

The Local Government Fiscal Impacts of Land Uses in Morgan County:

Revenue and Expenditure Streams by Land Use Category

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June 2008

The funding for this study was provided by Morgan County Board of Commissioners. Data were collected with the cooperation of Morgan County officials and staff.

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Morgan County is located in northeastern Georgia. It is a mostly rural county that still has 90% of its acreage in agricultural uses, but is beginning to feel some suburban growth pressure due to its location which provides commuting opportunities to Athens and metro Atlanta. Morgan County has some industrial base and opportunities for more due to its location along Interstate 20 and US-441 (a major north-south connector). Morgan County has a per capita income slightly below the average for the state of Georgia but its median household income is above the state and national averages. Madison, the county seat, is famous for its historic housing districts and old-style downtown shopping around the square. These features draw tourists from around the south. Morgan County has grown quite rapidly from 11,572 people in 1980 to an estimated 18,165 in 2007. Growth accelerated in the 1990s and has done so again so far through the 2000s, with the current growth rate around 2.3% per year. Agriculture is still an important contributor to the local economy and most residents wish to preserve the rural character of the county, perhaps by maintaining a rural feel to many of the roads throughout the unincorporated areas. However, residential development is encroaching on agricultural uses in many areas of the county and whether the county can preserve a profitable commercial agricultural sector in the future is an open question. Citizens are generally ambivalent about growth, but want new growth to bear its costs so that tax rates are not increased on all residents to pay for the new arrivals. Everybody would like a better understanding of the benefits and costs of growth.

Around the country, about one million acres of farmland per year are being developed. Local governments, especially in rural and suburban areas, often have difficulty funding the services that come with this development and are constantly looking to improve their financial health. Local government officials often believe that one solution to their government's financial difficulties lies through development, by increasing the property tax base; however, a growing body of empirical evidence shows that while commercial and industrial development can indeed improve the financial well being of a local government, residential development worsens it. While residential development brings with it new tax (and fee) revenue, it also brings demand for local government services. The average cost of providing these services exceeds the average revenue generated by the new houses in every case studied (American Farmland Trust).

Georgia is in the national spotlight for growth and development policies. The state government is trying to encourage and subsidize economic development, particularly in rural areas. Morgan County has two nearby MSAs—Athens and Atlanta—giving it multiple opportunities for growth and commuting. Traffic problems are becoming an issue with people wanting more (and less congested) roads. The density of new residential development is also an issue, with local citizens often resisting higher density development. However, research has shown that local government's service costs drop at half the rate at which land use decreases (Burchell, 2000). That is, if a residential development increased its density so that it used 20% less land per unit, it would cost the county 10% less per unit to provide services. As Morgan County continues to grow and its government works to contain its budget (and thus the tax rate), allowing new growth to be higher density may be more appealing to citizens.

This report provides a snapshot of Morgan County in which an allocation of the county's budget numbers reveals the economic service costs and revenue streams of three major land uses and provides a snapshot of the county's overall financial health. After describing the method of analysis, the results will be presented.

Cost of Community Service Studies

Cost of Community Service (COCS) studies involve a reorganization of a local government’s (usually a county’s) records in order to assign the government revenues and costs of public services to different classes of land use or development such as residential, commercial, industrial, farm, forest and open lands. For example, a county’s expenditures on the Department of Family and Children Services program would be classified as all benefiting residential development; the costs of roads would be allocated across all types of development; and expenditures on the Forestry Commission would likely be allocated to farm and forestland. The resulting totals for revenues generated and expenditures incurred can be presented as a ratio of expenditures-to-revenues for different land use types. Where expenses are difficult to allocate across land use categories, emphasis is placed on the expert knowledge of county staff to estimate service expenditures by land use category. Data on the acreage, population, and property value in each land use category are also used in determining some expenditure allocations.

COCS studies look at average revenues and expenditures, not changes at the margin, and are thus not capable of precisely predicting the impact of future decisions. Still, they provide the benefit of hindsight, a budgetary baseline from which to make decisions about the future. They can also allow for informed decision-making on such policy topics as tax abatements for farm or forestland (or even for commercial/industrial development). Further, educated guesses can often be made from these averages as to the likely marginal cost of development and the impact on a local government’s financial situation as a result of land use transition. Finally, COCS studies look at the continuing operational cost of growth, not at one-time capital expenditure impacts.

Review of COCS Studies from Around the Nation and In Georgia

About 90 COCS studies have been completed by a variety of researchers around the country for cities and rural communities. The maximum, median, and minimum ratios of local government revenues-to-expenditures collected from these studies are shown in Table 1. The “Minimum” row states that for every dollar the county generates from the residential category, it spends \$2.11 in services. The commercial/industrial and farm/forestland categories show that, on average, the government receives more than it spends and therefore, these land uses create a surplus. The numbers show the fallacy of depending on residential development as a sound growth policy. In not a single instance did residential development generate sufficient revenue to cover its associated expenditures. Results of other Georgia studies are shown in the appendix.

Table 1. A National Summary of COCS Study Results

County	Revenue: Expenditures		
	Residential	Comm./Indus.	Farm/Forest
Minimum	1 : 2.11	1 : 1.04	1 : 0.99
Median	1 : 1.15	1 : 0.27	1 : 0.36
Maximum	1 : 1.02	1 : 0.05	1 : 0.02

Footnote: these figures are for 83 COCS studies compiled by the American Farmland Trust (http://www.farmlandinfo.org/fic/tas/COCS_9-01.pdf).

Morgan County

Three land use categories were defined for this study: residential, commercial/ industrial, and farm/forest/open space. Financial information was obtained from Morgan County Board of Commissioners and the Morgan County School System. For Morgan County, the data are for the fiscal year ended June 30, 2007; for the schools, the data are for the 2006-2007 school year. For schools, the analysis is based on local revenues and expenditures, only; state and federal dollars are assumed to remain constant per pupil. The revenues and expenditures in the budgets were allocated to the land use categories based on the review of available records and interviews with local officials and service providers (farmhouses were included in residential category.) All revenues were included for the funds that were part of the study, including sales taxes. In Morgan County, 87% of the LOST revenue was assumed generated from residents (with 1% from farms, 2% from local businesses and 10% from non-county residents); thus, new residential growth was credited with bringing an increase in LOST dollars to the county. Revenues and expenditures were totaled for each land use category and revenues-to-expenditures ratios were calculated. In calculating the ratios, an adjustment was performed to account for revenue generated from sources outside the county (which amounted to 7.7% of the total revenues); this adjustment recognizes that all expenditures are partially funded from these outside sources. The final results are displayed and tabulated in Figures 1 and 2 below. Figure 1 represents the county government only, with schools excluded. Figure 2 shows how the results change when schools are included. The figures are presented as dollars of revenue per dollar of expenditure; numbers greater than one signify land uses generating more in revenue than they are receiving in service expenditures.

Analysis of the revenue-to-expenditure ratio for the residential category in Morgan County reveals a common result: residential development provides less in revenue than it requires in service expenditures (with or without schools included). Just looking at the county government, residential development pays \$0.94 in revenue for every \$1.00 in services received which is more in balance than most places studied. This is a large positive for Morgan County, which combined with average new home prices somewhat above the average existing home value means new residents are bringing in roughly enough new revenue to pay for their associated operating budget expenditures, although the capital expenditure impacts of residential growth are still a concern. The commercial/ industrial category produces a large fiscal surplus for the county government, paying \$1.94 for every \$1.00 in services received. This is somewhat higher than in most counties, but not the highest to be found in Georgia. The farm and forest land in Morgan County generates a small fiscal surplus, providing \$1.06 in revenue per \$1.00 in services. The almost universal use of the conservation use assessment on agricultural land in the county keeps the surplus from agricultural lands from being higher. When school expenses are included, the residential fiscal shortfall grows, while the commercial/industrial and farmland categories both show quite large fiscal surpluses (see figure 2).

Break-even Home Values

The cost of service and revenue generation numbers that lie behind the ratios reported above can also be used to calculate the home value necessary for a county or school board to break-even. If one assumes that service cost is fairly constant across houses relative to the home value, such computations are straightforward. Further, this is not an unreasonable assumption as local government service costs will vary with location, lot size, and (for schools) with number of school children, but are not particularly correlated with home value. Given this assumption, the

Figure 1. Revenues per \$1 of Expenditures by Land Use (County Government Only)

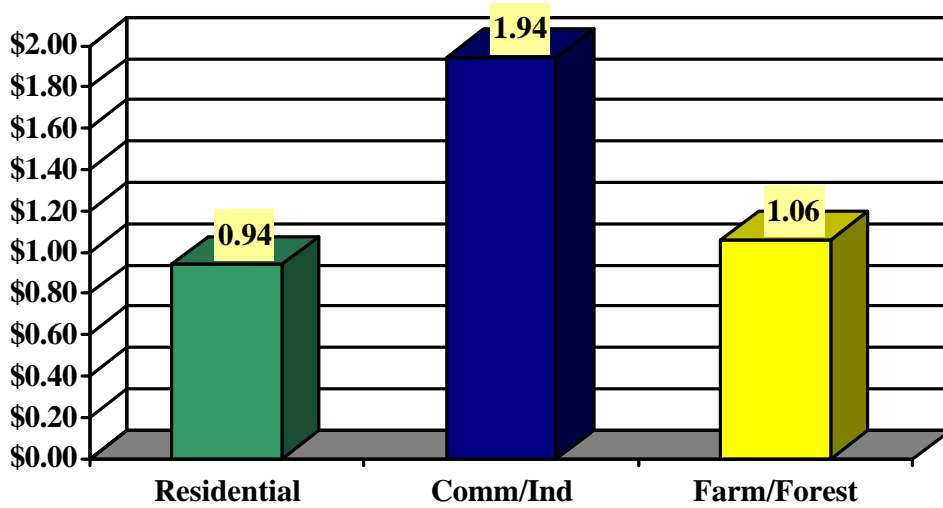
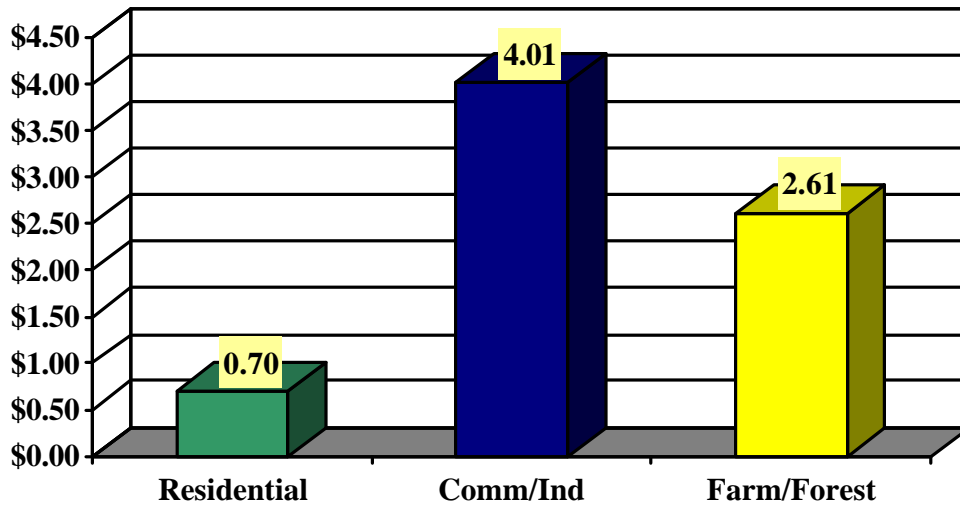


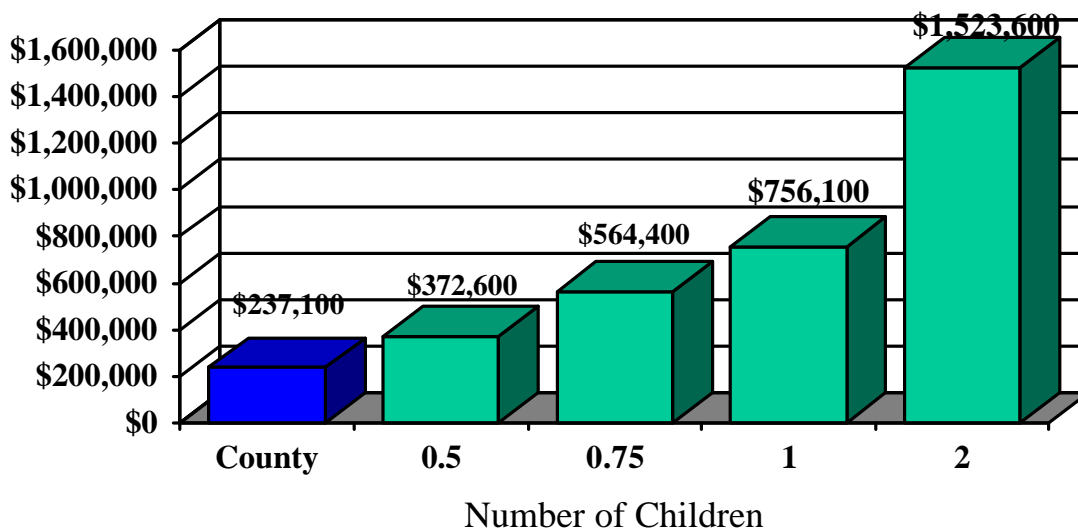
Figure 2. Revenues per \$1 of Expenditures by Land Use (County Government Plus County Schools)



county government’s average service cost per house is easily calculated, as is revenue from all residential sources other than property tax from houses. The county millage rate and homestead exemption are then used to find the home value where revenue exactly equals service cost; this is the break-even home value. Figure 3 shows the breakeven home value for Morgan County to be \$237,100 (the average appraised home value in 2007 is about \$180,000). New homes being constructed have averaged between \$210,000 and \$230,000 in the last three years, meaning new residents are nearly paying their way and not imposing much county government cost on existing residents.

While the county government breaks-even on a \$237,100 house, they are just one government entity in the county. For schools, the starting point is the average per pupil cost from local tax money (state and federal money excluded), adjustment is made for the average car value per home, and then the school millage rate and exemptions allow the computation of a break-even home value needed to generate sufficient local revenue to cover whatever number of children per household is expected or is being modeled. From the school systems perspectives, the results are quite different. If a home contains just one child attending the public county schools, the break-even home value is \$756,300 from the point of view of the schools’ budget. Thus, the county government will be earning a fiscal surplus off a house with a single child long before the schools. With two children in school, the break-even home price increases to \$1,523,600. Based on Census data, a more realistic estimate is 0.5 public schoolchildren per home in Morgan County. The break-even value for homes from the school system point of view using 0.5 pupils per household is \$372,600. This is still well above the average value of new houses being constructed in Morgan County. Thus, in most cases, public education must be subsidized by taxes paid from other land use classes along with school taxes paid by homeowners without children in the public school system. Schools are the main service burden from residential development, yet growth and land use policies are made separately from school funding and location decisions.

Figure 3. Morgan County Breakeven Home Values



*All values to the nearest \$100. Values do not account for dedicated capital fund revenues and expenditures.

How Much Does Farm Preservation Cost?

There has been an ongoing debate over the equity of state and local government programs that provide tax relief for farm and forestland. These programs provide tax relief by assessing the land at its “current use” in place of its “highest and best use.” In return, landowners must agree to keep the land in its current use for 10 years or be subject to financial penalties. These programs help to slow development and preserve farm/forestland and green space. In Georgia, agricultural lands are eligible for enrollment in the Conservation Use Valuation Assessment (CUVA) or the Agricultural Preferential (AG PREF) program to receive these tax incentives.

A major underlying question, however, is: How much of a tax burden is shifted to homeowners to make up for this loss in revenue? This question can be answered in Morgan County by empirical investigation of the tax digest and the results of the COCS. Table 2 below was compiled from the Morgan County Tax Digest Consolidated Summaries and shows the loss in revenue for Morgan County as a result of the CUVA and agricultural preferential programs.

Table 2. Lost Revenue in Morgan County from Conservation Use Assessment

Government Program	Parcel Count	Value Eliminated	State Tax Loss	County Tax Loss	School Tax Loss	Total Tax Loss
CUVA	1555	\$360,288,199	\$90,072	\$3,037,230	\$4,588,270	\$7,715,572
AGPREF	9	\$399,083	\$100	\$3,364	\$5,082	\$8,546

To compute the impact of the conservation use tax programs, the reduction in the tax digest (the sum total of property value in the county) due to conservation use assessment is added back into the tax digest. This yields a hypothetical tax digest as if this program did not exist. Then a millage rate is computed to produce the same revenue as collected currently by the local government and school combined. This produces a slightly lower millage rate that property owners would pay if these tax incentive programs for farms did not exist. The difference between this lower, hypothetical rate and the actual millage rate (2.245 mills for the county, 3.392 mills for the school district) allows computation of the fiscal impact of these tax programs for any specified property value. Table 3 shows the amount of additional property tax (both county and school) a homeowner pays because of the existence on property tax benefits for agricultural landowners. The numbers are computed for various home prices and a standard homestead exemption. For example, the owner of a \$150,000 house pays an additional \$326.93 per year. These tax impacts are fairly large, particularly given an property tax bill on the average house of about \$1,500 per year for county government and schools combined. However, this tax shift should be weighed against the environmental amenities provided by these lands such as improved air and water quality and the fact that even after accounting for these tax breaks, owners of farm and forest lands are still paying more than their “fair share” toward the services received as evidenced by the ratios in Figures 1 and 2.

Table 3. Homeowner Tax Increases as a Result of Farmland Assessment Programs

House Value	\$100,000	\$150,000	\$200,000	\$250,000	\$300,000
Additional Tax	\$214.20	\$326.93	\$439.67	\$552.41	\$665.14

Implications for Governments and Land Use Planning

The main finding of this study is that residential development does not pay for its services directly in Morgan County. Residents pay \$0.94 for every \$1.00 they receive in services from the county government. When schools are included, the deficit grows bigger (\$0.70 revenue per dollar of services). A fiscal surplus is provided by businesses which pay in \$1.94 for every \$1.00 they receive back in county services, and with schools included businesses provide an even bigger surplus (\$4.01 in revenue per \$1.00 of services). Farms and forest lands also provide surpluses, paying \$1.06 to the county for every \$1.00 in services received (rising to \$2.61 with schools included). New homes built in Morgan County have averaged about \$220,000 in value for the last several years, so this new development is close to paying its operating budget expenses based on a county government break-even home value of \$237,100. It is mainly the capital expenditures of new growth that could cause a large county government tax shift to existing residents (road widening, more traffic lights, new schools, etc.).

With new homes being built at an average price of \$210,000 to \$230,000, the school system is in a very different budget situation. Even at 0.5 public school children per new house, the school system needs an average home price of \$372,600 to break-even. That means that unless new businesses are added along with the new homes at a fairly high rate these new homes will force the county schools to shift the tax burden of public education onto existing residents to pay some of the cost of these new neighbors.

The numbers in this report are also affected by the style of development. For example, denser residential development, multifamily development, and residences closer to the city center are all likely to have a smaller fiscal shortfall or even a surplus for the county government (Burcell, 2000). For example, building a house on a 1 acre lot instead of a 2 acre lot could potentially like save the county government approximately \$350 per year in service delivery costs, enough to lower the break-even value of the house by approximately \$100,000. Including green spaces in new developments, even when the total units in the development remain the same, also reduces service delivery costs by helping with stormwater management and reducing the amount of infrastructure to be maintained (Burchell, et al., 2005).

The findings of this report do not mean that only projects with positive fiscal impacts should be approved. The Board of Commissioners will rightly consider a variety of factors in deciding on proposed projects with non-fiscal impacts such as the need for affordable housing, environmental impacts, and many other issues all part of the decision-making mix. Yet, knowing the fiscal impact of projects is still helping in balancing the budget impact of a project with broader community impacts. For example, assume the Board of Commissioners feels that additional workforce housing is needed in Morgan County. A proposal for 100 homes averaging \$125,000 in value is proposed. Such a project would have a negative fiscal impact on the county budget of \$37,800. If the homes averaged 0.75 public school children per house, the county schools would have a negative fiscal impact of \$232,050 (at 0.5 children per house the school impact shrinks to a \$134,300 shortfall). While these numbers clearly suggest a tax burden to be transferred to existing taxpayers, the burden shifted would be small. The owner of a \$200,000 house would be an additional \$21 per year (\$3 to the county, \$18 to the schools). Also, the Commissioners might consider that the additional affordable housing would help attract new industry whose property taxes would offset part or all of the negative fiscal impact of the housing development. Tradeoffs and other considerations are a part of the political process and while these numbers help make the decisions informed, they are only a piece of the process.

The findings of COCS studies should be carefully evaluated. COCS studies should not be used to promote one land use type over another without a careful and full understanding of their limitations. They use average revenues and expenditures and may not reflect the costs and revenue of a particular development project. Also, this study focused on operating budget revenues and expenditures, not one-time capital expenditures. New growth of all types often requires one-time increases in community infrastructure such as new roads, traffic signals, water and sewer capacity, and new schools. These items must either be paid for with impact fees or their costs will be spread among all community citizens. The key finding is that communities must ensure that their development is balanced with enough commercial and industrial development to “support” residential development that does not generate enough local government revenues to cover the expenditures it requires.

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About Dorfman Consulting

Jeffrey H. Dorfman earned a Ph.D. in agricultural economics from the University of California, Davis in 1989. Since then he has been a professor in the Department of Agricultural & Applied Economics at The University of Georgia where he is also currently co-director of the Land Use Studies Initiative. From 1998-2000 he was the founding director of the Center for Agribusiness and Economic Development at The University of Georgia. He has written one book, co-authored another, authored or co-authored over 50 academic articles, and published a number of pieces for popular press outlets. He is a recognized expert in the economics of growth, sprawl, green space, and farmland preservation. On these topics he has been invited to present talks around the nation, appeared on television, radio, and been quoted in numerous newspaper articles. He has worked for American Farmland Trust, the Turner Foundation, The Georgia Conservancy, 1000 Friends of Florida, and numerous local governments on growth related issues. In addition to his work on the economics of development issues, Dr. Dorfman also does research in the areas of Bayesian econometrics, productivity measurement, and e-commerce's effect on agribusiness. He consults on a range of economic and statistical issues for a variety of companies, government agencies, and non-profit organizations.

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Appendix – Focus on Morgan’s Benchmark Counties

Figure A1. Revenues per \$1 in Expenditures by Land Use (County Government Only)

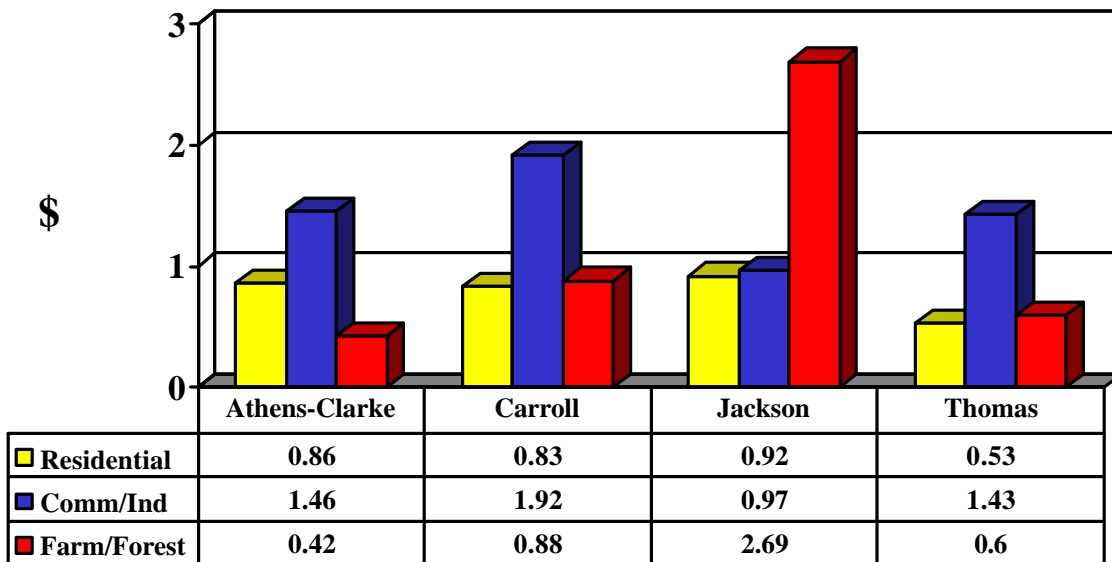


Figure A2. Revenues per \$1 in Expenditures by Land Use (County and Schools)

