurisdiction's current costs.

Also included as part of the analysis are refinement coefficients, which are intended to prevent significant differences in the value of residential and nonresidential property from skewing cost relationships. The total number of nonresidential land parcels is divided by the total number of land parcels, and this figure is used to select the area of a refinement coefficient curve.

The proportional-valuation approach is used infrequently because most analyses include a residential component and because selecting a refinement coefficient for each public service is a fairly subjective process. Additionally, this method assumes that costs increase with land-use intensity. This may or may not be the case. It also groups industrial and commercial development into one land-use category, thus assuming that the impacts of these land-use types are similar, when in fact retail development is significantly more costly than office and industrial uses.

MARGINAL-COST TECHNIQUES

There are two commonly used fiscal impact analysis methodologies that employ marginal-costing techniques.

Local Case Study

The most thorough of the FIA approaches uses locally based case information. This case-study approach assumes that every community is unique and that the assumptions regarding levels of service and cost and revenue factors should reflect what is occurring in that community. Department representatives are interviewed about existing public facilities and service capacities. Local information on excess park capacity, for example, makes it possible to predict when new facilities, programs, or personnel may be needed. This method also allows communities to include more detail if desired (e.g., to make estimates based on the costs of specific facilities and programs, such as pools, softball leagues, or tennis courts).

In cases where it is difficult to get marginal-cost information, communities might use average-cost data in place of local data. For example, estimating the increase over time in general government operating expenses may be done most efficiently using the per capita average-cost approach. On the other hand, local interviews could indicate that the cost for a particular local government service is fixed (not affected by growth) or semivariable by population (affected by growth but not fully variable on a per capita basis).

The primary drawbacks of the case-study approach are that it can require a significant amount of time and that the accuracy of the data depends on the accuracy of each department's estimates. There may be a vested interest on the part of a particular department to "feather its nest," so to speak. In other words, it is not uncommon for departments to estimate that the marginal impacts from new development will require more resources than are currently provided, resulting in new development being charged for a higher level of service than is currently provided. For example, the parks and recreation department may point to an adopted level-of-service standard of one acre per 1,000 residents as the factor to use in developing marginal park-construction factors, whereas in reality the community is actually providing 0.75 acres per 1,000 residents. As noted above, charging new development for higher levels of service than are currently provided is prohibited by law.

Comparable City

The second marginal-cost approach looks at costs in comparable jurisdictions. This approach typically relies on data from the U.S. Census of Governments. The data are organized by population and by growth rate. This approach assumes that growth will affect expenditure patterns and includes that effect in projecting future costs. For example, according to the U.S. Census of Governments, a city with a population of 110,000 will have an operating expenditure multiplier of 1.95 for public safety services. After a projected increase in population of up to 5 percent over the next 10 years, the expenditure multiplier will be 2.25, a difference of 15 percent (2.25/1.95). This 15 percent figure is applied against current annual expenditures per person to obtain projected future annual expenditures per person. If the current per capita cost for public safety services is $6.00, then the new cost would be $6.90 per capita, multiplied by the number of new residents projected. A similar approach would be used for capital costs.

Without the rate of population increase or decrease reflected in the tables, this methodology would be very

similar to the service-standard approach. This methodology is used infrequently.

COST OF COMMUNITY SERVICES APPROACH

A third type of approach worth considering is the Cost of Community Services (COCS) methodology that was developed by the American Farmland Trust, a not-for-profit organization created in 1980 for the purpose of protecting agricultural resources in the United States. COCS studies are becoming increasingly popular in small, rural communities, particularly due to their relatively straightforward methodology and low costs.

A typical COCS study divides land use into three categories: residential, commercial/industrial, and farmland/open space. Analyzing fiscal impact entails calculating a COCS ratio for each land-use category. The ratio compares how many dollars' worth of local government services are demanded for each dollar collected. A ratio greater than 1.0 suggests that for every dollar of revenue collected from a given category of land, more than one dollar is spent. COCS studies usually conclude that residential developments contribute less in revenue than they require in government expenditures, while agricultural, commercial, industrial, and open space lands contribute more in revenue than they require in expenditures.

The general process of calculating COCS ratios involves analyzing the finances and land uses of a specific community, including financial information from the local school district. Revenues and expenditures are broken down among the different types of land uses that provide or require them. Obtaining this information usually requires detailed interviews with the community's manager, clerk, or treasurer or budget officer, other local municipal officials, if needed, and the business manager or superintendent of the local school district. Detailed budget information is collected and related to land uses for both the municipality and the school district. The municipal and school district information is combined, and the final ratios are calculated.

In some ways, conducting a COCS study can involve more art than science. Careful consideration of land uses is required, and difficult decisions must be made about budget items that do not fit easily into land-use categories. In cases in which revenues and expenditures cannot be allocated, a system of default allocations is used to avoid biasing the results (Kelsey 1998).

Since much of the focus of COCS studies has been on demonstrating that open space and agricultural land are a fiscal benefit, these studies are an important means of putting a monetary value on what is increasingly recognized as a public good. Proponents also claim that COCS studies assist planners in determining the costs associated with residential development projects. Conservationists have used COCS studies to help change attitudes and challenge assumptions that encouraging new development is fiscally superior to the conservation of open space.

Critics of COCS studies discount them because they sometimes rely on many underlying assumptions based on interviewees' estimates rather than empirical evidence. For example, the allocation of police costs may be based on a "guesstimate" of calls for service, rather than an analysis of call data. Proponents of marginal-cost analysis correctly point out that a COCS does not involve an analysis of true levels of service and the cost of maintaining those levels.

The greatest criticism of this approach is that the studies often fail to acknowledge workers or residents living on farms. The costs for both workers and residents are apportioned to other land uses, primarily residential. These studies rarely apportion to agricultural uses the costs of services such as street maintenance, garbage collection, or protective services, but the overall costs associated with these uses are often low or nonexistent. Furthermore, many studies do not differentiate between different types of open space. Farmland and vacant lots may have different associated costs and revenues, for example.

SELECTING A METHODOLOGY

So which methodology should an analyst select when preparing a fiscal impact analysis? No one methodology is appropriate for every analysis or situation. The answer depends on several factors including type and scale of evaluation, data availability, size of the jurisdiction, budget, time frame, and audience.

Burchell and Listokin (1980) argue that average-cost analyses and marginal analyses yield similar results when comparing cumulative impacts. However, there are likely to be substantial differences between the two methods during the intermediary years of the analysis. The fiscal results tend to follow a linear relationship when the average-cost approach is used, whereas under a marginal-cost approach they tend to fluctuate due to the amount of available capacity at a given point in time. For example, deficits are likely to be incurred when a new capital facility is needed and the associated operating costs are absorbed, as shown when the full cost of the facility and staffing, rather than a per capita cost, is being reflected in the analysis. As a result, the marginal-cost approach enables a community to better understand if, when, and for how long budget deficits are likely to be incurred. It can be a more accurate indicator of return on investment, particularly when evaluating development proposals or economic development projects.

As an example, parks and recreation departments have traditionally constructed three types of parks: neighborhood, community, and regional. However, a recent trend has been to focus on special-purpose

parks such as athletic complexes, dog parks, aquatic parks, and skateboard or sports-bike parks. These parks can have very different maintenance needs than traditional neighborhood and community parks. Under an average-cost approach, maintenance costs would be calculated on a per capita or per acre basis. Therefore, if park maintenance costs are $1,000,000 and the current park inventory is 145 acres, the cost per acre is $6,896.55. However, this figure is based on an inventory that is not likely to be constructed in the future, so park maintenance costs may be over- or understated, depending on the community. In contrast, the marginal-cost approach has the ability to factor in different operating costs depending on the park type. In other words, the marginal-cost approach recognizes that the cost to serve future development may be different than the current cost per unit today.

To get the most accurate information from a fiscal impact analysis, most local governments find the case-study approach preferable. This method seems to have more credibility with local government finance and management staff. Finance and budget staffs tend to view per capita analysis as a planning exercise and the marginal analysis as a more serious attempt at replicating fiscal reality. For example, if a community would like a fiscal analysis to reflect a higher level of service or to factor costs for a new division within an individual department, the marginal-cost approach would be more useful than an average-cost approach. Marginal-cost analysis can also model demographic and socioeconomic data from a geographic perspective by showing how factors such as housing unit size, persons per household, pupil-generation rates, and vehicle-miles of travel vary by city subarea. The analysis could then use this information to generate geographic cost differentials. This type of analysis calls for a level of precision that would be very difficult to model under an average-cost approach. Finally, marginal cost is the method of choice for communities that are approaching build out or do not anticipate a large development increase and as a result are able to absorb some increment of development with very little additional cost. Since average-costs analyses almost always treat every cost and revenue as being growth-related, they have a tendency to overstate costs in situations where growth is minimal.

Where data are not readily available or where it is difficult to define the service level relationship on a true marginal basis, it may be necessary to use the per capita average-cost approach to supplement departmental estimates. If and when more detailed information becomes available, the local government may wish to refine the analysis using marginal-cost data. Burchell et al. (1994) maintain that the average-cost approach is most appropriate when the service system capacity bears a close relationship to service demand and the average cost of providing services to current users is a reasonable approximation of the cost to provide services to future users.[2] Average-cost analyses are also appropriate for smaller-scale development projects.

Because the average-cost method uses existing data and does not involve substantial interviews with government staff, it has the advantages of being relatively inexpensive and possible to complete in a fairly short amount of time. Proponents contend the average-cost method has significant face validity since applying per capita multipliers to current conditions perfectly replicates the local budget and is therefore highly precise (Edwards and Huddleston 2010). However, because the average-cost approach derives its costs and revenue factors from a balanced budget, most average-cost analyses conclude that new development pays its way.

TABLE 4.1. PER CAPITA MULTIPLIER VS. CASE STUDY METHODOLOGY

Local Context#	Per Capita Multiplier Method Likely Appropriate	Case-Study Marginal Method Likely Appropriate
Time is constrained	X	
Staff expertise and resources are limited	X	
Budget is limited	X	
Data collection capacity is limited	X	
Most services are at capacity	X	
Significant unused or overused capacity		X
Development will create unique service demands		X
New population likely to resemble the current population	X	
Services likely to continue at current level	X	
Development requires significant new infrastructure		X
Type of Analysis*		
City/countywide analysis		X
Area/corridor plans		X
Large mixed use/planned unit developments		X
Small/medium-scale developments	X	
Cost-of-land-uses studies	X	
Infill/redevelopment		X
Analysis of alternative development patterns		X
Annexation		X
Level of service changes		X

#Edwards and Huddleston 2010
*Bise 2010

A significant objection to average-cost analysis arises from the fact that although cost figures for new development can be calculated using the average-cost approach, revenue streams resulting from major growth are calculated marginally. For example, rather than comparing the average cost of providing residential services to a per capita property-tax figure, the average cost is compared with the assessed value of a new housing unit or the marginal revenue for that development. In most cases, the assessed value of new construction is higher than the average assessed value of existing development. As a result, the analysis has taken a budget in equilibrium and distorted the revenue side of the equation.

Finally, in most cases this approach is not a true "apples to apples" comparison. Although comparisons to regional and national standards can be helpful, each community has its own unique levels of services, geographic service boundaries, cost and revenue factors, and available capacity of existing capital facilities.

Edwards and Huddleston (2010) include a table that describes the list of conditions that should be considered in choosing between the per capita multiplier method (the most popular average-cost approach) and the case-study method (the most popular marginal-cost method). Table 4.1 adapts that table to reflect an alternative consideration that relates to the type of analysis that will be conducted.

ENDNOTES

1. For a more detailed explanation, see *The Fiscal Guidebook: A Practitioner's Guide* (Washington, D.C.: U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 1980), which was used in the preparation of this chapter.

2. They do note that in jurisdictions with considerable slack or deficient service capacity, average per unit costs would misstate the true costs of growth.

CHAPTER 5

Elements of the Fiscal Equation

The general perception among planners, citizens, and elected officials is that in most cases residential development does not pay for itself, while nonresidential development does. It is true that, generally speaking, some types of land uses are better than others from a fiscal perspective. One useful tool in assessing this is the fiscal hierarchy of land uses matrix developed by Robert Burchell and David Listokin of Rutgers University (Figure 5.1), wherein research office parks are at the top and mobile homes are at the bottom. Somewhere in the middle are open-space lands and undeveloped and unimproved property.

FIGURE 5.1. HIERARCHY OF LAND USES AND FISCAL IMPACTS

Land Use	Municipality	School District
Research Office Parks	(+)	(+)
Office Parks	(+)	(+)
Industrial Development	(+)	(+)
High-Rise/Garden Apartments (studio/one bedroom)	(+)	(+)
Age-Restricted Housing	(+)	(+)
Garden Condominums (1–2 bedrooms)	(+)	(+)
Open Space	(+)	(+)
Breakeven Point for Municipality		
Retail Facilities	(–)	(+)
Town Houses (2–3 bedrooms)	(–)	(+)
Expensive Single-Family Homes (3–4 bedrooms)	(–)	(+)
Breakeven Point for School District		
Town Houses (3–4 bedrooms)	(–)	(–)
Inexpensive Single-Family Homes (3–4 bedrooms)	(–)	(–)
Garden Apartments (3+ bedrooms)	(–)	(–)
Mobile Homes (unrestricted as to occupancy locally)	(–)	(–)

+ = Positive fiscal impact – = Negative fiscal impact

Source: Burchell and Listokin 1978

The hierarchy takes both costs and revenues into account. It shows which land uses, after all costs and revenues are considered, are more fiscally beneficial than others. The fiscal hierarchy also takes into account the two primary local governmental units: the municipal government and the school district. In the case of nonresidential uses, costs occur primarily in one governmental unit (municipal), while revenues are generated for two governmental units (municipal and school).This cost/revenue hierarchy indicates that most nonresidential land uses (with the exception of retail) tend to generate positive fiscal results to local governments. Most standard residential land uses tend to generate deficits.

It is important to recognize that Burchell and Listokin's fiscal hierarchy is a generalized guide to how individual land uses will perform from a fiscal perspective. But there are numerous factors that influence the fiscal results for different land uses, including the local revenue structure, levels of service, and the capacity of existing infrastructure, as well as the demographic and market characteristics of new growth.

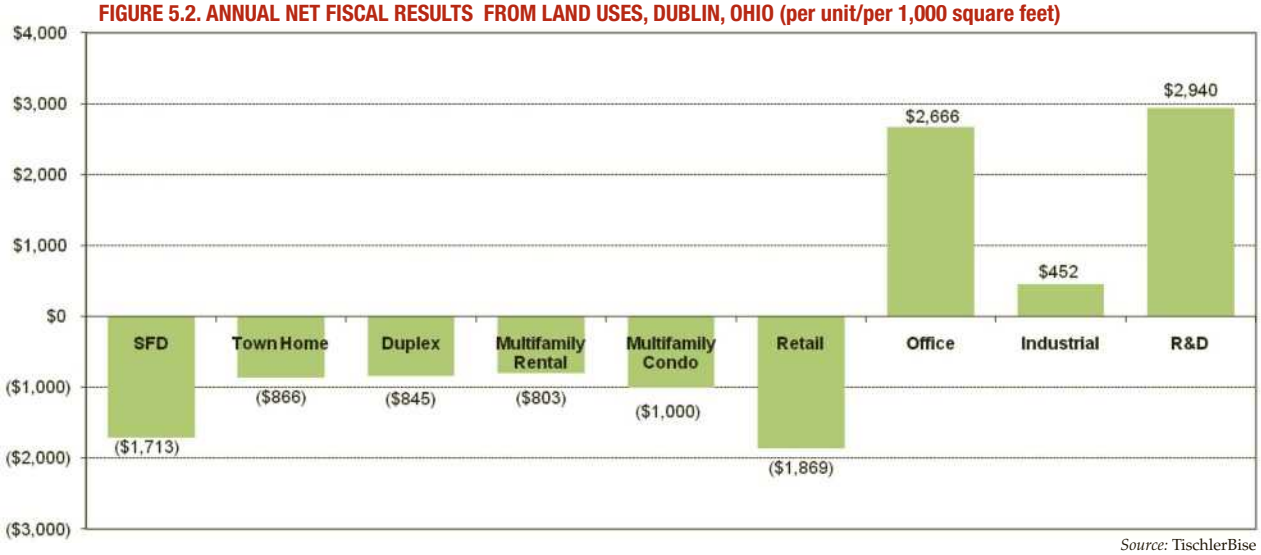
LOCAL REVENUE STRUCTURE

The key determinant in the calculation of the net fiscal results generated by new development is the local government revenue structure. Local revenue structures vary from state to state, with different rules for different classes of governments (e.g., municipalities, counties, villages, and school districts). Every community has at least one predominant revenue source. Common revenue sources include property taxes, local sales taxes, and local income taxes.

An important component of the revenue structure is the distribution and collection formula for each source. With the exception of property tax, the distribution and collection formula for most revenues varies greatly from state to state. In states where sales tax is collected, some communities are allowed to exact a local option sales tax, which is usually collected on a situs (point of sale) basis. Other states collect sales tax revenue and redistribute it to communities using a population-based formula. The same situation exists with income tax, where some states allow a local income, or "piggyback," tax on top of the state income tax. In certain states, such as Maryland, this tax is collected by place of residence. In others, including Ohio, it is collected by place of employment.

Figures 5.2 and 5.3 illustrate the distinct contrast in the annual net fiscal results from residential land uses in Dublin, Ohio, and Washington County, Maryland. All four residential prototypes generate annual net deficits in Dublin, whereas two of the three residential prototypes generate net revenues in Washington County. In Dublin, the local income tax is the largest source of revenue generated by new growth. As mentioned, this revenue is collected at place of employment rather than place of residence. For example, if a person resides in Dublin but works in Columbus, Columbus receives the local income tax. Office and industrial uses are favored by this collection formula because of the higher salaries associated with those types of employment. Retail space generates net deficits as a result of the lower salaries associated with retail and service employment, as well the higher public safety costs associated with this use. In contrast, Maryland's income tax, as noted above, is collected by place of residence, so that residential uses provide some level of revenue for local governments.

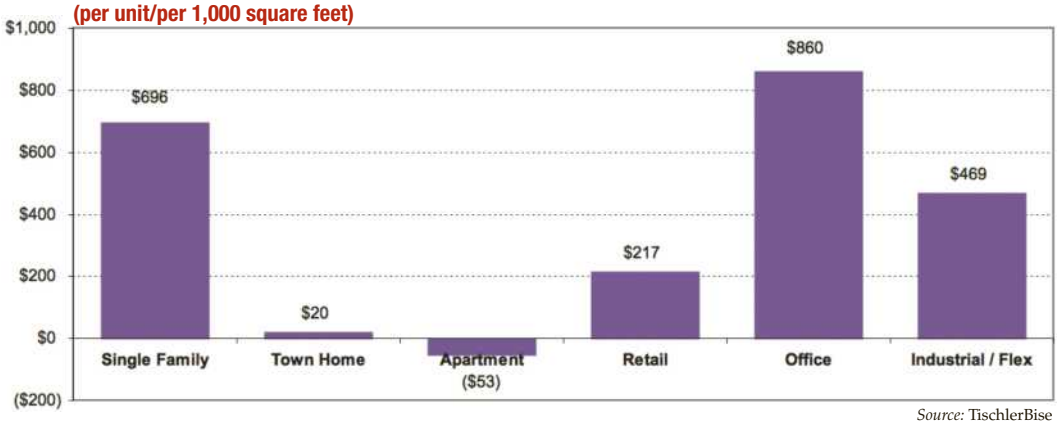
FIGURE 5.2. ANNUAL NET FISCAL RESULTS FROM LAND USES, DUBLIN, OHIO (per unit/per 1,000 square feet)



Source: TischlerBise

(Above) In Dublin, Ohio, local income tax is collected at place of employment. (Below) In Washington County, Maryland, local income tax is collected at place of residence.

FIGURE 5.3. ANNUAL NET FISCAL RESULTS FROM LAND USES, WASHINGTON COUNTY, MARYLAND (per unit/per 1,000 square feet)



Source: TischlerBise

LEVELS OF SERVICE

Another important factor in the fiscal equation are the existing levels of service (LOS) being provided in a community. The existing LOS is defined as the facility or service standard that has been planned for or that is currently funded through the budget—in other words, the most desirable LOS as expressed in planning policy or the LOS that is currently provided given what the jurisdiction can afford.

Typically an LOS "A" designation describes the highest quality of service and "F" describes the lowest quality. On a roadway, for example, an LOS "A" could denote free-flowing traffic at the roadway's design speed with waits no longer than one cycle at a signalized intersection. An LOS of "C" may denote stop-and-go traffic traveling slower than the roadway design speed and with delays of more than one cycle at an intersection. Other examples of level-of-service standards are pupil-teacher ratios (e.g., one teacher per 24 students), acres of parkland per capita, and so on.

This is an important factor since levels of service generally vary from community to community. Assuming a new development or annexed area would receive the same levels of service as the already-served areas of a community, the costs of providing those services at those levels are factored into the equation. Because the targeted levels of service vary from one community to the next, the cost of continuing to provide the same LOS will be higher in some areas, while other communities may be committing to greater future financial investment to ensure that the LOS does not deteriorate.

CAPACITY OF EXISTING INFRASTRUCTURE

In assessing the capacity of existing infrastructure, the challenges for municipal officials are to determine the capacity for absorbing growth, the costs associated with increasing capacity, and the methods of paying for needed additions to infrastructure.

If new development will generate more students than can be accommodated by existing classrooms, traffic that degrades local roads from LOS C to LOS F, or average daily water demands that exceed the treatment plant's design capacity, new infrastructure is needed. In most cases, the community could continue to function without investing in new infrastructure, but the reduction in level of service would be evidenced by overcrowded schools and roads and periodic breakdowns of the treatment plant.

The capacity of existing infrastructure to accommodate growth also has a bearing on the fiscal sustainability of new development. A community may have excess capacity to absorb some new development without incurring additional capital costs. But continued growth will eventually create a need for additional infrastructure such as more classrooms, wider roads, and a larger fleet of municipal vehicles.

For most infrastructure, "capacity" is a term that can have both quantitative and qualitative meanings. For certain public infrastructure (e.g., parks and libraries), local governments sometime rely on published national standards for guidance on levels-of-service capacity. Most jurisdictions rely on level-of-service standards provided by the Institute for Transportation Engineers to determine acceptable levels of traffic. State laws set the standard for the number of pupils per classroom. State and local governments also adopt engineering standards for minimum and maximum wastewater flows, which are also affected by demand caused by new development.

Regarding school capacity, most school districts use some sort of capacity threshold to trigger the need to construct schools. This threshold can be a function of several items, including state funding formulas, concurrency or adequate public facility standards, and the ability or willingness of the school district to undertake redistricting. The number of student seats is usually referred to as "state-rated capacity" and has nothing to do with how many students can physically fit within the educational space. State-rated capacity is defined as the maximum number of students that reasonably can be accommodated in a facility without significantly hampering delivery of the educational program.

Table 5.1 is from a model developed for Henrico County, Virginia. It indicates enrollment versus capacity for the 2005–2006 school year. In this particular case, it was decided, on the basis of discussions with county staff, that it was better to model utilization by school type (e.g., elementary, middle, and high school) for the entire attendance area versus the individual schools. While the county's targeted enrollment/capacity ratio (i.e., utilization) is 90 percent, county capital construction has historically been triggered at a higher utilization rate. Therefore, a capacity threshold of 95 percent was used in the model to determine if new schools were needed.

TABLE 5.1. SCHOOL AND PARK FISCAL ANALYSIS ZONES, HENRICO COUNTY, VIRGINIA

	2005–2006 Enrollment	Capacity	Utilization (%)
West			
Elementary	13,984	15,694	89
Middle	7,383	8,590	86
High	9,025	9,686	93
Total	**30,392**	**33,971**	**89**
Central			
Elementary	4,247	4,843	88
Middle	2,179	2,233	98
High	3,105	3,013	103
Total	**9,532**	**10,089**	**94**
Central			
Elementary	2,828	3,529	80
Middle	1,558	1,452	107
High	1,966	2,027	97
Total	**6,352**	**7,009**	**91**

Source: Henrico County Schools

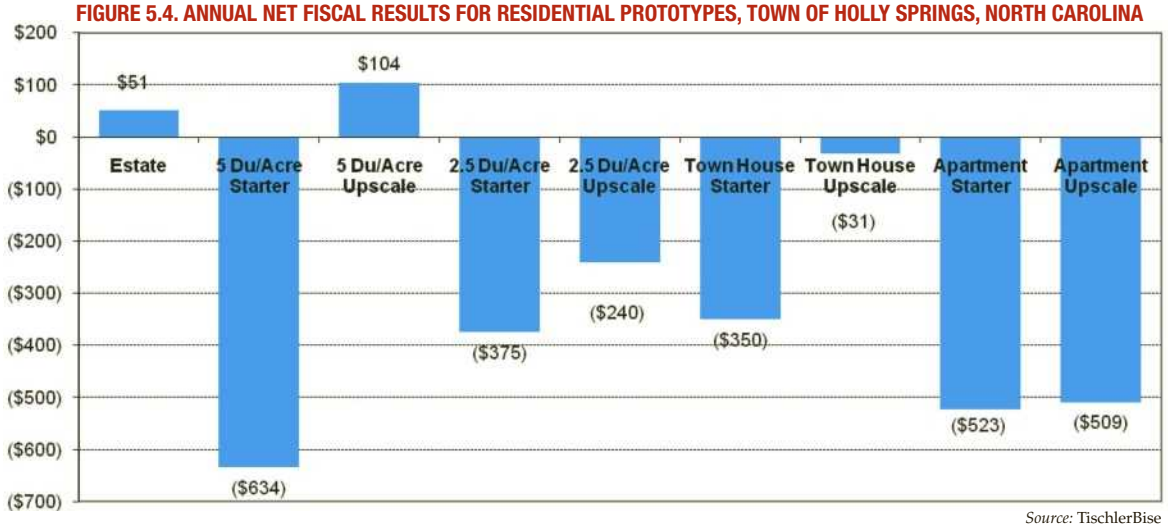
The fiscal impact model for Henrico County recognizes the number of available school seats by attendance area (i.e., the fiscal analysis zone being considered) and utilizes those available seats until the 95 percent threshold is reached.

DEMOGRAPHIC AND MARKET CHARACTERISTICS OF NEW GROWTH

Next to a community's revenue structure, no other factor has as great an impact on the net fiscal results as the demographic and market characteristics of different land uses. Examples of such characteristics for residential development include average household size, pupil generation rates, market value of housing units, trip generation rates, density per acre, and average household income. Important characteristics for nonresidential development include square feet per employee, trip generation rates, market value per square foot, retail sales per square foot, and floor area ratio.

The relative importance of the various demographic and market factors depends on a community's revenue structure. Figure 5.4 shows the annual net fiscal results for nine residential land uses from a study prepared for Holly Springs, North Carolina, where property tax

FIGURE 5.4. ANNUAL NET FISCAL RESULTS FOR RESIDENTIAL PROTOTYPES, TOWN OF HOLLY SPRINGS, NORTH CAROLINA



Source: TischlerBise

is the largest source of revenue—almost 54 percent of general fund revenue in FY2000. The next-largest revenue source, sales tax, accounts for 14 percent of total revenue. Given this revenue structure, market value is the primary determinant of the fiscal results.

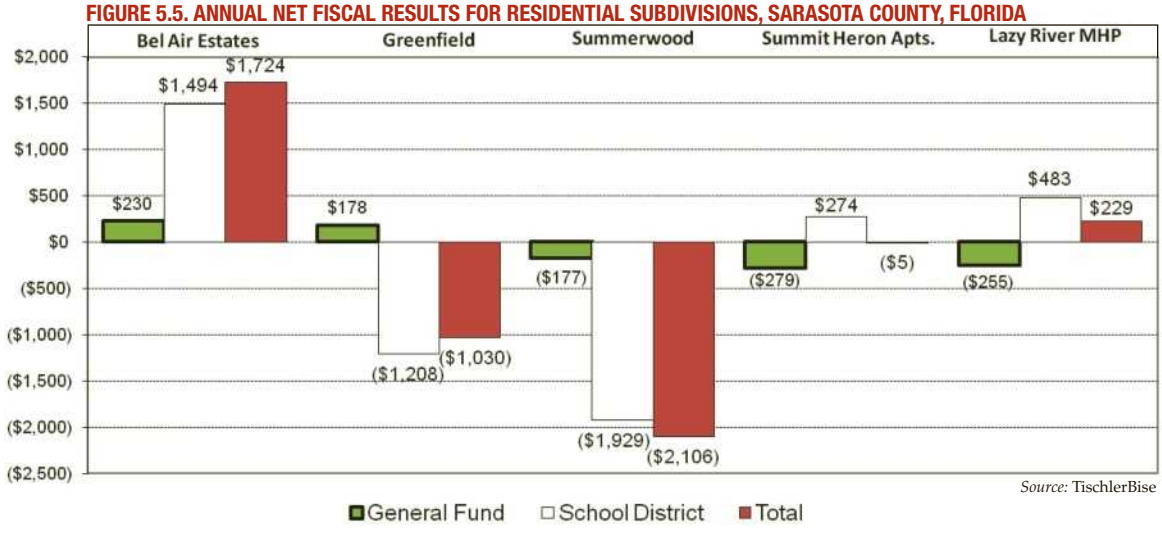
Only two of the nine residential prototypes generate annual net revenue to the Town of Holly Springs. To illustrate the importance of market value in these fiscal results, one must look no farther than the two five-dwelling unit per acre prototypes, which include an "upscale" prototype as well as a "starter" home prototype. The demographic characteristics are the same for both of these residential prototypes; however, there is a $115,000 difference in the market value (tax value), resulting in substantial net deficits on a per unit basis for the starter home and modest net revenues for the upscale version.

Another interesting example comes from Sarasota County, Florida, where actual subdivisions were used in the analysis rather than generic land-use prototypes. Geocoded data were obtained for certain demographic attributes (e.g., schoolchildren) in three single-family detached subdivisions: Bel Air Estates, Greenfield, and Summerwood (Figure 5.5). The varying demographic and socioeconomic factors of each subdivision resulted in different fiscal outcomes for each. This illustrates the pitfalls in making broad generalizations about land-use types.

In this example, Bel Air Estates generates large surpluses per unit to the county, while the other two subdivisions generate net deficits per unit. The reason for the large surpluses in Bel Air Estates is that it consists of large-lot single-family units with high assessed values. In addition, a large number of the residents are empty nesters, resulting in smaller average household sizes. Finally, this subdivision generated no schoolchildren at the time of the study.

The Greenfield and Summerwood subdivisions were representative of mid-priced and entry-level (starter home) housing, respectively. As a result, these developments have younger families, more public school students, and lower assessed property value (resulting in lower property tax) than Bel Air Estates.

FIGURE 5.5. ANNUAL NET FISCAL RESULTS FOR RESIDENTIAL SUBDIVISIONS, SARASOTA COUNTY, FLORIDA



Source: TischlerBise

CHAPTER 6

Preparing a Fiscal Impact Analysis

Preparing a fiscal impact analysis can be a daunting task for a planning professional who is not well versed in the nuances of fiscal impact modeling. The variety of methodologies that can be employed and the sheer number of assumptions that must be made make FIA both an art and a science. It is a science in that there are mathematical projections and a methodology involved. And it is an art in that there is a great deal of subjectivity involved in devising level-of-service standards (LOS) and cost- and revenue-factor assumptions. An FIA is only as good as the methodology and assumptions used in preparing it. This is why it is important that the process and the assumptions be clearly explained and included as part of the written work product. This chapter details the process of and the steps in preparing an FIA and compares the relative merits of the average-cost approach to the case-study marginal approach, where relevant.

POPULATION AND SERVICE DEMAND

Let's look at a specific example of FIA: evaluating how an increase in population will increase the demand for a service, such as recreation. A developer requests the rezoning of a 300-acre parcel from a density of one unit per acre to four units per acre. First, as part of the process of ascertaining an acceptable level of service, the services provided by the recreation department must be defined. In this case, the level of service for a community park might be described in terms of population or the number and type of housing units. For instance, an acceptable level of service might be defined as one community park for every 3,000 single-family detached housing units or for every 7,500 people.

Once the level of service is defined, the cost and revenue factors are determined. It is desirable to define the costs as precisely as practical. In our example, the capital costs for a community park could be defined in terms of acres of land required, plus equipment and other improvements per park. Operating expenses could be defined in terms of program personnel, materials, supplies, and other related items used on an annual basis. The process might also consider the existing capacity of nearby parks, the different thresholds at which new services would be added to the existing parks, and the date when additional parkland would be required.

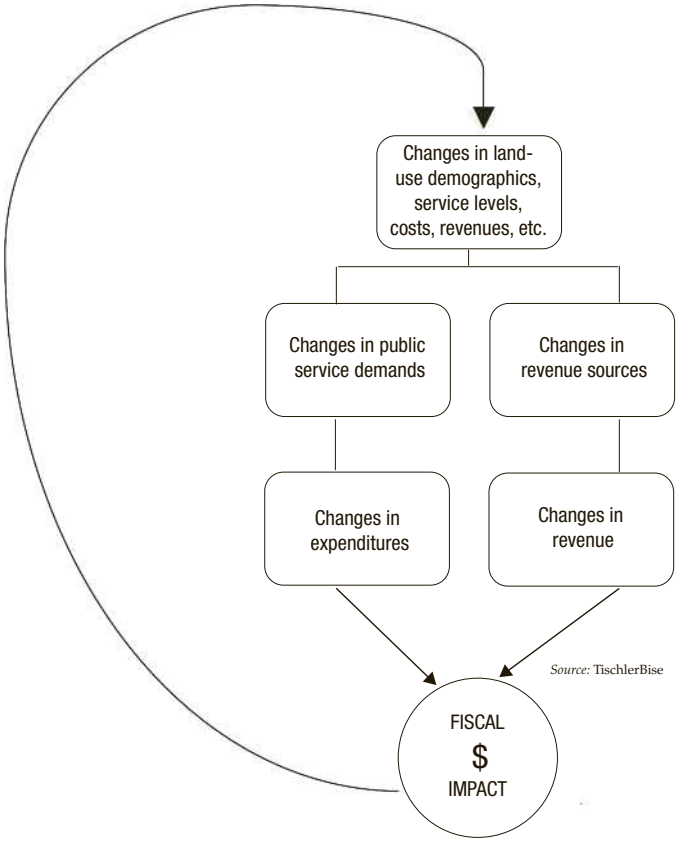
Another step is the projection of any dedicated capital revenues associated with providing the service. In our example, impact fee revenue must be anticipated.

FIA identifies the increases in annual and cumulative expenses for all services that will result from new development. This includes annual operating expenses (including new staff needed per year) and capital expenses associated with constructing or expanding facilities. The fiscal impact statement can also summarize the jurisdiction's bonded debt; its bonding capacity as a percentage of the increase in the tax base; the increase in the tax base; and the fiscal surplus or deficit when general revenues are applied against the net of all special revenues and expenses associated with the development.

THE FISCAL IMPACT PROCESS

The dynamics of fiscal impact analysis are shown in Figure 6.1. To accurately assess the fiscal impacts of changing land use or demographics, the local government must first define an acceptable level of service for all relevant services (e.g., police, fire, public works, recreation, etc.). In evaluating the costs associated with providing the acceptable levels of service, the local

FIGURE 6.1. THE DYNAMICS OF FISCAL IMPACT ANALYSIS



Source: TischlerBise

TABLE 6.1. PROJECTED DEVELOPMENT, CHAMPAIGN, ILLINOIS

	A: Olympian and Prospect	B: Olympian extension/Clearview
Population	5,802	1,428
Housing Units		
Single Family Detached High PP	39	23
Single Family Detached Medium PP	337	109
Single Family Detached Low PP	310	62
Attached Housing	81	48
Multifamily Units	2,231	461
Total Housing Units	**2,998**	**704**
Nonresidential Building Area	1,395,604	192,283
Employment		
Industrial	1,075	4
Office	1,359	682
Neighborhood Retail	643	71
Big Box Commercial	0	0
Total Employment	**3,077**	**757**

Source: TischlerBise

This table shows projected development over a 20-year time horizon for seven fiscal analysis zones.

government should consider existing unused capacities of public services and programs, especially of capital facilities. The new development or new demand will be expressed in terms of changes in population, employment, or land use projected to result from the scenarios being evaluated.

Table 6.1 provides an example from a fiscal impact analysis prepared for Champaign, Illinois, summarizing new development assumed over the 20-year time horizon for seven subareas of the city, known as fiscal analysis zones, and citywide (the column on the far right). It also shows predicted employment increases for nonresidential land-use types.

Using local information and perhaps comparing it to regional or national average cost information, the local government next estimates future capital costs, operating expenses, and special and general revenues that will result from providing the acceptable level of service to the potential new development. In other words, the local government projects the annual costs, by department, of servicing new development; the annual revenues generated by the new development; and the net surplus or deficit.

The information can help local officials estimate a new development's specific impact on tax rates, bonding capacity, and bonding margin. Or, if local officials are thinking about changing land-use policy, fiscal impact analysis can help them determine whether the proposed regulatory revisions will result in a fiscal surplus or in a deficit. If new infrastructure must be built to serve growth early on, then local officials can estimate the size of the short-term deficit and determine when revenues generated by growth should begin to enter the local government's budget.

Since an FIA will indicate whether and when a jurisdiction could face deficit budgets, the local government is able to evaluate land-use policy decisions, acceptable levels of service, plans for capital investments, and long-term borrowing needs. In addition, a projected fiscal deficit can prompt local officials to evaluate current and future revenue sources. If the evaluation indicates a surplus, the local government may wish to change its use of revenue sources to fund infrastructure replacement or higher levels of service.

Fiscal Analysis Zone (FAZ)					
C: Bradley and Staley	D: Staley and Kirby	E: Southwest Champaign	F: Curtis Interchange	G: Infill	TOTAL
1,720	3,764	4,261	778	699	**18,452**
24	164	160	0	0	**411**
198	610	534	55	0	**1,844**
64	254	427	0	0	**1,118**
257	230	333	130	0	**1,079**
231	165	277	217	419	**4,001**
774	**1,423**	**1,732**	**402**	**419**	**8,453**
572,482	917,508	682,888	94,770	129,718	**3,985,254**
616	652	0	0	0	**2,348**
130	589	991	122	0	**3,872**
166	755	1,269	0	371	**3,274**
0	0	0	291	0	**291**
912	**1,996**	**2,260**	**413**	**371**	**9,785**

WHO DOES THE FISCAL IMPACT ANALYSIS?

Most FIAs are prepared by private sector entities such as consulting firms, university professors, or accounting firms. Some agencies have the planning or finance staff expertise to do the analysis in-house. Typically, the analyst has a background in public finance, economics, or urban planning. An outside consultant brings the benefit of objectivity to the analysis and can usually do the work more efficiently than if staff takes the lead role.

An interdepartmental work group should be assembled to advise the consultant or staff and review the work product. At a minimum, representatives from the chief executive's office (e.g., mayor's office, city manager's office) the finance or budget department, police, public works, solid waste, and parks and recreation should be included.

Step 1: Defining the Development Project or Scenario(s)

To begin the FIA process, the scope of the analysis must be decided upon—that is, whether it will be of a specific development project or a land-use scenario, which can include a proposed annexation, a subarea of a jurisdiction, or a policy, such as an entire comprehensive plan. The study area is sometimes referred to as a "fiscal analysis zone" (FAZ). Once the scope of the analysis has been established and a consultant or staff person has been given the assignment, the analysis can begin.

The first step is to identify the "demand units" associated with the project or land-use scenario. A demand unit is a unit of growth generating additional demand for public facilities and services. Units differ depending on the nature of the services and facilities provided. For residential development, housing units are the demand units used to calculate increased demand on roads, schools, libraries, and other facilities. For nonresidential development, square footage of added space is used as the demand unit.

The housing units and nonresidential square footage are then converted into population and employment figures. This is typically done using persons-per-household data by type of unit from the U.S. Census Bureau and employment-per-1,000-square-feet factors that can be derived from a variety of sources, including the Institute of Transportation Engineers and the Urban Land Institute. If the community is responsible for the school system, pupil-generation rates must also be developed. Other factors that may be required include vehicle trip-generation rates, income assumptions, and assessed values for new construction.

Once the number of housing units and nonresidential square footage has been determined, the next step is to determine the absorption schedule (or rate), which is the pace at which infrastructure capacity will be used or filled over time. This can be done annually or for certain time increments (e.g., five years) within the overall time frame of the FIA, which is typically 10 to 20 years. See Table 6.2 for an example.

to average cost per unit to serve existing development. This cost per unit is then multiplied by the number of new units projected. It does not take into account excess or deficient capacity, and it assumes that average costs of municipal services will remain stable.

In contrast, the marginal-cost approach relies on analysis of the demand and supply relationships for public services and, more importantly, public facilities. This approach does not view growth in a linear manner. Instead, it recognizes that the costs to serve new development can ebb and flow based on the amount and timing of development, the geographic location of development, and the current capacity of capital facilities needed to serve new development.

Which methodology is appropriate depends on the type of analysis being performed. For communitywide analysis, area plans, and large development projects, the marginal-cost approach is often the most appropriate method. The average-cost approach is a better fit with smaller projects. The marginal-cost approach will

TABLE 6.2. SCENARIO INPUT MODULE

SCENARIO 1:	INNER CORE FOCUS								
Is Development in Core Area?:	Yes								
RESIDENTIAL DEVELOPMENT COMPONENT									
Land-Use Profile				Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed	Cumulative Units Develop		
							Year 1	Year 2	Year
Single Family	2.45 Persons per Unit			7,000 Units	Annual Absorption	400 Units	400	800	1,
Assessed Value:	$40,000 per Unit	9.57 Vehicle Trips		50% Adjustment Factor		3.50%			
Multifamily	1.64 Persons per Unit			1,350 Units	Annual Absorption	135 Units	135	270	
Assessed Value:	$17,000 per Unit	6.59 Vehicle Trips		50% Adjustment Factor		0.00%			
Condominium	2.81 Persons per Unit			660 Units	Percent Absorbed	0 Units	20	40	
Assessed Value:	$27,600 per Unit	6.59 Vehicle Trips		50% Adjustment Factor		3.00%			
TOTAL				9,010 Units					
NONRESIDENTIAL DEVELOPMENT COMPONENT									
Land-Use Profile				Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed	Cumulative Acreage and S		
							Year 1	Year 2	Year
Big Box Retail	0.25 FAR	$250 Sales per Square Foot		20 Acres	Annual Absorption	35 Acres	20	20	
Assessed Value:	$5 per Square Foot			218,000 Square Feet		4.00%			
Employment Density:	2.22 per 1,000 Square Feet	53.28 Vehicle Trips		35% Adjustment Factor	2	Square Footage:	218,000	218,000	218,
Restaurant	0.28 FAR	$400 Sales per Square Foot		1 Acres	Custom	1 Acres			
Assessed Value:	$6 per Square Foot			12,001 Square Feet		0.00%	1	1	
Employment Density:	5.00 per 1,000 Square Feet	89.95 Vehicle Trips		26% Adjustment Factor	1	Square Footage:	12,001	12,001	12,
TOTAL				230,001 Square Feet					
SCENARIO 2:	CENTRAL CITY								
Is Development in Core Area?:	No								
RESIDENTIAL DEVELOPMENT COMPONENT									
Land-Use Profile				Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed	Cumulative Units Develop		
							Year 1	Year 2	Year
Single Family	2.92 Persons per Unit			5,000 Units	Annual Absorption	250 Units	250	500	
Assessed Value:	$37,500 per Unit	9.57 Vehicle Trips		50% Adjustment Factor		0.00%			
Multifamily	1.98 Persons per Unit			500 Units	Annual Absorption	100 Units	100	200	
Assessed Value:	$25,000 per Unit	5.86 Vehicle Trips		50% Adjustment Factor		0.00%			

This table represents a sample 20-year absorption schedule for residential and nonresidential development.

Step 2: Selecting the Methodology

There are a number of standard approaches to choose from in conducting the analysis, including the average-cost method (also known as the per capita multiplier method) and a case-study marginal-cost method which relies on extensive interviews with local government staff.

As discussed in Chapter 4, the average-cost approach is the simpler and more common procedure. This method allocates costs to new development according

analyze a community's marginal response to a new development project or proposed land-use changes through an evaluation of existing demand and available capital facility capacity in a community. Larger projects (and larger areas of analysis) may indicate enough new demand that the need for new services development is triggered. Conversely, smaller projects may increase level-of-service needs but are unlikely to do so to an extent that triggers new capital investment needs.

For smaller development projects, the average-cost method is preferable because, in many cases, the size of the development is not large enough to trigger the threshold level where surplus capacity is depleted. Thus, additional capital facilities and operating expenses are not needed or incurred. As a result, the marginal analysis can dramatically understate the cost to service the smaller development proposal.

Step 3: Projecting Revenues

When preparing a fiscal evaluation, most fiscal analysts start with an examination of the jurisdiction's operating budget. The operating budget includes both revenues and expenditures. Operating expenses for most local governments include personnel, benefits, supplies, administrative costs, and minor capital costs (typically under $10,000). Operating revenue includes general taxes (i.e., sales, property, and income), franchise taxes, user fees and charges, state and federal revenues, and interest.

TABLE 6.3. PROPERTY TAX REVENUES, WILSON, NORTH CAROLINA

Property Tax: Current Year Prototype	Taxable Value ($)[1]	General Fund Tax Rate 0.515 ($)
Residential (per unit)		
Single Family (Low)	110,900	571
Single Family (Mid)	190,677	982
Town House	466,200	2,401
Duplex (Rental)	75,061	387
Multifamily (Age Restricted)	54,911	28
Single Family (Infill)	205,110	1,056
Nonresidential (per 1,000 square feet)		
Big Box Retail	61,900	319
Community-based Shopping Center	81,130	418
Industrial Park	53,240	274
Hotel	38,723	199

Source: TischlerBise
[1]Based on assessed valuation data provided by City of Wilson

Cumulative Units Developed

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
400	800	1,200	1,600	2,000	2,400	2,800	3,200	3,600	4,000	4,400	4,800	5,200	5,600	6,000	6,400	6,800	7,000	7,000	7,000
135	270	405	540	675	810	945	1,080	1,215	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350
20	40	59	79	99	119	139	158	178	198	218	238	257	277	297	317	337	356	376	396

Cumulative Acreage and Square Footage Developed

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000	218,000
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001	12,001

Cumulative Units Developed

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
250	500	750	1,000	1,250	1,500	1,750	2,000	2,250	2,500	2,750	3,000	3,250	3,500	3,750	4,000	4,250	4,500	4,750	5,000
100	200	300	400	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

Source: TischlerBise

Disaggregating revenue and determining projection factors. Determining the revenue factors to be used in an FIA depends on the methodology employed as well as the revenue structure of the community. If property tax is part of the local revenue structure, the revenue factors are typically the same regardless of methodology. The same holds true for sales tax as well. The analysis will determine the likely assessed value of the various development types being analyzed and apply the current property-tax rate to the assessed values. In the example from Wilson, North Carolina, in Table 6.3, the general fund property tax rate is 0.515 per $100 of assessed value, which is applied to the assessed value assumptions.

In the case of sales tax, revenue factors are largely dependent on how sales tax is derived. (See Chapter 5.) In those communities that use a point-of-sale distribution formula, the analysis will use a sales-per-square-foot figure which is then applied to the sales tax rate to determine the revenue factor. This is shown in Table 6.4 on page 40. In places where the state redistributes local revenue on the basis of population, analysis would

TABLE 6.4. HALF-CENT SALES TAX REVENUES WILSON, NORTH CAROLINA

Prototype	Sales per Square Foot[1]($)	Tax Rate 0.5 ($)
Big Box Retail	422	2.11
Community Scale Shopping Center	397	1.99

Source: TischlerBise
[1]Derived from average retail sales from 2003 to 2005 from CAFR

divide the sales tax revenue by current population to determine the amount of sales tax per capita.

Property tax and sales tax generally constitute most local governments' major growth-related revenue sources. In a few states, such as Maryland and Ohio, income tax is a major growth-related local revenue source. The remaining revenue categories include franchise taxes for gas, electric, and cable utilities; intergovernmental revenue (typically from the state); user fees (building permits, recreation fees, etc.); fines and forfeitures (typically court-related); and miscellaneous revenue (interest, sale of surplus equipment, etc.). An example from Oklahoma City, Oklahoma, is shown in Table 6.5.

Many of these revenue sources tend to be overstated in fiscal impact studies, particularly those prepared using an average-cost, or per capita, methodology. The

TABLE 6.5. LOCAL GOVERNMENT REVENUE SOURCES, OKLAHOMA CITY, OKLAHOMA

Revenue Category	Revenue Name	Base Year Budget Amount ($)
Taxes	Sales Tax	153,466,536
	Use Tax	18,761,458
	Excise Tax	3,600,000
	Alcoholic Beverage Tax	686,047
	Remington Park Admissions Tax	22,276
	Utility Fees–Water	1,088,000
	Utility Fees–Wastewater	865,000
	Utility Fees–Solid Waste	540,491
Franchise Fees	Oklahoma Natural Gas	4,875,613
	Oklahoma Gas & Electric	14,573,600
	Caddo Electric Cooperative	18,255
	Oklahoma Electric Cooperative	220,482
	Tri-Gen	305,000
	Southwestern Bell	1,500,012
	Cox Cable	4,237,179
	Cox Fibernet	354,056
	Cox Telephone, McCloud, Chickasaw & Primel	32,194
Licenses, Permits, and Fees	Fire Prevention Permits	52,605
	Alarm Permits	598,106
	Oil and Gas Well Inspections	226,000
	General Licenses	702,980
	Building Permits	3,858,968
	Electrical Wiring Permits	1,166,170
	Plumbing Permits	1,014,530
	Boiler and Elevator Permits	57,349
	Offsite Wagering Fee	86,988
	Prequalification Application Fee	47,800
	Refrigeration/Forced Air Permits	612,689
	Sidewalk and Paving Fees	329,053
	Paving Cut Fees	68,782
	Hunting and Fishing Permits	154,916
	Mixed Beverage/Bottle Club License	454,374
	Vending Stamps	194,992
	Garage Sale Permits	77,772

TABLE 6.5. *(continued)*

Administrative Charges	Airport Administrative Payments	656,776
	Airport Police Payments	2,285,212
	Water/Wastewater Administrative Payments	5,750,515
	Federal Fund Administrative Payments	180,000
	Drainage Utility Administrative Payment	559,747
	Solid Waste Administrative Payment	786,272
	Convention and Tourist Administrative Payment	139,627
	Zoo Administrative Payment	106,000
	Golf Administrative Payment	270,000
	Bond Fund Administrative Payment	1,270,294
	Other Administrative Payment	99,733
	Risk Management Administrative Payment	206,256
	Transit Administrative Payment	658,802
	Parking Administrative Payment	248,274
	IT Administrative Payment	850,605
	Print Shop Administrative Payment	118,764
	Fleet Services Administrative Payment	25,131
Other Service Charges	OCMAPS Chargebacks	535,733
	OCMAPS Engineering Chargebacks	315,000
	Hazmat Cost Recovery	10,000
	Animal Shelter Fees	355,551
	Engineering Fees	1,525,753
	Planning Fees	753,706
	Fire Service Recovery	28,000
	Police Fees	1,854,484
	Parking Meters	887,433
	Recreation Fees	646,134
	Myriad/Civic Center	1,059,315
	Myriad Gardens Revenue	441,764
Fines	Traffic Fines	6,848,760
	Parking Fines	1,205,971
	Court Fees	558,397
	Court of Record, Jury Division	10,863,589
	Criminal Court	209,326
	Juvenile Fines	165,371

Source: TischlerBise

overstating of revenue occurs because many of these average-cost studies consider all revenue to be variable or growth-related. While many revenue sources will increase with growth, it is unrealistic to expect that all revenue will increase. The case-study marginal approach accounts for growth-related revenue more realistically, since the projection methodology is based on interviews with local finance staff and is more specific to the circumstances in the community.

In the example from Oklahoma City in Table 6.5, most franchise fees will increase with new development. However, the oil and gas well-inspection revenue shown under the licenses, permits, and fees category will increase only if additional wells are constructed, which has nothing to do with additional residential or nonresidential construction. Similarly, court fees (under the fines category) may or may not be considered growth-related revenue, depending on the jurisdiction. For example, the amount of cases heard by the local court system may be a function of the number of judges, which may be controlled by the state. Therefore, the case volume remains the same regardless of new development. In other jurisdictions, the case volume may increase with the addition of judges or expansion of hours to include night courts.

Step 4: Determining Operating Cost Factors

New development almost always results in increased demand for services. The difficult part is translating

the estimated population, number of schoolchildren (if applicable), and employment changes into public service and facility costs. As discussed, the average-cost method simply calculates the average cost per unit of service and multiplies this cost by the number of new units (housing, pupils, workers) generated by the project. Thus, for example, the parks and recreation department total annual operating budget would be divided by population to obtain an average cost per person. This is shown in Table 6.6 in an example from a fiscal model prepared for Hillsborough County, Florida, which had a population of 1,055,617 at the time.

TABLE 6.6. DETERMINATION OF PER CAPITA PARKS AND RECREATION COSTS, HILLSBOROUGH COUNTY, FLORIDA

	Expenditures	FY03 General Fund ($)	Unincorporated Service ($)	Special Revenue ($)	Total All Funds ($)	Per Capita Amount ($)
572	Parks/Recreation	482,120	-39,800	16,315,170	16,757,490	18.36
573	Cultural Services	3,136,122	9,070,409	5,692,760	17,899,291	19.61
579	Other Culture/Recreation			9,966,613	9,966,613	10.92

Source: TischlerBise

To illustrate the differences in how to evaluate parks and recreation costs using a marginal approach, we can look at another study from Hillsborough County, Florida, which was prepared on behalf of the independent Hillsborough County City/County Planning Commission. Table 6.7 illustrates the level of detail that is examined using marginal costing. As the figure indicates, there are many divisions, or program areas, within the Hillsborough County Parks and Recreation Department. Under the marginal-cost approach, interviews by the consultant or internal project leader would help determine several items:

- *Organizational structure:* What division or program areas exist within the department?
- *Fixed versus variable costs:* What components of the operating budget will remain the same regardless of new development? For example, the planning director salary is a fixed cost because it will be incurred regardless of whether the community's population is 10,000 or 1,000,000. Variable costs refer to those that are affected by new development. For example, discussions may indicate that additional planners will be needed as development occurs or additional areas are annexed.
- *Drivers of demand (i.e., the demand units) for each functional area:* The driver of demand refers to the demand indicator resulting from new development. For example, the demand indicator for growth-related school costs is additional schoolchildren resulting from new development. In Table 6.7, which depicts parks and recreation costs for Hillsborough County, there are several demand units used to project growth-related costs depending on the program area. For example, discussions with staff indicate that certain activities (e.g., the equestrian program) are not affected by growth and are considered fixed in the fiscal impact model. The table also indicates that some of the department's activities are affected by countywide population and others are affected only by population growth in the unincorporated areas of the county. This is because the City of Tampa provides duplicative services in some areas. Finally, the bottom of the table indicates the marginal operating cost associated with constructing additional types of parks and recreation facilities in the county. It is important to note that when using the marginal-cost approach, staffing is projected separately; all growth-related cost factors shown in Table 6.7 are for nonsalary operating costs.

EXCLUDED ENTITIES

Utility infrastructure and operations such as sewer and water (and sometimes electricity) are usually excluded from traditional fiscal impact analyses. These entities are financed using enterprise funds, the operations of which are conducted in a manner similar to private business enterprises. The intent of the governing body is to finance or recover the cost (including depreciation) of providing goods or services on a continuing basis to the general public through user fees and charges. Historically, this has been construed to mean that users of the service are billed only for what they actually use: no more, no less. This is substantially different than the local government's general fund, which is fiscally constrained by the political nature of tax rates.

TABLE 6.7. DETAILED MARGINAL COSTING FOR PARKS AND RECREATION COSTS, HILLSBOROUGH COUNTY, FLORIDA

Expenditure Name	Base Year Budget Amount ($)	Project Expenditure Factor	Demand Unit Multiplier	Level-of-Service Standard $ per Demand Unit
Administration	1,411,904	Fixed	0.30	0
Countywide Parks	7,010,403	County Population	0.32	6.64
Equestrian Program	314,666	Fixed	0.19	0
Physical Therapeutics	606,582	County Population	0.15	0.57
Fiscal Control	2,013,017	Fixed	1.00	0
Project Management	617,190	Unincorporated Population	0.03	0.90
Construction	983,702	Unincorporated Population	0.23	1.43
Maintenance	6,054,465	See Direct Entry	0.35	0
Recreation Services	12,845,155	County Population	0.14	12.17
Operation Cleanup	50,135	Fixed	1.00	0
Arts and Crafts	110,312	Unincorporated Population	0.39	0.16
Ed Radice Sports Complex	547,190	Fixed	0.61	0
Youth Sports	1,127,058	Unincorporated Population	0.92	1.64
Adult Sports	838,994	Unincorporated Population	0.38	1.22
Owens Pass Park	101,028	Fixed	1.00	0
Teen Program	718,522	Unincorporated Population	0.47	1.04
Special Parks	408,540	Fixed	1.00	0
Roadway Landscaping	990,017	Vehicle Trips	0.58	0.35
Balm-Boyette Monitoring	103,037	Fixed	0.05	0
Plant Control Task Force	57,618	Fixed	0.09	0
Fun with Nature	87,352	Fixed	0.16	0
Neighborhood Park Operating Costs	0	Direct Entry	1.00	243,000
Trail Operating Costs	0	Direct Entry	1.00	35,000
Recreation Center Operating Costs	0	Direct Entry	1.00	174,690
Sports Complex Operating Costs	0	Direct Entry	1.00	403,000
TOTAL	**36,996,887**			

Source: TischlerBise

Table 6.8 on page 44 indicates the various positions by type, the indicator of demand, and current level of service for each position.

Step 5: Determining the Capital Impact

It is important for planners to understand the long-term consequences of costs associated with growth-related capital improvements and facilities. There are two basic approaches for estimating the impact of new development on a jurisdiction's capital budget. The first is the average-cost method; the second approach reflects the marginal-cost approach.

Average Costing of Facilities. The development of average-cost capital-facility cost factors is an excellent example of how fiscal impact analysis can be viewed as both an art and a science. There is much leeway given to the analyst, and cost factors can be developed in many different ways, depending on what the analyst is trying to show. However, the basic average-cost concept remains the same. The first step of the average-costing approach is to determine the number of infrastructure units per demand unit (e.g., per person or per job) multiplied by the cost per infrastructure unit.

In cases where capital facilities are typically paid for with bonds or other debt mechanisms designed to spread the cost over time, the debt-service cost per person is determined by dividing the jurisdiction's existing debt service by its current population (i.e., demand units). Another method involves dividing the total cost (or value) of the jurisdiction's existing capital facilities by current demand units to determine the capital cost per person. In both cases, the result is then multiplied by the anticipated new population or number of units in the proposed development to determine the portion of capital costs that may be attributed to the development.

There are several potential drawbacks to these approaches to estimating capital costs per person; they may understate costs in several ways. First, the debt-service payments may extend past the analysis period. The second problem is that the cost basis used for

TABLE 6.8. PARKS AND RECREATION STAFFING INPUT, HILLSBOROUGH COUNTY, FLORIDA

Category	Base Year Full-Time-Equivalent Positions	Which Demand Base?	Current Demand Units Served per Position
Accounting Clerk	2	Fixed	0
Clerk	5	Unincorporated Population	137,791
Construction Equipment Operator	4	Fixed	0
Crew Leader	9	Fixed	0
Custodian	44	Recreation SF	6,526
Director, Parks and Recreation	1	Fixed	0
Electrician	1	Fixed	0
Engineer	3	Fixed	0
Environmental Scientist	2	Fixed	0
Environmental Specialist	9	Unincorporated Population	76,550
Environmental Supervisor	1	Fixed	0
Environmental Technician	5	Unincorporated Population	137,791
Equipment Operator	38	Unincorporated Population	18,130
General Crew Leader	2	Fixed	0
General Manager	4	Fixed	0
Head Custodian	6	Fixed	0
Landscape Gardener	6	Fixed	0
Managers, Divisions/Programs	7	Fixed	0
Multitrades Worker	39	Recreation SF	7,363
Painter	1	Fixed	0
Park Manager	20	Park Acres	124
Park Ranger	78.2	Park Acres	32
Personnel Clerk	1	Fixed	0
Project Director	1	Fixed	0
Receptionist	1	Fixed	0
Recreation Area Supervisor	8	Fixed	0
Recreation Leader	131	County Population	8,060
Recreation Specialist	47	County Population	22,464
Recreation Therapist	5	County Population	211,161
Recreation Therapist Assistant	1	Fixed	0
Refrigeration/AC Mechanic	2	Fixed	0
Architect	2	Fixed	0
Buyer	1	Fixed	0
Secretary	4	Unincorporated Population	172,238
Groundskeeper	12	Park Acres	207
Senior Manager	5	Fixed	0
Personnel Assistant	1	Fixed	0
Trades Helper	9	Recreation SF	31,904
Trades/Maintenance Supervisor	3	Recreation SF	95,713

Source: TischlerBise

new capital facilities (either for debt service or existing facility value) is based on the cost of construction several years earlier (or the debt-service cost related to their construction)—thus, these amounts are rarely representative of current costs. And third, if the analysis uses current debt service as the sole basis for determining the cost factor, that amount may be understated if the jurisdiction financed capital facilities (or portions thereof) through current revenues.

Levels of service also must be factored into the determination of capital-facility impacts. Most FIAs strive to evaluate the costs to maintain present levels of service.

The analyst must be sensitive to the concern that new development will not be assumed to receive higher and more costly levels of service than the jurisdiction currently provides. Conversely, the analyst should also be mindful that the capital-cost factors used in the analysis do not result in a declining level of service. Although many jurisdictions try to base facility needs on level-of-service goals, the harsh reality is that many jurisdictions are unable to maintain desired levels of service across the board, as many capital budgets are fiscally constrained by the amount of revenue available. There is therefore a better-than-average chance that the debt-service cost per demand unit used in the FIA is artificially low.

To avoid issues related to levels of service, an alternative average-cost approach called the "incremental expansion method" can be used. This method develops a cost factor based on the current level of service for each type of public facility in both quantitative and qualitative measures, based on an existing service standard such as square feet per capita or park acres per capita. This approach is essentially a snapshot of current levels of service for infrastructure; it assumes that there are no existing infrastructure deficiencies or surplus capacity.

The incremental expansion method is similar to the approach used to establish impact fees and is not based on a specific facility plan. Using current level-of-service data, a factor reflecting the cost to provide existing development with capital facilities is derived and applied to future development. The amounts are annualized to reflect the one-time nature of these expenditures. For buildings, costs are divided by 20 years. The annualized amounts for vehicles and equipment are divided by shorter time periods, depending on type. An example of this approach (shown for Culture and Recreation) is shown in Table 6.9.

Marginal Costing of Facilities. Marginal capital-cost factors can also be developed in several different ways. Since the marginal-cost approach involves much more detailed interaction with staff, the assumptions that are developed by the analyst can be quite specific. One way to factor capital needs is to simply use "direct entries." For example, if it is known through the capital improvement plan that a particular facility will be constructed, the year and cost to construct can be entered into the fiscal impact model. This method is particularly useful in the short term but can be difficult over the long term as most jurisdictions do not have facility plans that span a 10- to 20-year period for every infrastructure category.

When not using direct entries, projecting capital facilities on a marginal basis can become quite complicated. As discussed, the case-study marginal-cost approach involves an extensive evaluation of facilities, levels of service, and existing capacities. As a result, the fiscal impact models developed for these evaluations can project when new facilities are needed, based on delivery criteria provided by the user. They can also recognize capacities of existing facilities and useful life spans, thus providing a time frame for when the purchase of new facilities will be necessary. When the local government knows the timing of delivery, it can also identify lead or lag times, providing for funding needs at times before or after actual delivery, as may be needed for construction or ordering processes.

The timing of debt payments may also be similarly adjusted relative to actual delivery. Funding, bonding, and debt mechanisms and terms, including direct funding ("pay as you go"), are entirely at the discretion of the user or analyst. An example of this is shown in Table 6.10, for parks and recreation athletic complexes in an analysis for Lawrence, Kansas. The analyst can input the percentage of the facility cost to be debt financed (in this case 100 percent), as well as the interest rate and bond term. (These inputs areas are not shown in this illustration.) The analyst also has the option of selecting how much lag or lead time there is between the funding of the facility and its actual construction. For example, it often takes several years to construct a school. Therefore, the bond may be issued in

TABLE 6.9. AN INCREMENTAL-EXPANSION APPROACH TO DETERMINING COST FACTORS FOR CULTURE AND RECREATION SERVICES

CULTURE/RECREATION	SF	Cost/SF	Total Value	Residential %	Demand Unit	Population	Per Capita Capital Cost over 20 Years	Annualized Per Capita Cost
				100%				20
SENIOR SERVICES								
Senior Citizens Center (Alamo)	2,000	$200	$400,000					
Senior Citizens Center (Panaca)	2,400	$200	$480,000					
Senior Citizens Center (Pioche)	2,000	$200	$400,000					
			$1,280,000	$1,280,000	POPULATION	4,184	$305.93	$15.30
LIBRARY								
Library	1,638	$200	$327,600	$327,600	POPULATION	4,184	$78.30	$3.91
				Culture/Recreation Annual per Capita				$19.21

Source: TischlerBise

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TABLE 6.10. PARKS AND RECREATION CAPITAL FACILITIES STANDARDS AND COSTS, LAWRENCE, KANSAS

Facility Type		Base Year Inventory	Need for Facility Based on	Citywide Level of Service by Capital Facility	Current Demand Units Served per Facility	Current Cost/ Unit ($000s)	Inflation Adjustment (+/–)
Athletic Complexes	Acres	81	Population Capacity Factors	0.00091	16,396	2,950	0%
Useful Facility Life	New Facility (years)	30	Prototype Facility Size (acres)		15.0		
			Estimate of Available Facility Capacity		75%		
			Remaining Capacity/Initial Construction Threshold (acres)		11.25		

Source: TischlerBise

This table shows the timing of debt payments for parks and recreation athletic complexes.

year 1, but the 1,200 additional student seats do not come online for three years.

Another version of the marginal-cost approach involves determining required capital facilities based on the service or design capacity of individual facilities. For example, a jurisdiction may be providing a library for every 25,000 residents. If it is determined that the prototype library will cost $3,500,000, the fiscal impact model will be designed to construct a new library (at a cost of $3,500,000) when the demand threshold of an additional 25,000 persons is met.

CHAPTER 7

Fiscal Impact Analysis in Practice

This section includes five case studies that illustrate different applications of fiscal analysis. The first three look at growth alternatives that reflect different mixes of land uses, alternative development patterns, and socioeconomic and demographic changes. In addition to evaluating growth alternatives, the fourth case study also addresses revenue and implementation strategies. The last example explains a basic cost-of-land-uses fiscal impact analysis that can be applied to smaller, rural jurisdictions that are interested in understanding fiscal issues affecting their communities.

GERMANTOWN, TENNESSEE: EVALUATION OF LAND-USE AND ANNEXATION ALTERNATIVES

Germantown (pop. 43,000), a suburb of Memphis, evaluated the fiscal impact of four future land-use alternatives and several annexation alternatives. The four growth scenarios evaluated within the city included a "trends" scenario based on the existing land-use plan, a "higher density" scenario that assumed a mix of town house and senior living units, and two nonresidential scenarios. The latter two scenarios assumed the city would succeed at capturing office development and, to a lesser extent, retail development. One of the nonresidential scenarios considered the amount of Class A office development that might be captured, and the other considered Class B office development.

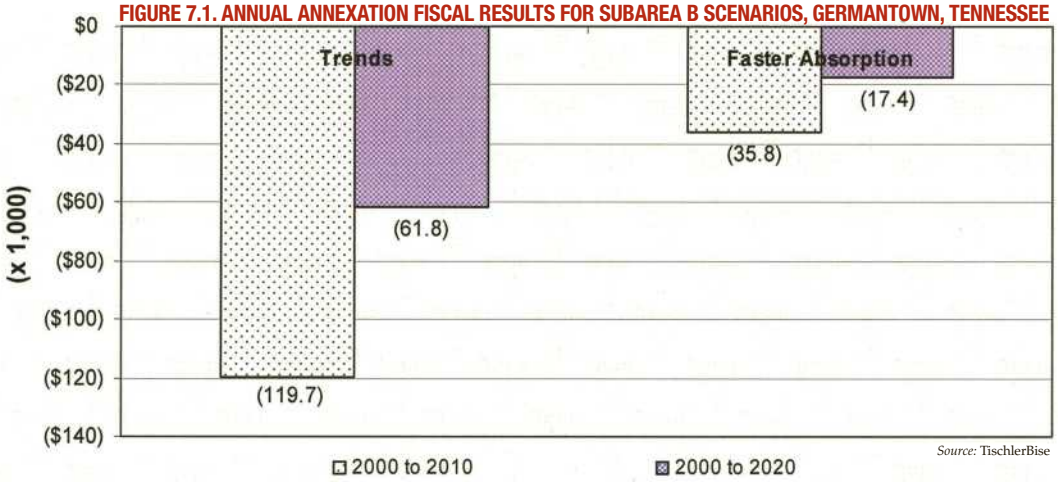
The study confirmed that the city was in a good position to accommodate new growth within the existing city limits under its current land-use pattern that emphasized low-density single-family housing. This was a result of several factors: (1) no major capital expenditures other than parks were required to serve new development; (2) new development had high market values; and (3) the existing revenue structure benefited from higher market values (namely, property tax) and population growth (state revenue sharing). The analysis also indicated that the city would clearly benefit from attracting additional economic development (i.e., nonresidential square footage) and encouraging higher-density housing.

Germantown also analyzed the fiscal impact of annexation of two new areas: subareas B and D. Subarea B was primarily residential in nature. Analysis showed that the remaining developable land in Subarea B had the potential to yield 349 additional single-family units, with 1,130 additional persons, and that 311,000 square feet of retail space would be developed between 2000 and 2010. A second scenario projected this growth to occur by 2005. The average annual fiscal impact results for these two growth scenarios, projected over both a 10-year and 20-year time frame, are shown in Figure 7.1.

Subarea D was projected to accommodate 5.8 million square feet of office space and 2.7 million square feet of retail activity by 2020. Three increasingly less-optimistic scenarios were developed showing absorption of 75 percent, 50 percent, and 25 percent of the by-right office space.

Annexation of Subarea B would represent a net loss of revenue for the city unless new revenue sources were found, existing rates increased, or different zoning put in place. Annexation of Subarea D was projected to generate average annual net revenues over the long term under all four scenarios, although costs might outweigh revenues in the short term.

FIGURE 7.1. ANNUAL ANNEXATION FISCAL RESULTS FOR SUBAREA B SCENARIOS, GERMANTOWN, TENNESSEE



Source: TischlerBise

HOWARD COUNTY, MARYLAND: PLANNING FOR BUILD OUT

Howard County, Maryland, a suburban county located between Baltimore and Washington, D.C., conducted a two-phase fiscal impact analysis as part of its 2000 comprehensive plan. Phase 1 determined whether revenue generated by four different growth scenarios between 1999 and 2020 would cover the costs for additional services and facilities. Phase 2 added the costs and revenues generated by the existing development base and evaluated how various economic, socioeconomic, real estate, infrastructure-replacement, and related factors

TABLE 7.1. PROJECTED POPULATION INCREASES, HOWARD COUNTY, MARYLAND

Scenario	Fiscal Analysis Zone					
	Columbia	Elkridge	Ellicott City	Southeast	West	Total County
Aging in in Place	420	7,100	11,670	13,960	10,730	43,880
High Mobility	10,740	10,970	18,280	18,690	15,660	74,340

Source: TischlerBise

would affect county finances as the county approaches build out. This was done in the context of two growth scenarios: one in which the population ages in place and one where there is an influx of new population (high mobility).

The number of housing units is the same under both scenarios, but as shown in Table 7.1, the population increase under the high-mobility scenario is 30,460 persons greater than under the scenario of aging in place.

Although the Phase 1 analysis indicated that new growth would bring net surpluses to the county, the Phase 2 analysis (which looked at the county's overall fiscal structure and policies) indicated average annual net deficits. The primary reason was that the county relies partly on income tax revenues. While strong financial markets boosted these revenues and contributed to a $26.4 million surplus in the county's FY1999 budget, the fiscal analysis could not assume similar revenue levels for the future. (In March 2000, shortly after this analysis was prepared, the stock market took a nosedive, confirming the wisdom of the analysis.) Meanwhile, however, capital program costs would continue because the county is required to maintain current levels of service. The modest annual net surpluses generated by new growth indicated in Phase 1 were not enough to sustain the FY2000 level of spending.

These net deficits increase when an infrastructure replacement program is factored in, to reflect costs to maintain or replace county buildings and facilities, roads, stormwater infrastructure, sidewalks, curbs and gutters, and parks and recreation facilities.

This fiscal impact evaluation resulted in several recommendations: that the county adjust the ratio of debt to pay-as-you-go funding for capital projects, enhance the economic vitality of older areas (by combating crime and blight), and monitor the direction and magnitude of demographic shifts and county revenue patterns so that it can develop policies to address future budgetary and service level impacts.

CHAMPAIGN, ILLINOIS: EVALUATING GROWTH ON THE FRINGE

The City of Champaign, Illinois, was interested in evaluating the cost to serve new development in the future, particularly as growth occurs near the city fringe areas. Two scenarios were evaluated as part of this analysis:

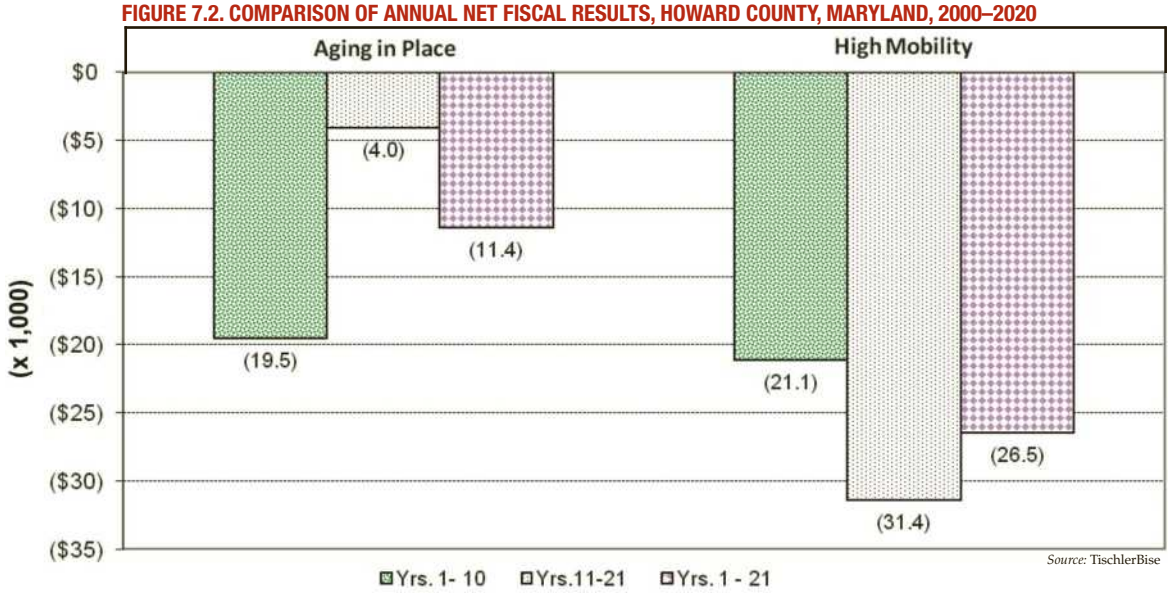
Scenario 1: Growth Within the Service Area. All growth occurs within the current sanitary-sewer service area.

Scenario 2: Growth Beyond the Service Area. Growth occurs both within and outside of the current sanitary-sewer service area.

The two scenarios are intended to show the fiscal implications of public policy decisions about key planning issues and their impacts on broad land-use patterns. The first scenario assumes that no new sewer projects will be completed to serve the fiscal analysis zones (FAZs). Additionally, the only infrastructure specific to each FAZ required is road construction. The second scenario assumes that the sanitary-sewer service area will be extended with four capital projects.

While the pace of growth in each scenario is very similar, the mix of land uses varies, as does the amount

FIGURE 7.2. COMPARISON OF ANNUAL NET FISCAL RESULTS, HOWARD COUNTY, MARYLAND, 2000–2020

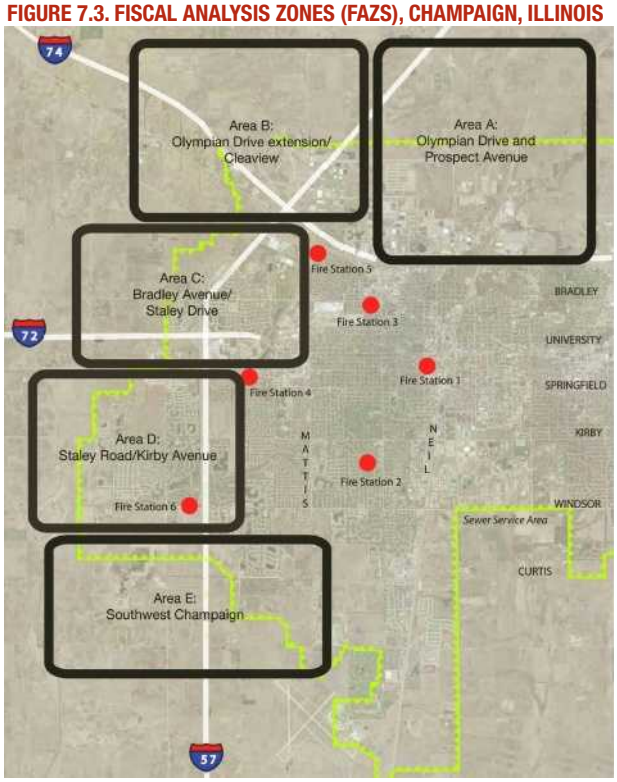


Source: TischlerBise

The analysis (see Figure 7.2) also shows that if the national trend of an aging population and decreasing household size continues in Howard County, the costs are less than if household sizes remain the same. The loss of income-tax revenue and higher aging-related costs are more than offset by lower education costs if lower numbers of school-age children are generated. This is an important fiscal finding.

of growth in each of the fiscal analysis zones. Land uses are based on approved developments as well as the assumptions in the Champaign Tomorrow plan. Growth within each of the two scenarios is allocated to seven different FAZs, defined by transportation nodes in the city. These FAZs are shown in Figure 7.3.

FIGURE 7.3. FISCAL ANALYSIS ZONES (FAZS), CHAMPAIGN, ILLINOIS



Source: TischlerBise

As Figure 7.4 shows, the largest changes in the net fiscal impact from one year to another for each of the growth scenarios are triggered by capital projects and the associated operating costs. By showing the results annually, the magnitude, rate of change, and timeline of deficits and revenues can be observed. The "bumpy" nature of the annual results during particular years represents the opening of capital facilities or the incurring of major operating costs. Data points above the $0 line represent positive annual results; points below it represent annual deficits. Each year's result is not carried forward into the next year. This enables a comparison from year to year of the net results without distorting the revenue or cost side of the equation. In reality, those positive impacts would be carried forward or deficits would be funded through other means, such as debt financing for capital improvements.

In FY2017, there is a significant decrease in the net fiscal impact for the Growth Within the Service Area scenario, which is caused by the beginning of road projects; additional road projects begin in FY2025. An accompanying downturn in the net fiscal impact is seen that year as well. The slight leveling of the net fiscal impact between FY2019 and FY2020 and FY2025 and FY2026 is caused by the triggering of new street-maintenance workers and new snow-removal trucks coupled with added police officers and vehicles. However, the net fiscal impact remains positive in all years except FY2017.

The decrease in the net fiscal impact begins in FY2016 for the Growth Beyond the Service Area; this decrease is caused by the beginning of road projects. The net deficit increases in FY2017, when the new fire station opens and another fire station moves. Another significant decrease in the net fiscal impact occurs in FY2025 when the second set of road projects begins.

The cumulative fiscal results comparing the net operating and net capital impacts make this even clearer. The relative size of each of these cumulative net positive and negative results as well as a comparison of the cumulative net fiscal impact can be seen in Figure 7.5. As the figure indicates, cumulative fiscal results for the city are $52 million more favorable for the first scenario than in the second scenario. The net fiscal impact of the first scenario is a $32.8 million positive impact while it is a $19.6 million deficit for the second scenario. This is driven primarily by the higher infrastructure costs associated with development occurring beyond the Service Area. Note that the acreage available for development under the Growth Beyond the Service Area scenario is

FIGURE 7.4. ANNUAL NET FISCAL IMPACTS OF NEW GROWTH, CHAMPAIGN, ILLINOIS

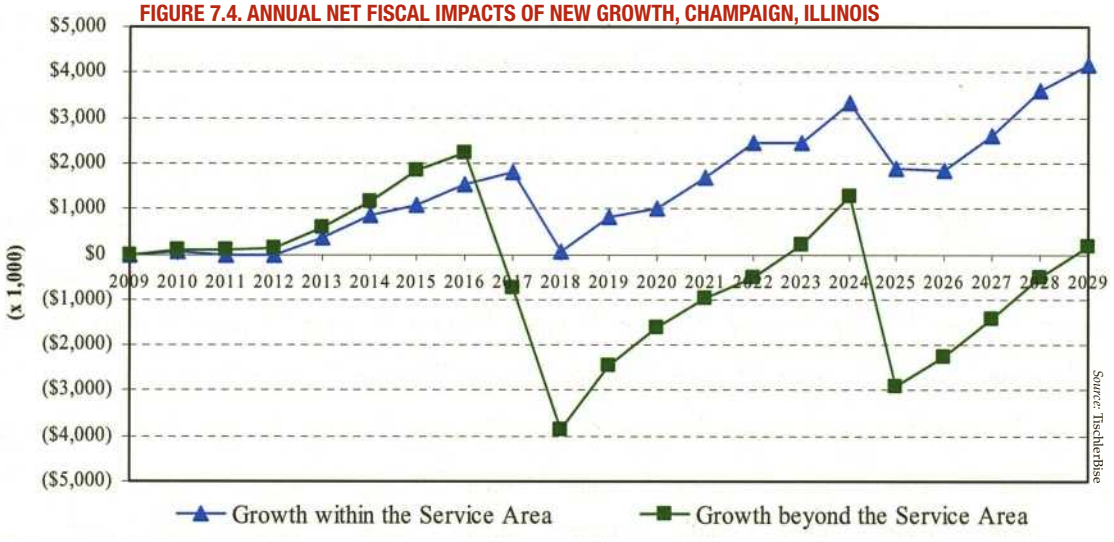
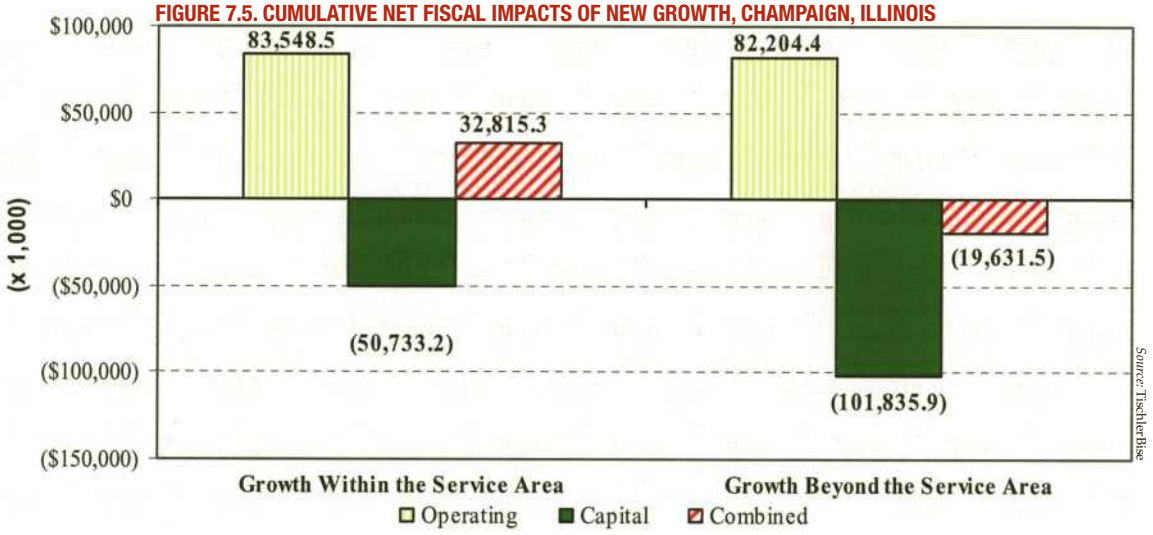


FIGURE 7.5. CUMULATIVE NET FISCAL IMPACTS OF NEW GROWTH, CHAMPAIGN, ILLINOIS



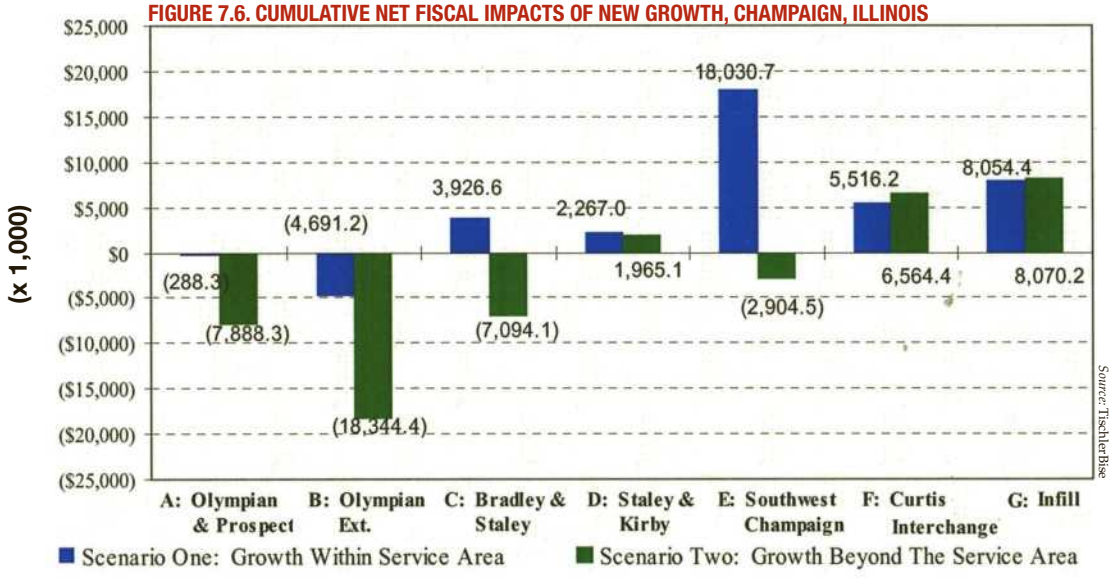
more than double that of the Growth Within the Service Area scenario. This larger development area leads to a more scattered and leapfrog approach to development, which requires the expansion of fire-service areas as well as of the road network. The fiscal impact results confirm that this is an inefficient development pattern.

Three additional factors must be considered when analyzing these fiscal results:

- The fiscal impact analysis results for each scenario are a snapshot based on the FY2009 budget and levels of service. Thus, it is assumed that these current levels of service will continue over the 20-year analysis period. If any levels of service are insufficient or the city raises any levels of service, costs will increase, reducing the net fiscal impacts.
- Road projects and fire-station construction are assumed to be debt financed over a period of 20 years. Thus, the debt payments extend beyond the time period of this analysis. Remaining debt service for the Growth Within the Service Area scenario totals $52.5 million, eliminating the positive impact of this scenario, while the remaining debt service for the Growth Beyond the Service Area totals $96.4 million, creating a more extreme deficit.
- The Growth Beyond the Service Area also requires expansion of the sanitary-sewer service area with four projects, including the extension of interceptor sewers and new lift stations. These sewer-project costs have not been captured in this analysis because sanitary-sewer service is not provided by the city but by the Urbana-Champaign Sanitary District. These costs and the difficulty of the projects should be considered in addition to the net fiscal impact. However, the city often carries the cost of sewers and is reimbursed as development occurs.

The analysis also indicated that three of the FAZs with positive net cumulative results in the first scenario—Staley and Kirby, Curtis Interchange, and Infill—maintain positive results in the second scenario. (See Figure 7.6.)

FIGURE 7.6. CUMULATIVE NET FISCAL IMPACTS OF NEW GROWTH, CHAMPAIGN, ILLINOIS



In fact, the Curtis Interchange and Infill FAZs show very little difference in fiscal impact in the two scenarios and maintain net positive impacts in each year of the analysis. Two FAZs—Olympian and Prospect, as well as Olympian Extended—have net deficits in both scenarios. Only the Bradley and Staley and Southwest Champaign FAZs change from a net positive result to a net deficit.

Summarizing the Impacts

Olympian and Prospect FAZ. The positive operating impact does not outweigh the capital deficit in this area due to the high cost of road projects and the mix of development. Most residential development is lower-valued multifamily housing coupled with far more industrial and office development than retail. While the property tax generated can cover the operating expenditures, without the boost from retail-generated sales tax the capital costs cannot be offset.

Staley and Kirby FAZ. A cumulative net surplus generated under both scenarios, as the positive operating impact is large enough to make up for the capital deficit. This is primarily due to two factors. One, the scenarios assume a significant amount of neighborhood retail, which generates sales tax. Second, road capital costs are relatively low, due to the limited area available for new development in this FAZ.

Southwest Champaign FAZ. This area generates the largest net positive impacts under Scenario One and the second best result under Scenario Two. Residential development is a balance of all housing unit types, and this area generates sales tax due to the amount of neighborhood retail.

Curtis Road Interchange FAZ. This FAZ generates cumulative net positive impacts under both scenarios. Like the Bradley and Staley FAZ, arterial road improvements were not identified for this area. As a result, the operating surpluses are large enough to make up the capital deficits.

Olympian Extended FAZ. This area generates the largest cumulative net deficit. Most (88 percent) of the nonresidential development is offices, which results in this FAZ generating the lowest level of sales tax revenue. This makes it difficult to generate a significant enough operating surplus to offset capital deficits created by the cost of road construction.

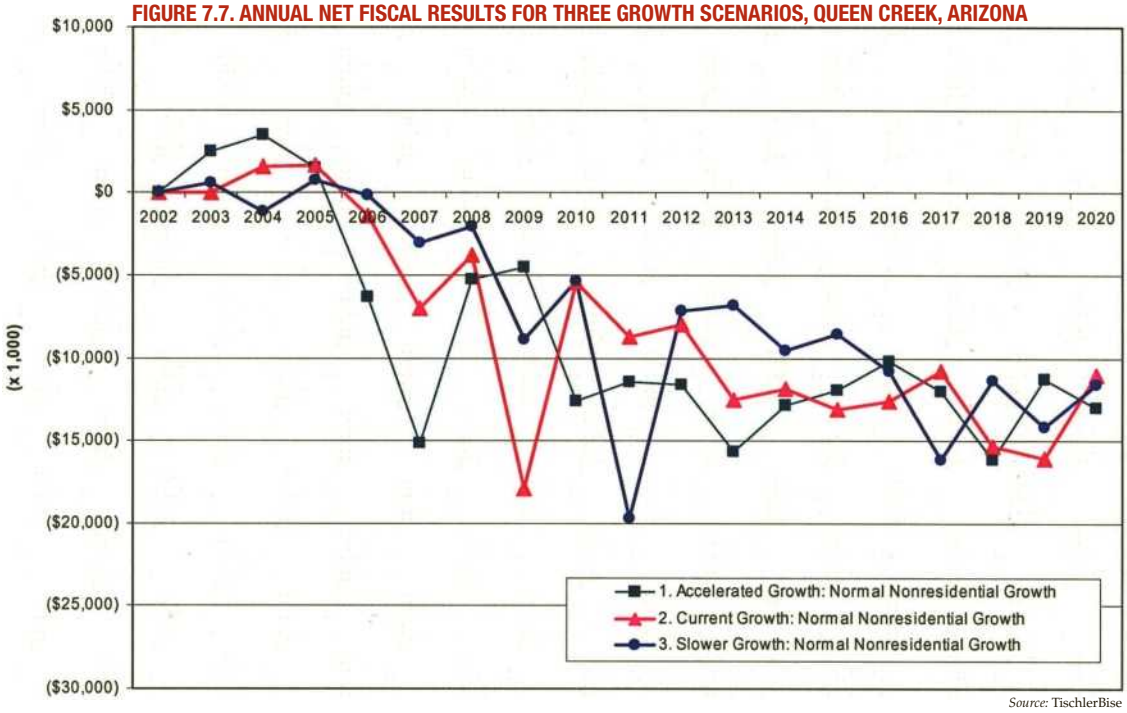
Bradley and Staley FAZ. Cumulative net positive impacts are generated under Scenario One, as this area does not require arterial road improvements under this scenario. A significant cumulative deficit is generated under Scenario Two (Growth Beyond the Service Area) due to the arterial road improvements required.

Infill FAZ. As development increases over the 20-year period, the net positive impact increases. Infill development does not require capital infrastructure, and the balance of retail and higher value multifamily housing units creates a positive net impact.

QUEEN CREEK, ARIZONA: EVALUATING THE TOTAL COST OF GROWTH

The Town of Queen Creek, a Phoenix suburb with a current population of 20,479, is expected to increase by more than 55,000 persons within the next 15 years. As a first step in evaluating the total cost of growth, the town had an impact (i.e., development) fee analy-

FIGURE 7.7. ANNUAL NET FISCAL RESULTS FOR THREE GROWTH SCENARIOS, QUEEN CREEK, ARIZONA



Source: TischlerBise

sis prepared for municipal facilities and equipment, including police, parks, recreation, roads, library, and fire services. The town's existing fees were the highest in the Phoenix area at $10,200 per single-family housing unit.

Queen Creek's fiscal impact analysis included all revenues, capital costs, and operating expenses. The town's major revenue source is a point-of-sale sales tax. (In Arizona property taxes are levied by counties, not municipalities.) However, many big-box stores and a regional mall lie just outside the town's boundaries, so it is unlikely to capture significant new retail space.

While the impact fee study calculated new growth's fair share of future capital facilities, the FIA indicated that new growth would generate insufficient revenue to cover associated operating expenses. This is an important consideration, as by collecting the impact fees the town is committing itself to construct and operate the facilities.

Although the State of Arizona requires the local planning process to consider the cost of development, most jurisdictions use an average cost-per-capita calculation. Queen Creek chose instead to evaluate several growth alternatives, which varied the pace of residential and employment growth. Equally important, it used the case-study marginal approach to model the associated operating costs of new capital facilities as well as the fiscal impacts on an annual basis.

The alternatives evaluated reflected three different rates of residential growth. For each scenario, two nonresidential growth rates were evaluated to depict the impact of slowed commercial development.

Scenario 1. Accelerated Growth. Average annual growth of 1500 housing units.

Scenario 2. Current Growth. Average annual growth of 1000 housing units.

Scenario 3. Slower Growth. Average annual growth of 750 housing units.

The FIA indicated that the town will begin to incur deficits in about year 5 under all scenarios, when additional capital facilities are needed and the associated operating costs for those facilities are incurred. The case-study marginal approach used in this analysis forecast the timing and cost of new capital facilities (Figure 7.7). As discussed, construction of these facilities will trigger additional operating expenses.

This FIA led to several important policy discussions. First, town officials reviewed and revised the levels of service Queen Creek could provide. They then reviewed and recalculated some of the proposed impact fees since the modified levels of service meant fewer capital facilities would be required. They also created a revenue-strategies committee to continue discussion on the study findings. Finally, the study helped the town educate its citizens on the need for additional revenues to maintain levels of service, with the prime candidate being a property tax.

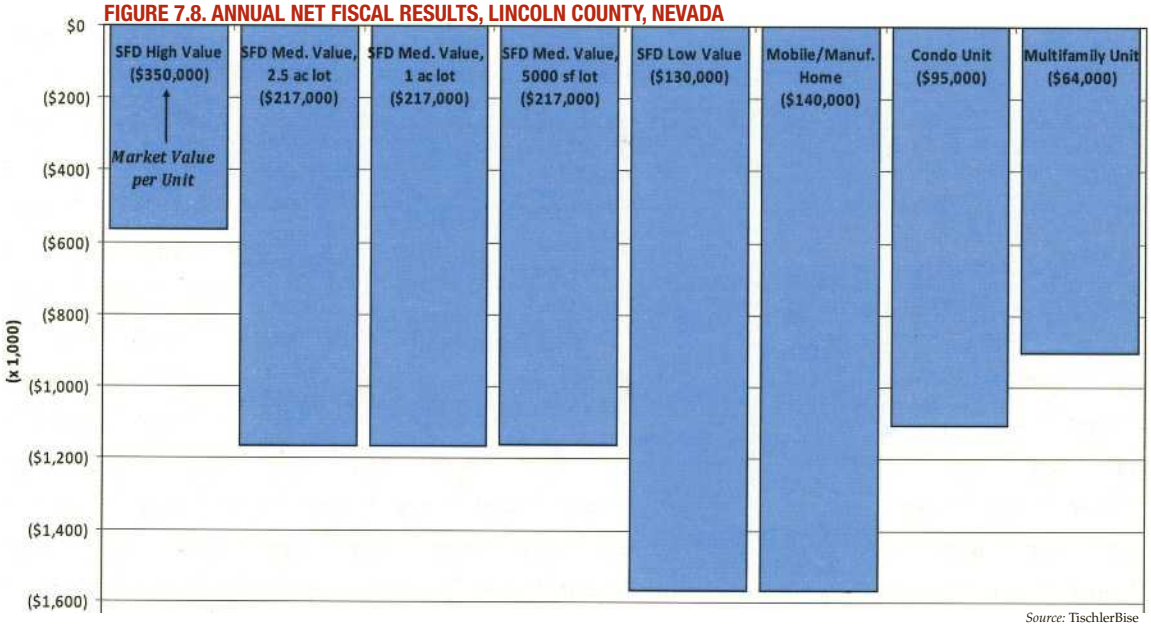
LINCOLN COUNTY, NEVADA: EVALUATING THE COST OF GROWTH IN A SMALL COMMUNITY

In small communities with limited resources, a cost-of-land-uses FIA can provide a comprehensive overview of

the link between land use and fiscal health. A good example is Lincoln County, Nevada, a large, rural county (over 10,600 square miles) with a population of only 4,500. The county has recently experienced increased development pressure and was interested in better understanding the impact of various land uses.

The Lincoln County cost-of-land-uses FIA found that none of the prototype land uses included in the study generates a positive fiscal impact, given the revenues and costs associated with maintaining current levels of service for each land use. (See Figure 7.8.) For all funds combined, residential prototype land uses produce net deficits per unit. For the general fund, road fund, and federal in-lieu tax fund, net surpluses are generated. Net deficits are produced for nonmajor special funds and capital improvements. (See Table 7.2.) The net surpluses generated in those funds are insufficient to offset the deficits to maintain current levels of service.

FIGURE 7.8. ANNUAL NET FISCAL RESULTS, LINCOLN COUNTY, NEVADA



Source: TischlerBise

This chart shows the annual net fiscal results for residential prototypes per residential unit.

The county had a cost-of-land-uses FIA prepared that evaluated eight residential prototypes: (1) single-family high value; (2) single-family medium value (2.5 acre lot); (3) single-family medium value (one-acre lot); (4) single-family medium value (5,000 square-foot lot); (5) single-family low value; (6) mobile/manufactured housing; (7) condominium unit; and (8) multifamily apartments. It also evaluated three nonresidential prototypes: (1) retail; (2) office; and (3) industrial.

For all funds combined, all nonresidential land uses generate net deficits per 1,000 square feet of develop-

TABLE 7.2. ANNUAL NET OPERATING AND CAPITAL FISCAL RESULTS, LINCOLN COUNTY, NEVADA

Category	*SFD High Value*	*SFD Medium Value Large Lot (2.5 acres)*	*SFD Medium Value Medium Lot (1 acre)*
Operating Net Fiscal Results by Fund			
General Fund Operating Results	$382	($78)	($78)
Road Fund Results	$29	$29	$29
Federal in Lieu Tax Fund Results	$106	$106	$106
Nonmajor Special Funds Results (All Combined)	($358)	($479)	($479)
Subtotal Operating Net Fiscal Results	**$159**	**($422)**	**($422)**
Capital Net Fiscal Results			
Subtotal Capital Net Fiscal Results	**($723)**	**($742)**	**($742)**
TOTAL RESULTS	***($564)***	***($1,164)***	***($1,164)***

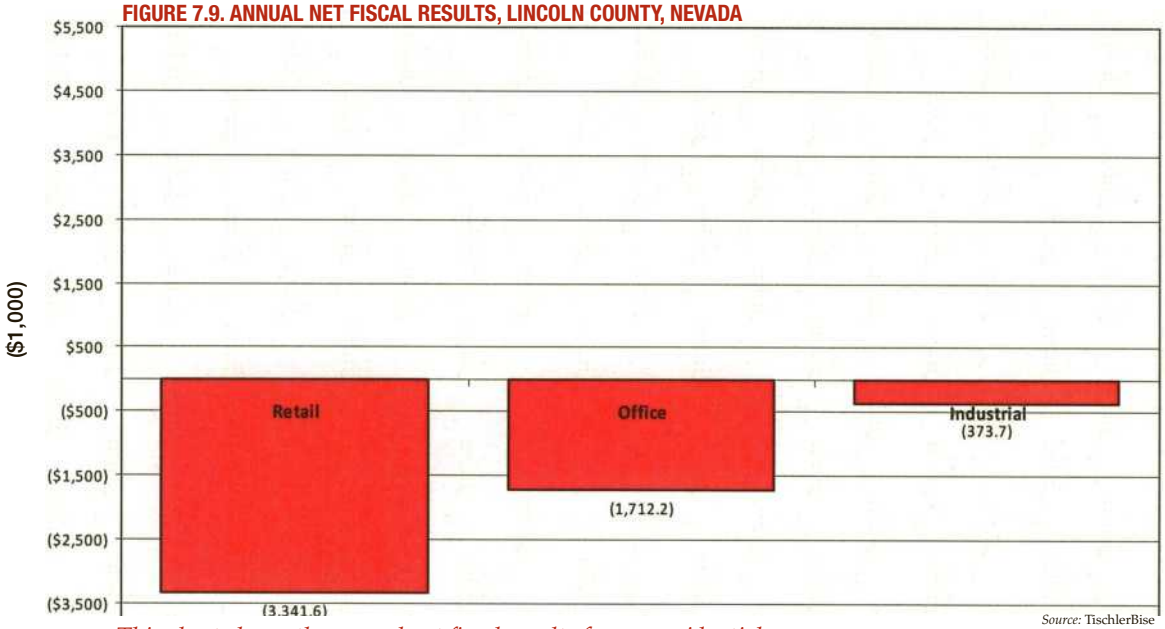
ment. (See Figure 7.9.) For the general fund, road fund, nonmajor special funds, and capital improvements, net deficits are generated. The federal in-lieu tax fund generates net surpluses. (See Table 7.3 on page 56.)

These results show that existing development is not paying its way in Lincoln County. The primary reasons are that the county's revenue structure is not sufficiently diverse, nor is the county doing its part to ensure fiscal sustainability. Many expenditures in the current budget year, particularly in special funds, are covered by fund balances. This leads to net deficits for these functions since new revenue generation is insufficient to cover the expenditures. This practice has occurred for several years. Despite this situation, the county has not increased the property tax in many years. The analysis also found that the county has a considerable number of services for which it does not charge user fees (charge for service).

Another important finding is that the county has minimal dedicated capital revenues. Given the fiscal results, it was recommended that the county give serious consideration to alternative capital financing sources such as impact fees. On the operating side, the county may also want to evaluate the level of cost recovery for existing user fees and consider additional user fees to cover costs.

As a result of this analysis, the county went forward with a comprehensive revenue enhancement assessment.

FIGURE 7.9. ANNUAL NET FISCAL RESULTS, LINCOLN COUNTY, NEVADA



Source: TischlerBise

This chart shows the annual net fiscal results for nonresidential uses per 1,000 square feet.

Residential (per Unit)				
SFD Medium Value Small Lot (5000 sf)	SFD Low Value	Mobile/Manufactured Home	Condo Unit	Multifamily Unit
($78)	($386)	($379)	($321)	($171)
$29	$29	$53	$123	($119)
$106	$106	$110	$82	$50
($479)	($560)	($576)	($439)	($263)
($422)	($812)	($792)	($555)	($503)
($741)	($755)	($774)	($550)	($402)
($1,163)	($1,566)	($1,566)	($1,105)	($905)

Source: TischlerBise

[Overall] results show that existing development is not paying its way in Lincoln County,the primary reasons being that the county's revenue structure is not sufficiently diverse, nor is the county doing its part to ensure fiscal sustainability.

TABLE 7.3. ANNUAL NET OPERATING AND CAPITAL FISCAL RESULTS, LINCOLN COUNTY, NEVADA

Category	Nonresidential (per 1,000 Square Feet)		
	Retail	*Office*	*Industrial*
Operating Net Fiscal Results by Fund			
General Fund Operating Results	($69)	($383)	($85)
Road Fund Results	($2,102)	($857)	($186)
Federal in Lieu Tax Fund Results	$64	$86	$24
Nonmajor Special Funds Results (All Combined)	($29)	($36)	($9)
Subtotal Operating Net Fiscal Results	**($2,135)**	**($1,189)**	**($255)**
Capital Net Fiscal Results			
Subtotal Capital Net Fiscal Results	**($1,206)**	**($523)**	**($119)**
TOTAL RESULTS	***($3,342)***	***($1,712)***	***($374)***

Source: TischlerBise

CHAPTER 8

Benefits of Fiscal Impact Analysis

Clearly, fiscal impact analysis has many benefits, whether it is used for budgeting or for land-use, capital, or financial planning. At the same time, there are certain common mistakes in using FIA that planners should be aware of; most can be avoided with careful use of this tool.

BENEFITS OF FISCAL IMPACT ANALYSIS

Encourages Anticipation of Change

One of the major benefits of FIA is that it describes what is likely to happen due to change within a jurisdiction. A fiscal analysis measures the impact of growth (or decline) on a local government's services, including capital facilities, and the resulting costs and revenues. This is different from the preparation of the next year's budget. In most cases, a fiscal analysis does not replicate the budget; it projects marginal changes in the budget given possible land-use, demographic, and employment changes. Fiscal analysis enables local officials to ask "what if" something happens and to consider the effects beyond the next fiscal year. While the resulting data are not necessarily completely accurate, they do provide a clear sense of the likely effects of various policies, which can be crucial to local officials making policy decisions.

Projects Capital Facility Needs

A fiscal impact analysis can incorporate information on the available capacity of current capital facilities and project when additions or new facilities will be needed for each development alternative being evaluated. Fiscal analysis also can be used to help allocate new capital facilities to geographic subareas of the community.

The evaluation of capital facilities needs can be helpful in developing or revising the local government's capital improvement program (CIP). The costs and staging of facilities included in the CIP are often based on the independent best estimates of the departments that have activities or programs affected by the proposed capital improvements. In some cases, the projections made by these departments are similar; at other times, they vary widely. Fiscal analysis can add an additional perspective.

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Helps Define Achievable Levels of Service

The level of service the local government will provide is an important factor in calculating impact fees and other user fees. In order to quantify levels of service, department heads and managers must choose an indicator as a basis: the number of residents or jobs in the community, the number of average daily trips on local roads, or some other appropriate denominator. Defining the level of service promotes discussion about the adequacy of services and enables the local government to determine through fiscal analysis whether the community can afford various levels of service, both in terms of the costs of new or expanded capital facilities and annual operating costs.

In addition, sometimes the CIP contains only those projections for use of capital facilities needed over the next year or two. Fiscal analysis can help the local government forecast capital-facilities needs over a longer period of time and in a more thorough fashion, giving decision makers more information to make better investment decisions.

Clarifies Development Policy Impacts

In most cases, fiscal impact analysis focuses on the effects of growth or development, usually defined in a development scenario. Development scenarios need to be defined for each year of the forecast period in terms of population, employment, housing by type, and nonresidential square footage.

Defining development scenarios can be useful. Many local governments never translate their policies or major land-use plan changes into estimates of annual revenues and expenditures. The process of describing in narrative form how and why the numbers were developed is a very important aspect of a fiscal impact analysis, which provides local officials with information to evaluate the logic of the assumptions underlying policies or proposals.

For example, under an optimistic development scenario, a community may project population growth of 25,000 over a 20-year period. The fiscal impact analysis can be used to project how providing the various types of housing that could accommodate this growth (garden apartments, town houses, single-family homes, and condominiums) would affect the need for services over time. Since this scenario projects job growth as well, the fiscal analysis could also assess the fiscal impact of alternative job-growth pictures (e.g., mostly offices with some retail versus industrial growth with some office and retail). Using this process, local officials can review existing and proposed policies from a more informed perspective.

Fiscal impact analysis can help not only local officials but also developers take realistic looks at the viability of proposed development. In one community, a mixed use high-rise development containing residential, office, retail, and hotel activities was proposed. The developer wanted the city to help provide infrastructure. To analyze the costs, the city requested that the project be explained in terms of its effect on growth on an annual basis (rather than at build out, as in the developer's scenario). When the developer projected the absorption of the new residential and commercial space into the local economy on an annual basis, he found that his absorption figures were too optimistic. He presented a revised proposal with a rationale for annual absorption that appeared reasonable to all parties.

Calculates Capital Costs and Operating Expenses

The calculation of capital costs and operating expenses is an obvious benefit of a fiscal impact analysis. If the FIA focuses on the marginal costs associated with growth, rather than using an average-cost approach, the results are more likely to accurately reflect annual needs and therefore will be more useful. The calculation of capital costs and operating expenses associated with service changes clearly shows decision makers how the local government's budget will be affected by growth or redevelopment.

Calculates Revenues; Helps in the Development of Revenue Strategies

A fiscal analysis calculates the additional local government revenues resulting from new development, assuming existing rates and fee structures. A fiscal analysis can show the magnitude of the revenues that would be collected under different development scenarios and can show whether there would be a surplus or deficit of revenues over expenditures on an annual as well as a cumulative basis for each alternative considered. This enables local officials to consider alternative sources of revenues.

Fiscal impact analysis presents a wealth of information that a local government can use to develop revenue strategies. Obviously, if the analysis indicates that existing plans for the community's growth will result in a deficit, the plans may need to be adjusted to arrive at a neutral or positive position. The first area to evaluate is the structure of rates for various revenue sources. Revenue formulas used to set user fees, utility rates, and property taxes should be reviewed as part of developing a revenue strategy. Possible new revenue sources can also be evaluated.

Even if the fiscal analysis projects a surplus of revenues over expenditures as a result of new development, rate structures for revenues such as user fees should be evaluated regularly so that appropriate fees can be applied to new growth.

Encourages "What If" Questions

A good fiscal impact analysis with a narrative explaining all assumptions and inputs encourages managers to ask a number of "what if" questions. Alternative scenarios can be described for service levels, for the cost and revenue factors, for growth itself, or for almost any other aspect of the analysis. Decision makers find that some of the major benefits of fiscal analysis are the explicit defining of all the different service level and cost and revenue factors, as well as the ability to change assumptions and quickly see the impact of the changes. This makes fiscal analysis a very effective policy tool.

RISKS IN USING FISCAL IMPACT ANALYSIS

There are several risks—all avoidable—that local officials should keep in mind so they can use fiscal analysis effectively. Some of these are discussed below.

Garbage in, Garbage out, and Black Box Concerns

Making faulty assumptions or making assumptions based on faulty data leads to faulty results. A fiscal impact analysis must include a clearly written rationale explaining the methodology employed as well as the assumptions behind the level-of-service standards and cost and revenue factors. It is also important to detail the assumptions behind the development scenarios evaluated in the analysis, including information on total development, allocation by subarea (if applicable), and the assumed absorption rate. A narrative that describes the annual as well as cumulative findings and the reasons for them is also necessary.

This information enables users of the analysis to understand the results and raise appropriate questions about basic assumptions. For example, local officials may want to question assumptions about issues such as how the population's demographics will change, how the ratio of residential to nonresidential land use will change over time, or how much revenue will be received from intergovernmental transfers in the future.

Econometric models that use regional or national data can be helpful if the assumptions are understood clearly and are applicable to the local situation. Many communities find such models to be too different from the local situation to be helpful. If the model is too different or too complicated, then local officials should evaluate the results especially carefully.

Political Effects of Making Data Assumptions Explicit

While explaining assumptions is considered a benefit by most people, levels of service as well as many other data inputs can be politically sensitive. Local officials should consider the impact of this information on the public's perception of services in determining how to explain the data and how to involve citizens effectively in discussing levels of service and related issues. For example, if the number of police assigned to a certain sector is controversial, then the number used in the fiscal analysis will most likely generate interest.

Neglecting Other Impacts

Local policy makers may be tempted to focus on the fiscal impacts of alternatives at the expense of other factors less easily quantified, such as environmental and social impacts. Moreover, to the extent that a fiscal analysis encourages all assumptions to be made explicit, there may be pressure to quantify the other factors for comparison. Whether or not other factors can be quantified is an issue that local governments need to consider then when evaluating specific proposals or changes in land-use policies.

An example is the increasing desire from the general public and many local governments to preserve open-space lands because of their importance from an agricultural perspective, for recreation and natural hazard mitigation, or because they possess important geological or biological features. Since local governments are heavily dependent on property tax monies for operating revenue, the fiscal and economic implications of open-space preservation decisions are paramount. Conservationists are frequently called upon to demonstrate to local communities the economic value of preserving open space (Fausold and Lilieholm 1996).

The most direct measure of the economic value of open space is its real estate market value. Another way to measure this value is through contingent valuation, which is a survey-based economic technique for the valuation of nonmarket factors, such as the preservation of open space or the impact of contamination. Typically, such a survey asks how much money people would be willing to pay (or willing to accept) to maintain, for example, the existence of open space.

CONCLUSION

The need for planners to evaluate the fiscal impacts of development will only increase in the future. With local governments facing growing financial pressures due to declining state and federal revenues and local resistance to tax increases, the need for new development to be fiscally neutral, at a minimum, is more important than ever. This report has shown that fiscal impact analysis can be a difficult process and can be conducted at various levels of sophistication. In addition, the analysis is only as good as the information used in its preparation. Nevertheless, fiscal impact analysis remains the best available technique for evaluating the impact of development on the provision of local government services and facilities.

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561. Fiscal Impact Analysis: Methodologies for Planners. L. Carson Bise II. September 2010. 68pp.

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# of special interest

Placemaking on a Budget

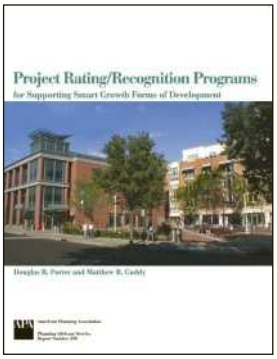
PAS 536. Al Zelinka and Susan Jackson Harden. 2006. 133 pp. $48.

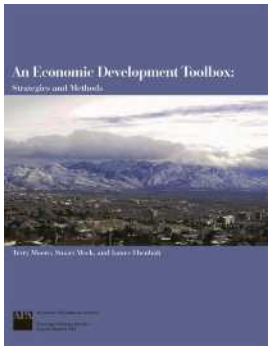
Does your town lack a distinctive main street? Can visitors distinguish your town from the next? Public spaces are failing in many communities—and they are often the barometers of vitality, social cohesion, and public health. This report offers help for small towns, neighborhoods, and downtowns that need to enhance identity and social connections without spending a lot of money. Find out how citizens can get involved in identifying the history, culture, and resources that make their community unique. Learn how to recognize opportunities for expressing community values.

Project Rating/Recognition Programs

PAS 538. Douglas R. Porter and Matthew R. Cuddy. 2006. 48 pp. $44.

What is smart growth? Communities that want to implement smart growth need criteria and standards for evaluating the extent to which proposed developments qualify as smart growth. Learn how to create project rating systems that help turn smart growth principles into built projects. This report describes ratings systems used by various organizations and evaluates their effectiveness. It also explains how such systems can be used to educate the public and officials about smart growth, and how to use them in recognition and awards programs.





An Economic Development Toolbox

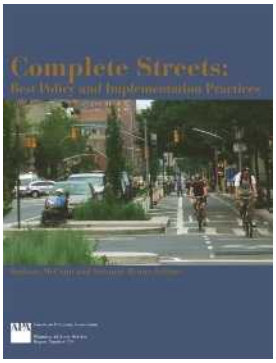
PAS 541. Terry Moore, Stuart Meck, and James Ebenhoh. 2006. 78 pp. $48.

This practical guide to economic development will help local governments analyze their economies and incorporate economic goals into comprehensive plans.

Complete Streets

PAS 559. Barbara McCann and Suzanne Rynne, eds. 2010. 144 pp. $60.

Drawing on lessons learned from more than 30 communities around the country, this report provides insight into successful policy and implementation practices that have resulted in complete streets. Readers will learn how to build support for complete streets, adopt a policy, and integrate complete street concepts into plans, processes, and standards. In addition, this report provides insight into design issues, handling costs, and ways of working with various stakeholders. Case studies highlight communities that have adopted and implemented complete streets, and model policy language provides guidance to communities interested in writing and adopting a complete streets policy.



City of Louisville

Fiscal Impact Model Overview

May 14, 2024

City of Louisville

Fiscal Impact Model Review

Fiscal Models Can Help:

- Ensure new developments have sustainable funding for City capital needs and services
  - Tax and fee revenues vs City expenditures to maintain level of service
- Evaluate fiscal impact of different land use scenarios and changes

City of Louisville

Fiscal Impact Model Review

Fiscal Models Do Not Evaluate:

- Market Conditions Needed to Support Desired Land Use
- Secondary Economic of Fiscal Benefits from Allowing Certain Land Uses
- Alignment of Land Use Policies with Other City Polices
  - E.g. Affordable Housing, EDI, Sustainability, Community Character and Vitality

City of Louisville

Fiscal Impact Model Review

Two Fiscal Model Types

Originally Developed in 2014 –Direct Cost and Marginal Cost Models

- ***Development Impact Model***
  Marginal/Average Cost Hybrid for Individual Development Proposals
- ***Area Planning Model***
  Marginal Cost Model for City-Wide or Area Land Use Scenarios

City of Louisville

Fiscal Impact Model Review

Standard Assumptions

Inputs	Source/Assumption
Persons/Unit	Census/American Community Survey
Unit/Construction Value	Developer/Market Research
Residential Income	Developer/15% of Unit Value
Residential Income Spent on Taxable Items	35% of Income
Residential Spending Captured in City	40%
Vehicle Trips	Institute of Traffic Engineers
Employee Density	Institute of Traffic Engineers
Employee Spending	ICSC/Staff Assumption: Office = $5,000 & Retail = $1,200
Retail Tax/Sq. Ft.	<25K = $100 25K-50K = $200 > 50K = $300
Absorptions Rates (Time to Complete the Development)	Developer/Staff Assumption: 7 Year Residential & 20 Year Commercial

City of Louisville

Fiscal Impact Model Review

Standard Assumptions

	High	Low
Residential Units	100	80
House Value	$600,000	$450,000
Construction Value	$300,000	$225,000
HH Income	$120,000	$67,500
Absorption	4 years	8 years
Office	20,000 sq. ft.	16,000 sq. ft.
Market Value	$300	$240
Construction Value	$200	$160
Worker Spending	$5,000	$4,000
Absorption	10 years	20 years
Retail	10,000	8,000
Market Value	$250/sq. ft.	$200
Construction Value	$180/sq. ft.	$144
Worker Spending	$1,200	$960
Sales Per sq. ft.	$100	$80
Absorption	10 years	20 years

City of Louisville

Fiscal Impact Model Review

Model Inputs

RESIDENTIAL DEVELOPMENT COMPONENT — YES

Land Use Profile			Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed
Residential Low Density	2.57 Persons Per Unit	33 Lin. Ft. Lot Width	1,000 Units	Percent Absorbed	10 Units
Market Value:	$600,000 Per Unit	6.76 Vehicle Trips	50% Adj. Factor		10.00%
Construction Value	$300,000 Per Unit	$132,000 HH Income	35% on Taxables Items		
Residential Medium Density	1.26 Persons Per Unit	8 Lin. Ft. Lot Width	361 Units	Percent Absorbed	50 Units
Market Value:	$550,000 Per Unit	4.13 Vehicle Trips	50% Adj. Factor		14.00%
Construction Value	$275,000 Per Unit	$121,000 HH Income	35% on Taxables Items		
Residential High Density	1.38 Persons Per Unit	8 Lin. Ft. Lot Width	0 Units	Percent Absorbed	0 Units
Market Value:	$350,000 Per Unit	4.68 Vehicle Trips	50% Adj. Factor		30.00%
Construction Value	$175,000 Per Unit	$77,000 HH Income	35% on Taxables Items		

NONRESIDENTIAL DEVELOPMENT COMPONENT

Land Use Profile			Potential New Development	Type of Absorption	Annual Absorption/ Percent Absorbed
Retail <25k	78.33 Vehicle Trips	28% Adj. Factor	136,618 Sq. Ft.	Percent Absorbed	47,000 Sq. Ft.
Market Value:	$272 Per Sq. Ft.	Construction Value:	$194 Per Sq. Ft.		10.00%
Employment Density:	3.33 Per 1,000 Sq. Ft.	$150 Sales Per Sq. Ft.	$0 Spending per Emp.		
Retail 25-50k	61.46 Vehicle Trips	31% Adj. Factor	0 Sq. Ft.	Percent Absorbed	75,000 Sq. Ft.
Market Value:	$259 Per Sq. Ft.	Construction Value:	$185 Per Sq. Ft.		10.00%
Employment Density:	2.86 Per 1,000 Sq. Ft.	$200 Sales Per Sq. Ft.	$0 Spending per Emp.		
Hotel	6.33 Vehicle Trips	50% Adj. Factor	206,808 Sq. Ft.	Percent Absorbed	0 Sq. Ft.
Market Value:	$272 Per Sq. Ft.	Construction Value:	$194 Per Sq. Ft.		10.00%
Employment Density:	0.62 Per 1,000 Sq. Ft.	$52 Sales Per Sq. Ft.	$1,200 Spending per Emp.		
Office <25k	13.00 Vehicle Trips	50% Adj. Factor	0 Sq. Ft.	Percent Absorbed	0 Sq. Ft.
Market Value:	$272 Per Sq. Ft.	Construction Value:	$194 Per Sq. Ft.		10.00%
Employment Density:	4.13 Per 1,000 Sq. Ft.	$0 Sales Per Sq. Ft.	$5,000 Spending per Emp.		

City of Louisville

Fiscal Impact Model Review

Model Output

Cumulative Combined Funds Results (x$1,000) - Scenario Comparisons (x$1,000)
City of Louisville
Fiscal Impact Model

	SCENARIO			
Revenue by Fund	**High**	**%**	**Low**	**%**
General Fund	$2,416	60%	$1,003	52%
Open Spaces & Parks Fund	$309	8%	$152	8%
Lottery Fund	$0	0%	$0	0%
Historic Preservation Fund	$114	3%	$56	3%
Capital Projects Fund	$1,195	30%	$701	37%
TOTAL REVENUE	**$4,034**	**100%**	**$1,912**	**100%**
Expenditures by Fund				
General Fund	$1,891	62%	$883	52%
Open Spaces & Parks Fund	$93	3%	$42	3%
Lottery Fund	$0	0%	$0	0%
Historic Preservation Fund	$0	0%	$0	0%
Capital Projects Fund	$1,075	35%	$765	45%
TOTAL EXPENDITURES	**$3,060**	**100%**	**$1,691**	**100%**
NET FISCAL RESULT BY FUND				
General Fund	$525		$120	
Open Spaces & Parks Fund	$216		$110	
Lottery Fund	$0		$0	
Historic Preservation Fund	$114		$56	
Capital Projects Fund	$120		($64)	
NET FISCAL IMPACT	**$974**		**$222**	

City of Louisville

SUBJECT: **STATE LEGISLATION IMPACTING LOCAL ZONING AUTHORITY**

DATE: **MAY 14, 2024**

PRESENTED BY: **ROB ZUCCARO, AICP, COMMUNITY DEVELOPMENT DIRECTOR**

SUMMARY:
For informational purposes, staff is providing links to four bills that were recently passed by the State Legislature and have either been signed into law or are anticipated to be signed into law. Each of these new laws will impact the City's zoning authority. Staff will need to conduct additional research to understand the full impact of each bill and to be able to answer any detailed questions. Links to the State Legislature's webpage for each of the bills and a brief summary are provided below.

HB24-1007, Prohibit Residential Occupancy Limits:
Link: Prohibit Residential Occupancy Limits | Colorado General Assembly

This bill was passed by the legislature on April 8, 2024 and signed into law on April 15, 2024. The law prohibits municipalities from limiting occupancy in a dwelling based on familial relationship but may limit occupancy based on health and safety standards. Louisville's municipal code limits occupancy to no more than two unrelated individuals and staff anticipates that this will need to be amended to comply with the new State law.

HB24-1304, Minimum Parking Requirements:
Link: Minimum Parking Requirements | Colorado General Assembly

This bill was passed by the legislature on May 8, 2024 and is anticipated to be signed into law. Starting on June 30, 2025, the bill prohibits municipalities from enforcing minimum parking requirements for certain types of residential developments, including multifamily residential development, adaptive reuse for residential purposes and mixed use with at least fifty percent residential use.

HB24-1152, Accessory Dwelling Units:
Link: Accessory Dwelling Units | Colorado General Assembly

This bill was passed by the legislature on May 8, 2024 and is anticipated to be signed into law. Starting on June 30, 2025, the bill requires municipalities to allow an accessory dwelling unit (ADU) as an accessory use on any property zoned for single-family detached dwellings. The bill includes limits on design standards for ADUs that would restrict the construction or conversion of ADUs. The bill also sets up a grant program to offset fees and costs for ADUs.

HB24-1313, Housing in Transit-Oriented Communities
Link: Housing in Transit-Oriented Communities | Colorado General Assembly

This bill was passed by the legislature on May 8, 2024 and is anticipated to be signed into law. The bill requires minimum residential zoning density requirements within a radius of certain transit stops and corridors. Louisville will need to confirm which transit stops and corridors would apply to the bill and take actions to create a *Housing Opportunity Goal* in these areas. The City would then need to create zoning and other policies that align with the *Housing Opportunity Goal* and provide infrastructure to support the development. The bill requires interim compliance steps starting in July of this year and full compliance by December 31, 2026.