Evaluating Fiscal Impact Studies: community guidelines

Bruce Weber, Extension Economist, Oregon State University

George Goldman, Extension Economist, University of California, Berkley

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Fiscal impact analysis in the context of growth is the study of the effect of a particular development or development alternatives, or of certain policy alternatives, on government expenditures and revenues. While such studies are occasionally done to identify the impacts on all levels of government, the interest of an impacted community is usually to determine the effect of development on local government expenditures and revenues, i.e., on the expenditures and revenues of the counties, municipalities and school districts in the impact area—and ultimately on the tax levied by these jurisdictions.

This discussion begins with some possible objectives and uses of fiscal impact analysis and illustrates how fiscal impact studies are commonly done. The reasonableness of some common assumptions about the impact of population on spending and nonproperty tax revenues is examined, and the effect of different assumptions on fiscal impact estimates is shown by example. The discussion concludes with some questions to ask in evaluating both methods used to estimate fiscal impacts and the underlying design of a fiscal impact study.

Objectives

Fiscal impact analysis can be guided by different objectives. If a county is considering a new general plan, it might want to know the fiscal impact of implementing that plan as opposed to not implementing it. What changes in expenditures and revenues will adopting that plan entail? A fiscal study can also be used for estimating the impact of a large project on the county. If a developer is planning a large subdivision, it may be desirable to estimate the possible effects on county expenditures and revenues. In addition, fiscal analysis may be useful in estimating the impact of a change in state or federal policy (for example, statewide agricultural land preservation policy).

There is no one method of fiscal impact analysis appropriate for all situations. A study to estimate the tax rate in an impacted community would not necessarily use the same method as a study to determine the effect of a change in state tax policy. The method used will depend on the objectives of the analysis, the local situation, and the quality of the information available to the analyst.

WRDC

Western Rural Development Center
Oregon State University
Corvallis, OR 97331
(503-754-3621)

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Using sensitivity analysis

A number of expenditure and revenue estimates are possible, even for a given objective. For instance, estimating school expenditures and revenues usually involves estimating the number of school children per dwelling unit at some future date. Clearly, no one knows what this number will be, or even the best way to estimate it. The projected expenditures and revenues, however, depend upon this number. When the value of a critical number cannot be closely estimated, it is often useful to take different values within a reasonable range and see how estimated expenditures and revenues are affected. This is called *sensitivity analysis.*

Fiscal impact analysis can be seen as—and is often used as—part of an advocacy process. Analysts may choose the estimate of the number of school children that leads to results most strongly supporting their position. With sensitivity analysis, the non-specialist can choose the estimate of the number of school children, for example, that seems most reasonable, and draw appropriate conclusions about school expenditures and revenues and taxes. Sensitivity analysis can also highlight the variables that are most critical and important to the study's conclusions.

An example

Fiscal impact studies commonly attempt to estimate the effect of a given development on the local tax rate. To begin this, two relationships must be specified: (1) the relationship between the development and local government expenditures, and (2) that between the development and local government nonproperty tax revenues. Nonproperty tax revenues include fees and charges, and federal and state aids. The difference between the total costs and nonproperty tax revenues is the estimated tax levy needed to support local government services. This levy divided by the new total assessed valuation of the jurisdiction equals the estimated new property tax rate.

An example of this approach to estimating fiscal impacts is shown in Table 1 for a city of 2,000 people and a development that is expected to increase city population by 1,000 and city assessed valuation by $50,000,000 by 1985. The current city tax levy ($64,000) divided by the current assessed valuation of $50 million yields the current tax rate of $1.28 per $1,000 assessed value. The new development is estimated to increase city expenditures by $112,000 and city revenues by $80,000 by 1985, yielding a 1985 tax levy of $96,000. Because the development is estimated to have a larger proportional effect on assessed value than on the tax levy, the tax rate in 1985 is estimated to be lower than the current (1978) tax rate. *The implication is that the development will lead to lower taxes for existing residents.*

What are the critical relationships which underlie this analysis—and how reasonable are they?

Table 1. City fiscal impact

	1978	impact of 1,000 new residents	1985
costs	$ 224,000	$ 112,000	$ 336,000
—nonproperty tax revenues	160,000	80,000	240,000
tax levy	$ 64,000		$ 96,000
assessed valuation	$50,000,000	$50,000,000	$100,000,000
tax rate/ $1,000 AV	$1.28		$.96

Two critical relationships

Growth and local government expenditures. A common assumption made in estimating local government expenditures is that per capita expenditures remain constant in the course of growth. In Table 1, the analyst divided current city expenditures ($224,000) by current population (2,000) and found that current city expenditures were $112 per capita. The analyst multiplied this figure by the estimated population increase (1,000) to obtain the estimated impact on local government spending ($112,000).

Because different analysts have different objectives and different perceptions of how expenditure decisions are made at the local level, there is no one accepted procedure for estimating expenditures.

Two possible objectives in spending estimation are:

(1) to estimate what expenditures are likely to be "with" and "without" development (not controlling for differences in the quality of services under the two alternatives), or

(2) to estimate what expenditures would have to be to maintain some standard of service quality or consumer satisfaction (not attempting to predict the most likely expenditures).

The latter is the commonly stated objective in fiscal impact studies, although the former is usually the more relevant to local governments. In the absence of any meaningful indicators of service quality or satisfaction with services, current per capita expenditures has been used as the usual measure of spending necessary to maintain a constant level of service.

Current per capita expenditures may not produce a very good estimate of either most likely expenditures or expenditures necessary to maintain a constant level of satisfaction—with or without development.

In many states, there are limitations on the amount of property tax a local government may levy without voter approval. In Oregon, for example, the local property tax levy can only increase by 6 percent each year (with certain exceptions), unless voters authorize a levy outside that amount. If voters in a particular locality have been reluctant to approve levy measures in the past, the most likely expenditures may be those permitted by allowing property taxes to increase by only 6 percent per year.

In localities in which there is relatively little citizen resistance to tax levy measures, the *most likely* expenditure per capita with development may be *that spent by the average city, county or school district of the size the* *affected local jurisdictions would become with development.* We know that as local governments get larger, they pay higher average salaries, use less volunteer labor, and hold higher levels of per capita long term debt. This would lead one to speculate that per capita expenditures might well be higher for large cities than small ones. What is the evidence on this issue?

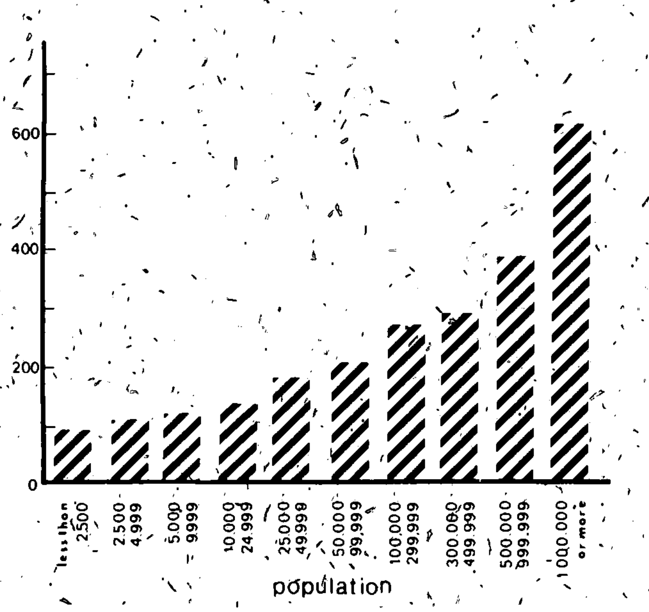

Figure 1. 1971-1972 per capita general expenditures for U.S. cities (1972 Census of Governments).

Data on expenditures per capita for cities of different sizes in 1972 suggest that *city expenditures per capita increase with city size.* Whether growth leads to higher per capita expenditures in any given case depends on many factors, but it is clear from Figure 1 that, on the average, larger cities spend more per capita than smaller ones.

In rapidly growing areas, it is common for governments to need to build new capital facilities, such as schools and water and sewer system expansions. The common practice in fiscal impact studies of using per capita operating expenditures to estimate spending often allows the analyst to ignore these capital expenditures. An implicit assumption behind using current per capita operating expenditures as the only estimate is either that major capital expansions are not necessary with the development, or that if made they will be financed in a way which is costless to current residents.

Because large capital projects such as sewage treatment plants are often financed partly by one-time charges to new residents and by debt paid for by monthly fees, such expenditures are often not explicitly estimated in fiscal impact studies, or if they are estimated, are assumed not to affect taxes or current residents. Increases in monthly water and sewer fees, however, affect existing residents—and longterm debt is often partially tax-supported as well.

Fiscal impact studies should explicitly identify whether the development is expected to generate a need for major capital investment and, if so, the impact to existing residents of alternative financing for expenditures. Whether the expenditures are financed by tax-supported bonds, increases in monthly utility fees or one-time charges to new industries and residents determines the impact on spending borne by existing residents. In cases where development requires new capital investments, exclusive reliance on current per capita expenditures to measure the impact of growth on local government spending is not satisfactory: a separate analysis is needed to capture this impact.

All of these things suggest that *the common assumption that per capita expenditures remain constant for large increases in population is unfounded.* Studies based on this assumption are probably underestimating the expenditures associated with growth.

Growth and local government nonproperty tax revenues. A parallel assumption to the one commonly made about local government spending is made about nonproperty tax revenues: that they remain constant on a per capita basis with growth. This assumption might be expected to be more valid, in that many state revenues are distributed on a per capita or per pupil basis. It is clear from Figure 2, however, that nonproperty tax revenues (intergovernmental revenues, charges, and local nonproperty taxes) do increase on a per capita basis as cities get larger. While charges do not show much increase on a per capita basis, per capita intergovernmental revenues and local nonproperty taxes increase substantially, particularly for large cities.

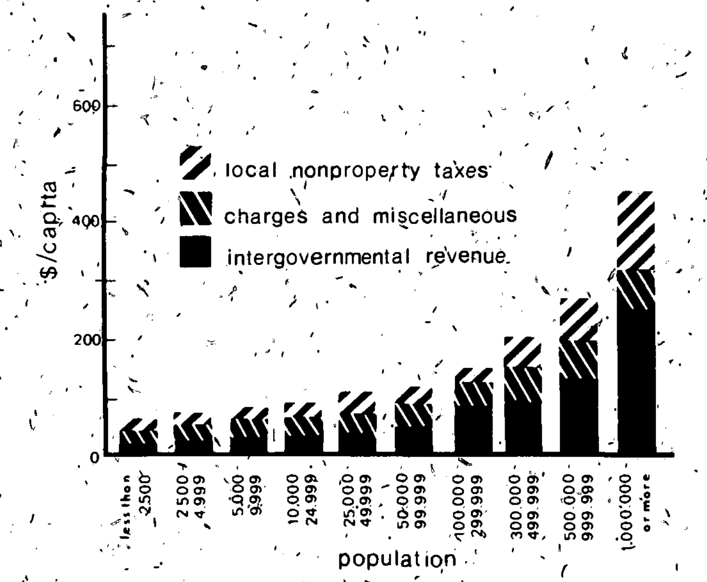

Figure 2. 1971-1972 per capita general nonproperty tax revenues for U.S. cities (1972 Census of Governments).

These figures, of course, are averages—and there is considerable variation within each size group and across states. Changes in nonproperty tax revenues under growth conditions depend on many things; but on the average, nonproperty tax revenues increase as city size increases. An assumption that they are constant on a per capita basis may tend to understate the nonproperty tax increases which occur with population growth.

The level of service charges and fees is, of course, a variable which is under the control of the local government. Local policymakers can consciously manipulate this level in order to shift the burden of new development from taxes to service charges—and/or from existing residents to new residents.

The assumption that per capita costs and revenues remain constant in the course of growth may tend to underestimate both expenditures and revenues. Do these assumptions really make a difference?

Different assumptions yield different results

If the analyst had assumed voter resistance to tax increases or had assumed per capita expenditures of cities at the with-development size instead of current per capita expenditures, what difference would it have made in the example in Table 1? Table 2 shows the effect of using these three different expenditure concepts on the estimated tax rate with development. Under the "voter reluctance" expenditure concept, taxes would be expected to decrease by $.60 per $1,000

Table 2. City fiscal impact under three expenditure concepts.

expenditure concept	voter reluctance to approve tax increases	current per capita expenditures	with-development size per capita expenditures
		($112/cap)	($140/cap)
With-development expenditures (1985)	$307,840	$336,000	$420,000
With-development tax rate (1985)	$.68/$1,000	$.96/$1,000	$1.80/$1,000
Difference between current tax rate ($1.28/$1,000) and 1985 with-development tax rate	−$.60	−$.32	+$.52

assessed value (AV) from current levels. The common method of using current per capita expenditure estimates results in an estimated tax decrease of $.32 per $1,000 AV. Finally, using average per capita expenditures for a city in the size class that the city would be in with development results in an estimated $.52 per $1,000 AV *increase* in the tax rate. Expected nonproperty tax revenue and assessed valuation assumptions are the same in each case. *Clearly, it does make a difference which method is used to estimate expenditures.*

Have the "right" questions been asked?

To this point, discussion has focused on whether the assumptions underlying commonly used methods of estimating fiscal impacts are appropriate to answer the question: what is the likely impact of a development on local government tax rates when the construction is finished (or at some other point in time)?

It must be asked whether this is the "right" question. Three considerations prompt this concern:

(1) The fact that tax rates decrease may not mean that tax bills will decrease: it is common for the assessed valuation of existing buildings to increase with development. If the fiscal impact study is attempting to estimate the impact of a development on existing residents taxpayers, the analysis should include an estimated impact on an average tax bill, not just on tax rates. This requires estimation of one additional relationship: the effect of growth on the average assessed value of existing residences. If development causes the assessed value of the home of an existing resident to

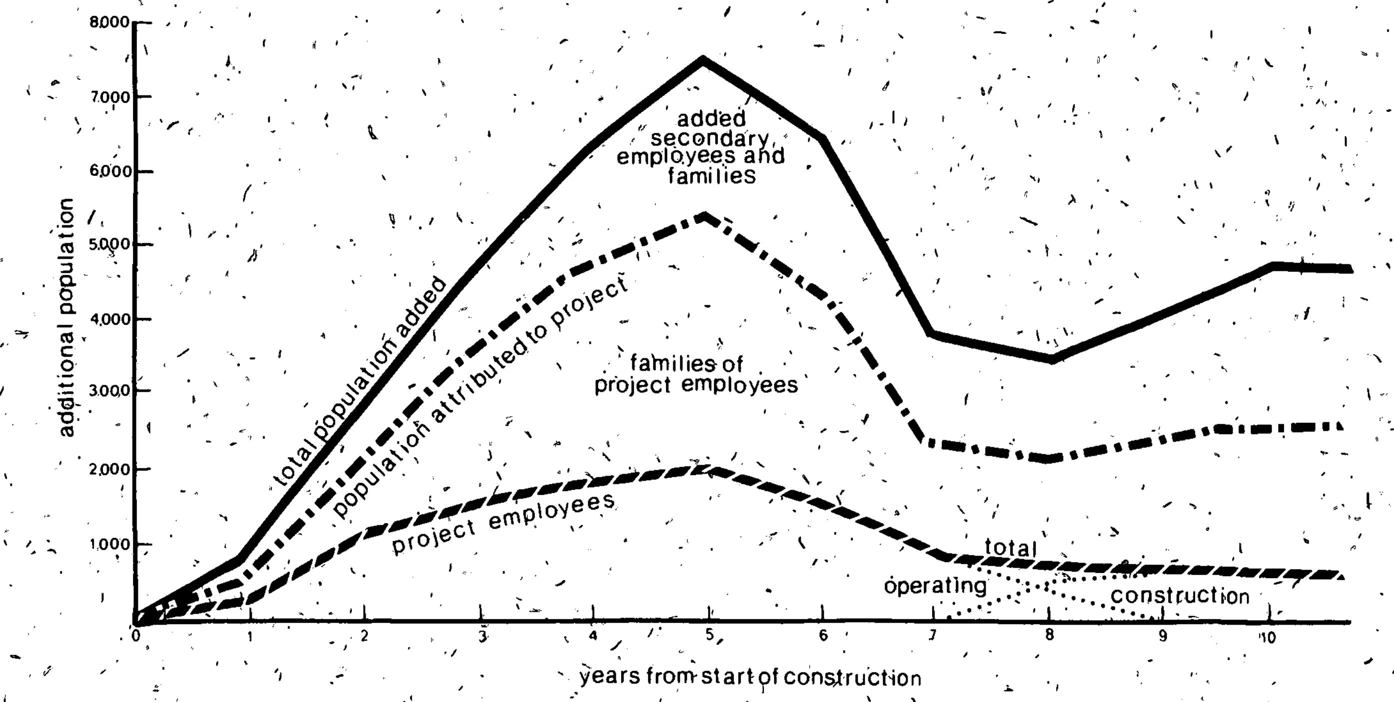

Figure 3. Added population from major development. Example: 2250-megawatt coal-fired electric generating plant (Rapid Growth from Energy Projects: Ideas for State and Local Action. Washington: U.S. Department of Housing and Urban Development 1976).

increase by proportionately more than the tax rate decreases, the net impact would be that the development would increase taxes paid by existing residents.

(2) Fiscal problems associated with growth are often cash flow problems. The revenue which development brings often comes considerably later than development-induced spending. For example, many state and some federal revenues are distributed on a per capita basis, but there is sometimes a considerable lag between the arrival of new population and the time the population becomes officially recognized. There is often a further lag before the revenue is received by the local government.

Furthermore, the population impact is often sudden and of short duration (see Figure 3). Additional schoolchildren come during the construction phase; however, often the new development does not pay the property taxes needed to pay for their education until the construction phase is over. Examination of post-construction-phase impacts does not provide the information needed to cope with short-run cash flow problems.

(3) In some cases, future without-development revenues may be quite different from current expenditures and revenues. In the example in Table 1, 1985 with-development expenditures and revenues were compared with 1978 expenditures and revenues to determine the 1985 with-development levy and tax rate. The actual impact of the development, however, is the difference between 1985 with-development expenditures and revenues and 1985 without-development expenditures and revenues.

An example may clarify this. Consider the case of the town in the earlier example which is anticipating a development expected to increase population by 1,000. The sewage treatment plant is estimated to be able to serve 3,200 people. The effect of these additional 1,000 people on local government expenditures and revenues would be very different if the town grew even without development, than it would be if the town's population were stable without development. (Figure 4.)

If operating expenditures per capita are in fact different at different population levels as suggested above, then the population growth of 1,000 in (a) would have a different (lower) expenditure impact than population growth of 1,000 in (b). Similarly, the addition of 1,000

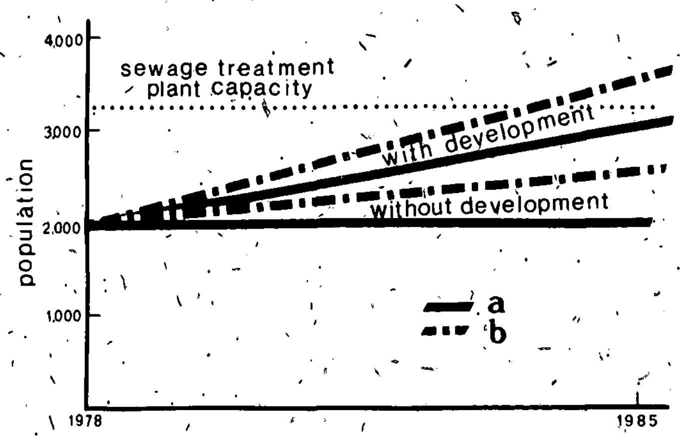

Figure 4. Impact of rapid population increase of 1,000 resulting from a development project. (a) reflects the assumption that the population would remain constant without the development; (b) assumes a certain population growth without development.

people in situation (a) would not generate the need for a sewage treatment plant, whereas an equal population growth in (b) would generate such a need with its attendant expenditure impact.

Finally, if different rates of growth have different effects on the assessed value of existing property, one might expect the existing residents to end up with different tax rates and tax bills in the two situations.

Summary

Fiscal impact analysis is the study of the effect of development (or policy) alternatives on government expenditures and revenues and on taxes. There are a number of possible uses or objectives of fiscal impact studies, and there is no one method of analysis appropriate to all problems. Sensitivity analysis aids understanding of the critical assumptions underlying the study and the effect of different assumptions on estimating expenditures and revenues. Sensitivity analysis of critical assumptions is an important part of a fiscal impact study.

Estimating expenditures and revenues of local governments under growth conditions is difficult. Reliance on "current per capita operating expenditures" to measure the impact of growth on local government costs may well underestimate the spending associated with growth. In designing and evaluating fiscal impact studies, the acronym *OMA* may help. Does the study clearly specify its *Objectives, Methods, Assumptions?*

Community leaders can critically evaluate the information contained in fiscal impact studies by asking the analyst questions about:

- how expenditures and nonproperty tax revenues are estimated;
- how tax bills as well as tax rates would be affected;
- what assumptions were made about time lags in expenditures and revenues;
- what assumptions were made about the without-development situation.

Community leaders can use these questions in the design and evaluation of fiscal impact studies to insure that the analysis they receive is useful to them.

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