

[« Return to Main Page](#) | [Print](#)

Professional Builder

The Little House That Could

Patrick L. O'Toole, Senior Editor -- 11/1/2001

Contentiousness over impact fees is an increasing fact of life for builders. And in a larger sense, the entire home building industry is grappling with a perception problem. The basis is a widely held assumption among people outside the development community that new homes are a net drain on road funds, school funds, sewer funds and most other types of public infrastructure funds.

"I have seen opponents to new growth and development stand up in meetings and say that new growth does not pay its own way," says Colorado-based economist and consultant Dave Bamberger, who for 20 years has studied the cost-of-growth issue from inside and outside government. "When you turn around and ask them to show you the data, they quiet down. Most of the opposition does not have it."

Many builders report that anti-growth advocacy groups have seized on the issue of infrastructure cost as a means to oppose all residential development. This often leads to a quid-pro-quo situation in which consultants are hired by one side to do a fiscal impact report to offset a previous report put forth by the other side - blunting the effectiveness of all data presented to decision-makers. The sheer volume of competing studies on the fiscal impact of residential development has only added to the sense of confusion on the issue.

The national reality of rising impact fees and land exactions is further complicated by two facts, says Barry Rutenberg, a Gainesville, Fla., builder long active in industry policy issues. First, most local developers and home builders associations are mostly on their own when it comes to making the case against growth-related fees. No two municipalities or jurisdictions collect taxes and fees the same way, and using out-of-town numbers from a previous study does not help.

Second, many indirect fiscal benefits of residential development are hard to quantify and are therefore left out of any analysis that often leads to impact fees. These fiscal benefits include taxes paid on land and lots during the construction period before closing, when relatively few public costs are incurred, and the induced fiscal benefit of sales taxes that arise from the addition of new "rooftops" when they attract new retail and commercial establishments.

On the revenue or benefit-of-housing side of the issue, economists in the NAHB's Housing Policy department have made considerable headway. Five years ago, they unveiled the most comprehensive method yet devised for capturing all the direct and indirect benefits of home building on a specific local area. It considers everything from population growth statistics and consumer spending trends to sales taxes netted on the purchase of building materials. Since then, department economists have used this methodology to prepare 40 to 50 county-specific studies annually.

While these reports are widely accepted as conclusive by all parties, they ignore the other side of the equation - public costs. A method to provide this cost-side analysis is in the works, says David Crowe, the NAHB's vice president for housing policy. In the meantime, a new report out of Florida offers a glimpse of the balanced, objective type of analysis that will anchor this debate during the coming years.

Paying Its Way

Just outside Gainesville, Fla., an unassuming, 2,077-square-foot, single-story home is more than it appears to be. In terms of its size, its price, the expected income of its owner and the costs it took to bring it (and the ground it sits on) to a point at which a family could move in, the home is ordinary in every way. And that is the beauty of it.



A cost-of-growth analysis in Alachua County, Fla., performed by two University of Florida economists and sponsored by Professional Builder and the Gainesville Builders Association, found that the typical new home, such as the 2,077-square-foot home at left, pays \$3,114 more than it costs local government to provide basic infrastructure and services for it.

This three-bedroom home is a composite of the average new home sold this year in Alachua County. And according to a new research analysis commissioned by the Gainesville Builders Association and Professional Builder, this prototypical home more than pays its share of public infrastructure costs.

Specifically, the study finds that the incremental cost of providing roads, schools and utility infrastructure to support the home are more than offset by revenue it contributes to various public funds, for a \$3,114 net surplus to local government. The study applies a new, more comprehensive analytical approach to both the cost and revenue sides of residential growth, say its authors, University of Florida economists James Dewey and David Denslow. They concluded that their model of "everyhome" in Alachua County is a model citizen of sorts.

The primary difference between Dewey and Denslow's analysis and hundreds of other project-specific fiscal impact studies conducted by planners and consultants is that it not only embraces the costs and benefits of home building, it also considers all sectors of growth in Alachua County. Commercial and industrial sectors are thrown into the mix with residential. Then, working backward to arrive at a per-household bottom line, the study achieves what many developers would consider the Holy Grail - a balanced, perhaps irrefutable answer to the cost-of-growth issue.

"It is impossible to think about continual growth in nonresidential uses without accompanying growth in residential uses," Dewey says, "or to think about continuing growth in only high-revenue-yielding types of residential uses. For instance, if only affluent persons moved into a city and no new stores or office complexes were built, the new residents would have no one to provide them with consumer goods, nowhere to buy them and nowhere to work."

Dewey and Denslow's approach has won the support of at least one critical observer, Stuart Meck, a vice president of the American Planning Association.

"Parts of this report are really ingenious," says Meck. "They have taken this question and looked at it from the standpoint of induced impact on other uses, and that is the right approach to take. And though most places don't have the horsepower to perform this rigorous kind of analysis, it is impressive."

Capturing a Countywide Snapshot

Traditionally, when planners and developers hash out agreements at the beginning of the entitlement process, they do so with a project-specific fiscal impact analysis in front of them. For more than 20 years, local planners around the country have prepared these analyses relying in large part on a methodology set forth in the authoritative source on the subject, *A Fiscal Impact Handbook*, published in 1979. The basic approach recommended in the book is to consider each component of public infrastructure, from police and fire to roads and schools, separately and to add arithmetically the number of new children, cars, etc. as a basis from which to extrapolate current and future needs. From there, the budget for new infrastructure and service needed is prepared. For large master-planned communities, the result often calls for new schools, fire stations, police substations and sewer treatment facilities as well as arterial roads and highway interchanges.

Such an approach helps local officials feel secure that they are maintaining accepted standards of safety and service to the community at large. But it often results in overkill, Dewey argues, with the levels of public service and infrastructure proposed exceeding those experienced before the arrival of the new development. A more global, statistical approach to the overall question of whether each new home incrementally adds its fair share, he says, is a truer way to get at the heart of the issue. So earlier this year, when Rutenberg and other members of the Gainesville BA considered how best to convince officials in Alachua County that potential impact fees on residential growth



Residential developers typically bear the cost of constructing roads, gutters and sewers within their developments. It is also common for developers to agree to pay for off-site improvements such as new highway interchanges and sewer plant upgrades. This increasingly common practice of requiring "exactions" was left out of the analysis and would have added even more benefit from the typical new home.



Shifting priorities could be the problem. A subsequent analysis of Alachua County's budgets from 1990 to 2000 reveals that while spending on arterial road building increased only 6.14%, spending on other items increased dramatically. The greatest increases were environmental, 218%; public safety, 125%; and culture and recreation, 143%.

are unwarranted, Dewey was ready to test his approach.

Instead of going to each jurisdiction within the county and scouring individual balance sheets and budgets, Dewey and Denslow worked backward. They performed regression calculations that applied detailed local tax roll information against general economic statistics about the county regularly put out by the federal government as well as state and local agencies. The benefit of this approach is that objective numbers on the costs and benefits of growth can be used as a level starting point. Their numbers never get down to the level of each separate capital and operating fund, but the resulting view provides greater understanding of the overall question. "It is a view from 30,000 feet," Meck says.

The analysis concludes that \$25,113 per household is the total cost of providing all incremental levels of infrastructure and ongoing maintenance the infrastructure will require during its useful life. The per-house receipts to the state of Florida and all Alachua County jurisdictions amount to \$28,227 per household, leaving the net benefit of \$3,114.

Doing the Numbers

That the federal bureaucracy keeps data on just about every aspect of private and public life in America is well-known. It should come as no surprise, then, that the little-known Bureau of Economic Analysis keeps estimates on the total value of public infrastructure and that they can be driven down to a county-by-county basis. These figures include all major capital stock, from sewer plants and fire stations to roads, bridges and schools - big-ticket items usually paid for by issuing bonds. The BEA data also include estimated capital stock figures for all other infrastructure that keeps local government running - "down to the lawn mowers" run by maintenance staff, Dewey says. These items are paid for from general funds without the assistance of bonds.

Alachua County has \$10,464 of state and local infrastructure on a per-person basis. With an average household size of 2.29 residents, total infrastructure per household equals \$23,979. The final cost-of-growth per household is derived by adjusting for a split between existing infrastructure, its associated bond interest payments and the sum of new growth-related infrastructure plus service costs.

The revenue side of the equation has more parameters, including county-specific data points:

- population: 207,955
- per-capita income: \$27,208
- average rate of population growth from 1990 to 2000: 1.84%
- countywide average millage rate: 26.40
- ratio of property just value to sales value: 82.47%
- materials share in structure costs: 51.55%
- average annual rate of inflation from 1990 to 2000: 2.36%
- several variations of interest rates

Used along with these data points in the revenue-side contributions of new homes was an estimate of growth-specific tax revenues, which the authors concede was difficult to acquire. These numbers are nonetheless key to understanding the rigor of the analysis and the overall integrity of the results.

Examining 50,000 parcels on the 2000 tax roll, the authors calculated average land value and just value for each category of parcel - commercial and industrial along with residential - and from there estimated average market value of parcels. Land value on residential parcels is subtracted, leaving a figure for structure values, which is then multiplied by the previously listed "share of materials in structure costs" to get an important average number: an estimate of average material used per house. Sales taxes on these materials amount to a significant "growth-related revenue," the authors assert.

For all homes built after 1996, the authors estimate that the average cost of building materials for single-family home parcels was \$70,657; manufactured housing parcels, \$21,808; condominium parcels, \$44,555; multifamily parcels with fewer than 10 units, \$60,070; and multifamily parcels with 10 or more units, \$3,015,141. The total sales tax on building materials generated by the typical new home in Alachua County was calculated at \$3,721.

Similar rigor was used to compile two other "growth-related taxes" generated by the typical new home in Alachua County. Property taxes paid on vacant lots under development per new household add \$1,553 in revenue to the county. Documentary stamp taxes per new house add \$1,458 on average. Further detailed analysis produced a figure for nonrecurring, growth-specific tax revenues. These come from property tax revenues from model homes and property cleared and undergoing development but not yet occupied. Also figured in is the one-

time incremental adjustment to property valuations associated with the higher incomes shown to follow new housing. This translates to an additional \$6,680 in growth-specific property tax revenues per new house, on average.

But what about furniture, tools and all the sales taxes associated with ownership of a new home? Nonrecurring sales tax revenue per new home, excluding those previously discussed from building materials, was calculated to be \$10,579.

Taken together, these figures formed the basis of further calculations for a wider conclusion. Each house has an excess net contribution of \$3,114. When a household's accompanying commercial and industrial development are factored in, this "creates a fiscal boon of \$5,083 per new home," the report concludes, "and the present value of this boon from all future growth is estimated at nearly \$450 million."

"Studies that are typically done regarding the appropriateness of impact fees neglect two very crucial factors," Dewey concludes. "One, the depreciation and quality adjustment of the capital stock must be representative of the typical facilities in the community. Second, these studies usually only look for revenues where people live, whereas you also have to look for revenues where they work and where they shop to do a balanced approach."

Project-Specific Fee Fighting

A good example of what developers face and how previous fiscal impact models remain ultimately inconclusive is found in the story of Briargate, an 8,500-home community in Colorado Springs, Colo., that is 19 years into a 30-year build-out. Its story highlights the current escalation of development costs and the vigilance it takes for individual developers to hold the line on fees and exactions using existing analyses of the cost of residential growth.

In the initial process of securing entitlements for the homes and 4 million square feet of office space at Briargate, developer Scott Smith, president of Colorado Springs-based La Plata Investments, says the company agreed to a number of exactions. In addition to the expected on-site set-asides of land for parks, schools and arterial roadways, the company agreed to build, out of its own pocket, a highway interchange on Interstate 25 and to construct 1 mile of a state highway, both off site from the development. Next came an agreement to construct an off-site sewer system that "in effect serves the entire north portion of Colorado Springs," Smith says. The assumption at that point, in 1986, was that La Plata had paid its fair share of public infrastructure costs (and perhaps more than its fair share) in exchange for the right to build a new community and all of its new homes, Smith says.



Most previous cost-of-growth studies ignored the impact on schools — an easy reason for no-growth advocates to ignore the results. This analysis includes schools and all of the capital and operating costs associated with them. The result: Sales taxes, fees, property taxes and the induced boost to local business from new homes more than offset the impact of more children in the school system.

Three years ago, however, talk resurfaced among local officials of imposing additional impact fees on new homes. La Plata decided to take action. In cooperation with its local HBA, the company commissioned Texas A&M University economics scholar Mark Dotzour and local economic consultant Bamberger to scour public records as the basis for an analysis of the true cost of a new home in terms of the city's general fund.

Two primary results came out of the analysis. First, all the homes in the new home subdivisions studied paid well in excess of the ongoing maintenance of infrastructure that the city spent per household annually. New homeowners living in those communities paid taxes ranging from \$797 to \$2,547 toward ongoing costs as compared with the \$547 paid per house by the city. Second, on the issue of the city's one-time, initial capital cost associated with each new home, \$393, sales taxes realized by the city from building materials purchased for each new home more than offset that cost. Those sales taxes netted the city \$1,000 to \$7,000 per home. Here, Smith and others thought, was persuasive evidence to present to city officials in making the case against further impact fees.

Thus, in September 1999, with much fanfare, the Colorado Springs HBA and La Plata presented their results to city planners and council members. To their dismay, the study got a lukewarm response, Smith says. That the study was commissioned by local builders and that school funding was omitted as part of the analysis were points of contention with the officials. Bottom-line success or failure of the study has been hard to gauge. No new impact fees have been enacted in Colorado Springs, but they haven't been ruled out in the future, Smith says.

Not satisfied that local officials had grasped the point, Smith then calculated the cost of Briargate's arterial road exactions and compared their total cost with the potential net revenue generated by an alternative system of transportation impact fees.

"I came to the conclusion that the city is probably getting about 160% more compensation through exactions than if they had an impact fee system in place," Smith says. "I sent it down to the planning department and then asked them to perhaps exempt Briargate from any new arterial impact fees. That seems to have gotten some play because not long ago [the request] was written into the comprehensive plan."

Bamberger and Dotzour have teamed up on two full-scale fiscal impact analyses. In addition to their work in Colorado Springs, they used the same strict arithmetic on behalf of builders in Lawrence, Kan., and got similar results. Separately, Dotzour has done studies in five other towns in Texas, Kansas and Arizona, the largest being Tucson. Not once did the results vary, he says. In each instance new homes in "traditional" subdivisions paid their way. In fact, Dotzour says he can imagine only one situation in which a new home subdivision would not pay its share of public costs - if a developer is not required to pay for the capital improvements within the development itself.

"If a city were to pay for the streets in front of the new houses," Dotzour surmises, "that would be another case entirely, but I don't think that city exists in America."

Dotzour's methodology also calculates costs originating from debt service funds from bonds issued to build police stations, fire stations, libraries and parks, something often overstated or not fully depreciated in anti-growth studies of growth costs. All of which goes to the point that developers everywhere bear the same burden of fighting back fees despite their conviction that even the homes they build on sprawling lots more than pay their way.

More than anything, builders are looking for certainty that costs associated with fees will not subsequently dash their pro formas for a project that will take years to build. In hiring Dotzour and Bamberger to do a study of eight new home communities and their impact on the general fund of Lawrence, members of the board of the local HBA were willing to live with whatever result the report showed. "We went in with the frame of mind that we really needed to figure out the real number," says Lawrence HBA president Tim Stultz, president of Highland Construction.

"If we were costing the city \$300 per new home, we were prepared to suggest that that is what the impact fee should be."

Also See:

[Where Does the Money Go?](#)

[« Return to Main Page](#) | [Print](#)

© 2007, Reed Business Information, a division of Reed Elsevier Inc. All Rights Reserved.