Best and Worst Methods of Calculating Impact Fees

by Emil Malizia

Methods of calculating impact fees were developed and debated in the 1980s and early 1990s, in response to legal decisions that formulated the "rational nexus" test. Since then, methods have become simpler but less accurate. Some appear biased in favor of justifying higher impact fees for local governments, which are after all the clients paying for most impact fee studies, including regular updates.

HIGHER OR LOWER FEES?

Higher maximum impact fees give local governments more negotiating room with real estate developers and homebuilders. The higher the maximum fee, the greater the potential discount that developers may receive, to arrive at politically acceptable fee levels. Developers have rarely taken legal action, which would only delay the provision of needed public facilities and slow development. But many developers have called impact fees "pay to play" charges and have tried to win such compensatory concessions as higher densities.

In recent years, local governments have come under increasing pressure to find revenue sources beyond property taxes. Many have begun to charge impact fees at or near maximum levels. Developers have begun to push back, viewing the proposed fees as excessive and the methods

on which they are based as suspect. In places where this confrontation occurs, local government managers and public officials need studies based on conservative methods that measure impact and benefit more carefully, even if the result is lower maximum fees.

In other local jurisdictions, developers remain willing to pay to play, perhaps because they can pass fees forward to space consumers or backward to landowners. In these places, managers and public officials may prefer aggressive methods, which result in higher maximum fees.

IMPACT FEE METHODS

A general approach to estimating maximum impact fees—and one that is intended to meet the rational nexus test—is presented below. This approach involves one *conservative* and one *aggressive* alternative for conducting each estimation task. For managers and public officials in jurisdictions with an adversarial development community, the conservative approach is better than the aggressive one. For those in jurisdictions with a cooperative and compliant development community, the opposite is the case.

Techniques presented below pertain to public facilities financed from the general fund (roads, open space, schools). Defensible impact fees for these facilities are more difficult to calculate, compared with those involving facilities for which special enterprise funds exist (water supply, sewage treatment, utilities). The relationships between demand/consumption and supply/capacity and the benefits received by fee payers are less clear. Thus, the rational nexus test is harder to meet.

Rational nexus requires evidence that new development causes a need for public facilities, is charged its fair and proportionate share of capital costs, and benefits from the public facilities provided. Rational nexus can be viewed as a continuum subject to broad or narrow legal interpretations. The aggressive methodology assumes a broad interpretation of rational nexus, whereas the conservative methodology assumes a narrow one. Under each task discussed below, "C" stands for the conservative method, and "A" is the aggressive alternative.

All methods driven by rational nexus involve estimating need/impact, capital cost, level of service, credits, and benefits.

1. Estimate need/impact.

C: Population, employment, and other growth forecasts over the next five- or 10-year horizon are translated into forecasts of new development (dwelling units, square footage of commercial space). These forecasts are disaggregated into the land use categories to be charged impact fees. The most appropriate demand indicator is determined (population, number of school-aged children, square footage of commercial space, and so forth) to connect the demand generated by new development to the needed public facilities.

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Illustration: A county wants to charge school impact fees on new residential development. The forecast of dwelling units is disaggregated into single-family, multifamily, and possibly more refined categories. Next, census data or local surveys are used to the estimate number of school-aged children for each dwelling-unit type. The estimates are made for age cohorts that correspond to the ages of elementary, middle, and high school students. These data would, of course, be used to find the probable portion of elementary, middle, and high school students for each type of dwelling unit.

A: New development forecasts would not be necessary. The analysis would focus on the current use of existing facilities to estimate the units of demand now being served.

Illustration: The county determines the current average number of students in elementary, middle, and high school. Census data or local surveys are compiled to attribute the present number of students to the dwelling-unit types that will be charged impact fees.

2. Identify public facility costs.

C: The analysis should begin with a careful assessment of the comprehensive plan, the capital improvement plan (CIP) for the next five or 10 years, and the fiscal capacity of the local jurisdiction to assume debt. The results should indicate which public facilities are needed and their financial feasibility within the planning horizon.

A list, with the projected costs of the public facilities on which the impact fees are to be charged, is compiled. Any external funding (state, federal, and private contributions) for these facilities is deducted to find the *local* capital costs.

Finally, the plans are examined to determine whether standards for level of service (LOS) have been adopted.

Illustration: A city decides to charge impact fees for open space and park facilities. The open space and park facilities, their capital costs, and applicable standards are identified in the comprehensive plan and CIP. These facilities should be deemed financially feasible and necessary.

A: The analysis would not refer explicitly to the comprehensive plan or CIP. The method would simply assert that new development generates the need for public facilities. Recent capital outlays for this type of facility would be compiled to arrive at updated estimates of capital costs.

Next, the appropriate unit of demand to be served by this new facility (population, number of school-aged children, square footage of commercial space, and so on.) would be determined to compute the capital cost per unit of demand. Again, expected external funding (state, federal, and private contributions) for the facility would be deducted to estimate local capital cost per unit.

Illustration: The city compiles recent capital outlays for open space and park facilities. The per-acre and improvement costs are applied to all existing open space and park facilities in the city. In effect, this aggregate value represents the total replacement cost of open space and park facilities. The current population or number of dwelling units in the city, when divided into this cost, gives the capital cost of parks per capita and per residential unit.

3. Establish current level of service (LOS).

C: The number of public facilities available to serve existing development must be carefully measured using demand indicators like population, school-aged children, vehicle-miles traveled, and so forth. The best approach is to disaggregate facilities to enhance the precision of LOS estimates (for such categories as elementary, middle, and high schools; neighborhood, community, regional, and special-purpose parks). Existing LOS should be compared with any adopted LOS standards identified in local plans. The lower LOS should be used in subsequent analysis.

The rationale for this approach goes something like this: If the adopted community standard is greater than the existing LOS, the latter should be used because impact fees cannot be used to raise the existing LOS. If existing LOS is greater than the adopted standard, excess capacity exists; charging impact fees at the adopted standard would generate sufficient fees to pay for planned facilities without generating excess fees.

Illustration: The city has neighborhood, community, regional, and special-purpose parks. For each type, the existing population served and the adopted standards for the population to be served are compared. The lower LOS is selected as the one to be applied to new residential development.

A: The LOS that exists throughout the jurisdiction for the category of public facility to be developed is considered the current LOS, which must be maintained. Therefore, any new development is expected to lower LOS through increased usage and therefore should pay impact fees.

Illustration: The analysis in the previous illustration produced an estimate of the acres of parks per capita or per residential unit. This estimate is considered the existing LOS in the city.

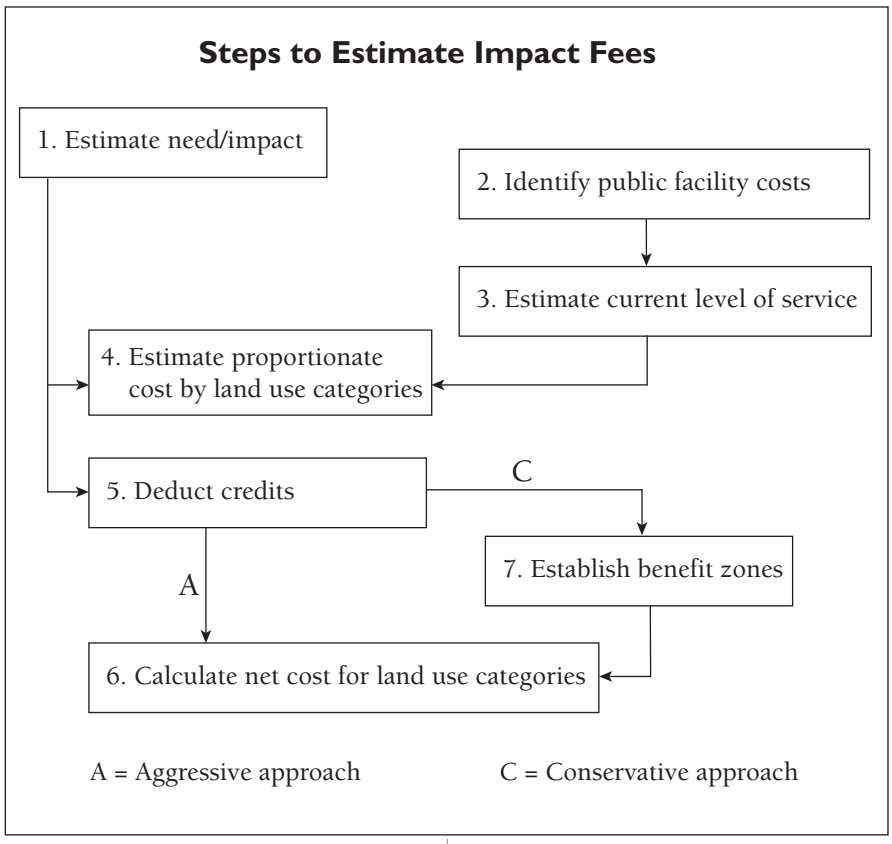
4. Connect need to capacity at the applicable LOS.

This task connects supply to demand and represents the application of the proportionality rule, or "prong," of the rational nexus test.

C: The objective is to connect planned public facilities to forecasted new development. The task begins with the detailed listing of public facilities to be built and their total cost over the planning horizon (see 2 above). Next, the amount of demand to be served by these facilities is estimated.

The careful estimate of current LOS is now applied to apportion these facilities and costs, either to address existing deficiencies or to serve new development. Only the latter figure can be funded with impact fees and represents the proportionate cost attributable to new development (that is, to all land use categories).

This task secondarily involves allocating demand to land use categories in order to translate units of demand (total population, total number of



school-aged children, and so on) into development categories. First, the forecasted amount of new development is disaggregated into land use categories that will pay impact fees (see 1 above). Then, the corresponding demand indicator is used to estimate each land use category's relative demand for the public facilities.

Now, these estimates of supply and demand can be connected using the demand indicator. First, local capital costs are allocated to each land use category to reflect the demand from each category. Second, these costs per land use category are divided by the amount of new development in that category to estimate the local capital cost per land use category.

Illustration: A township wants to charge proportionate-share impact fees for arterial and collector roads financed from the general fund. An origin-destination study is conducted to assess current road use, and a related study examines road conditions.

The analysis determines that road are now currently operated at LOS "C" and that certain roadway expenditures in the CIP would be used to maintain that service level. The results also show the percentage of through-traffic that could not be charged impact fees. Deduction of external funding expected for these improvements produces the estimate of local capital costs that can be assigned to new development, that is, its proportionate share.

New development is disaggregated into land use categories. ITE trip-generation data are used to estimate total trips expected from this new development. (Trip length could also be introduced.) New road capacity is needed to satisfy this trip demand, and the capacity is calculated at LOS "C." (The lower the LOS, the lower the amount of new capacity needed to satisfy a given amount of demand.)

Finally, the local capital cost for this capacity, divided by total new trips, gives the cost per trip. The average number of trips for each land use category is then multiplied by the per-trip cost to find the local capital costs attributed to each land use category (dwelling units, amounts of square footage of gross building area, etc.).

A: Local capital cost per unit of demand, multiplied by the portion of demand attributed to each land use category, gives the estimate of proportionate cost for each land use unit.

Perhaps more than any other task, the establishment of benefit zones affects the schedule of impact fees. If these zones are strictly applied, new development in each benefit zone only pays for public facilities provided in that zone.

Illustration: The method proposed for the township in the previous example would apply. The standards, however, would be less rigorous. First, road improvements need not be based on any formal plan. Second, LOS calculations could be based on the overall number of trips generated by existing residents relative to existing capacity. This simple relationship could be treated as the existing LOS to be maintained.

Finally, the costs apportioned to each land use category (being charged impact fees) could be collected from new development without limit or reference to a schedule of planned capital improvements.

5. Estimate credits.

C: Proper calculation of credits requires identifying all sources of future payments to be made by occupants of new development for the public facilities in question. These payments may include taxes of all kinds, user fees, and/or special assessments. Payments for new facilities and for replacements needed to maintain existing LOS are allowed. Payments for operating expenses and routine maintenance are not.

Because public facilities last many years and are often financed with debt (GO bonds, revenue bonds, COP, etc.), payments are reckoned over a 20- or 25-year period. If payments are made to the general fund, the fraction of taxes devoted to the amortization of debt on these facilities must be estimated.

Present-value calculations usually match the term of the debt instrument used to finance the public facility (GO bonds: 20 to 25 years) and apply the local cost-of-funds rate as the discount rate. Present-value calculations are made per unit or in square footage for each land use category being charged impact fees.

An additional credit can be considered for land use categories that generate a true fiscal-impact surplus. The present value of this surplus would be estimated, and a prudent amount of this value (50 to 80 percent) could be treated as a credit available for capital outlays to fund the public facility in question.

Illustration: The county receives revenues from sales taxes to help pay for schools. The local expenditures of residential units paying impact fees are estimated to find the amount of annual sales tax payments. The present value of these payments over the next 25 years is the credit to be deducted from the local capital costs of schools.

Since residential development is not expected to generate a fiscal surplus, no additional credit would be recognized.

A: The logic and mechanics of credit calculations would be the same. The bias would be to ignore the fiscal-impact credit. Moreover, credits could

be excluded entirely if they were not recognized in the state enabling legislation.

6. Calculate net cost for land use categories.

A: With the aggressive method, the net cost of public facilities for each land use category is equal to local capital costs less credits; net cost by land use units represents the maximum impact fee. The analysis ends here, and this schedule of maximum impact fees is presented to the local jurisdiction. This method assumes that the entire jurisdiction charging impact fees constitutes one benefit zone.

C: With the conservative method, an additional task is required: the consideration of benefit zones (see 7 below).

7. Demonstrate benefits.

Benefit zones spatially match the locations of planned public facilities with the pattern of new development. The purpose is explicit application of the benefit test, which requires that fee payers benefit directly from the public facility being provided.

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Illustrations: The entire jurisdiction charging impact fees may be an appropriate benefit district. For example, a township could be considered one district for road impact fees, and each land use category would pay the same impact fee regardless of location. A countywide school system, however, may be one school district but several subdistricts of the county could be established as distinct benefit zones.

If the jurisdiction takes this approach, residential units would only pay for schools to be built within their benefit zone. A city could charge *all* new development for special-purpose and regional parks but use benefit zones only for community and neighborhood parks.

Again, the program to expand neighborhood parks would first assign improvements to each benefit zone and then charge residential development in each benefit zone only for facilities in that zone. (For an illustration of the conservative method applied to impact fees for public schools, see E. Malizia and L. Gallo, "Reconsidering School Impact Fee Methodologies," Government Finance Officers Association Web site, 2005.)

OVERVIEW

It should be clear that the aggressive method will result in maximum impact fees that are likely to be higher than those arrived at with the conservative method. With the former method, local officials can negotiate either higher impact fees or steeper discounts, which may look to the development community like a "good deal."

With the conservative approach, local officials can be more confident that impact fees charged at or near the maximum levels will be legally defensible. As with other issues of local governance, which method is better or worse depends on your situation and perspective. **PM**

Emil Malizia is professor and chair, department of city and regional planning, University of North Carolina at Chapel Hill, North Carolina (malizia@email.unc.edu).