

Improving Revenue Flows from the Property Tax

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Many local governments in North Carolina have struggled in recent years to obtain adequate revenues to meet the demands for public services. Even fast-growing,

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wealthy counties have not escaped the problem, some of them feeling the squeeze especially acutely.

The largest single source of locally generated revenue in North Carolina is the property tax. It accounted for almost 70 percent of local government tax receipts in 2001, or \$3.4 billion.¹ It also is the tax over which local governments have the most direct control. Yet the way in which it is administered in

North Carolina may contribute to shortfalls in local government revenues. If that process can be improved, then better revenue flows from this important local tax can help close the gap between local public resources and local demands for public services.

This article describes problems with administration of the property tax, reports the results of a study of the system's operation, and suggests an

alternative way to administer the system that would provide a greater and more constant stream of revenues.

Problems with the Property Tax

Three important components of any tax are the tax base, the tax rate, and tax revenues. The tax base is the economic value being taxed, such as income, sales, or property value. The tax rate is the tax per dollar (or, in the case of the property tax, per one hundred dollars) of the tax base. Tax revenues are the result of applying the tax rate to the tax base; that is, tax revenues equal the tax rate multiplied by the tax base.

One of the desired characteristics of a tax is that increases in the tax base track economic growth. In this way the tax base will capture economic growth, and tax revenues will correspondingly rise without increasing the tax rate. For

example, if this characteristic is present, then a 5 percent expansion in the local economy will lead to a 5 percent increase in both the tax base and tax revenues, with the tax rate unchanged.

Problems can arise if this characteristic is not inherent in the tax, especially if the tax base increases more slowly than economic growth. Tax revenues will grow more slowly than the economy, and if the demands for public services increase with the size of the economy, then shortfalls in public resources and funding will occur. Alternatively the tax rate can be increased to keep the growth in tax revenues in line with economic growth, but this can lead to citizen resistance and opposition and political problems for locally elected officials who set the property tax rate.

Unfortunately the property tax system applied to “real property” (real estate) in North Carolina localities does

not meet the test of an economic base that changes with economic growth.² The economic base used in the property tax is the *assessed* value of real property, not its *market* value. “Assessed value” is the value that a locality assigns to the property when it performs a full evaluation of properties. “Market value” is the economic, or sales, value of the property.

The market value of a property should keep up with economic growth, approximately. Yet for the past forty years, a full revaluation of real property designed to bring assessed values in line with market values has been performed in most North Carolina counties only once every eight years.³ This means that assessed values of real property will not keep pace with economic growth in the years between revaluations. Even new real property in North Carolina is not valued at its market value at the time of construction. Rather, it is recorded at a value estimated to have existed at the last revaluation.

North Carolina is not alone in facing this issue. In 1999, forty-two states plus the District of Columbia did not annually revalue real property, and thirteen of those forty-three units did not update the assessed value between revaluations.⁴

To keep property tax revenues growing in line with the local economy, in the years between revaluations, locally elected officials have to raise property tax rates continually. Such increases are interpreted by many as increasing the tax burden, which is not the case if the increases are only to counteract the growing gap between market values and assessed values of real property. Also, when revaluations do occur, real property owners typically face large increases in property tax payments unless the property tax rate is lowered. Thus the current system impels a continual adjustment of property tax rates—up in the years between revaluations, down following a revaluation.

A Study of the Property Tax System

To gain better insight into how the property tax system operates in North Carolina, I conducted an examination

Figure 1. **Change in Assessed Values of Real Property, 1988–1995**

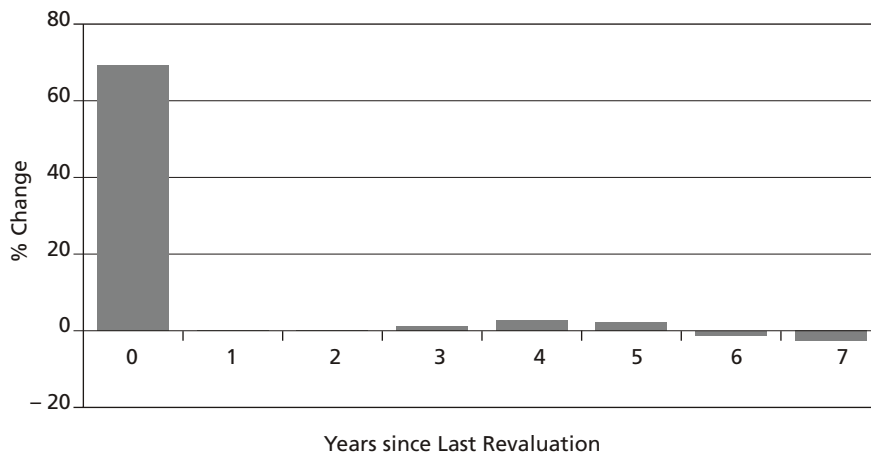
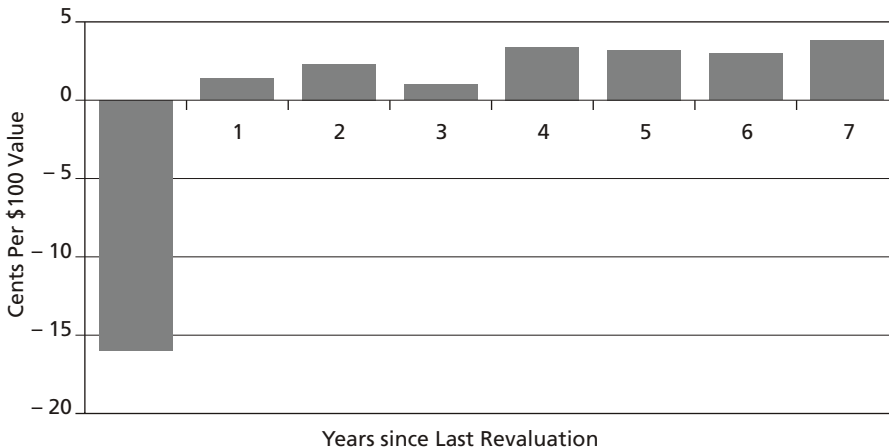


Figure 2. **Change in Legislated Tax Rate, 1998–1995**



Source for Figures 1–4: Author’s calculation from data available at http://data.osbm.nc.us/pls/linc/dyn_linc_main.show.

Note: Data in Figures 1–4 represent averages of values from all 100 counties.

of property tax rates, assessed values, and revenues for all 100 of North Carolina's counties from 1988 to 1995. I studied counties because, although both counties and cities levy property taxes, only counties establish the assessed value of real property. Thus, counties are the local government unit most involved in the interactions between assessed value, the property tax rate, and the time period between revaluations. I chose the time period of 1988 to 1995 because estimates of market values of real property were available for each year. All data were from the North Carolina Association of County Commissioners.⁵

Several trends and relationships were evident from the data. As expected, there was a large increase in assessed values of real property in the year of a revaluation but very little change in the years between revaluations, termed "interim years." Averaged over all counties, the increase in a revaluation year was 72 percent, the increase in the interim years less than 2 percent annually (see Figure 1).

Also as predicted, there was a large decrease in the property tax rate in revaluation years—16 cents per \$100 of assessed value, on average—followed by a gradual increase in the property tax rate in the interim years—2.6 cents per \$100 of assessed value annually, on average (see Figure 2). The cumulative increase in the property tax rate over an entire eight-year cycle was 2.1 cents per \$100 of assessed value.

Counties did not lower property tax rates to fully counter the effect of the increase in assessed values during revaluation years, so they averaged an almost 30 percent increase in real property tax collections in years when a revaluation took place. However, in interim years, they averaged a 3.6 per-

PROPERTY IDENTIFICATION AND VALUE INFORMATION	
Parcel Identification 1767-06-7634	MAP 7.117A. .5
PERSONAL PROPERTY VALUE	REAL PROPERTY VALUE
	223902
#6 SEC 2 GR HOMESTEAD VALUE	
BILLING INFORMATION AND CALCULATION	
CODE GO FL CH	TAX RATE PER \$100 VALUE
	.845
	.049
	.20
TAX AMOUNT	
181	
10	
44	
LATE LIST PENALTY	
TOTAL AMOUNT DUE	
DUE DATE	
2447	
PAST DUE DATE AFTER	
SEPTEMBER	

The largest single source of locally generated revenue in North Carolina is the property tax. It accounted for almost 70 percent of local government tax receipts in 2001, or \$3.4 billion.

cent annual increase in real property tax collections (see Figure 3).

A comparison of changes in assessed values and market values revealed the expected pattern. In revaluation years, increases in assessed values far outstripped increases in market values because they reflected the cumulative change in market values over the previous interim years. However, in the interim years, market values annually increased

three times faster than assessed values (see Figure 4).

An Alternative Way to Administer the Tax

To review, my study of the North Carolina property tax system revealed three potential problems:

- Assessed values increase significantly during revaluation years and thereafter change little, whereas market values increase at a more even, consistent rate each year.
- At the beginning of each revaluation cycle, property tax rates are significantly lowered and then are annually increased until the next revaluation year.
- Real property tax collections display a large increase in revaluation years, followed by very small increases in years between revaluations.

In summary, the current property tax system gives local governments a

Figure 3. Change in Real Property Tax Collections, 1988–1995

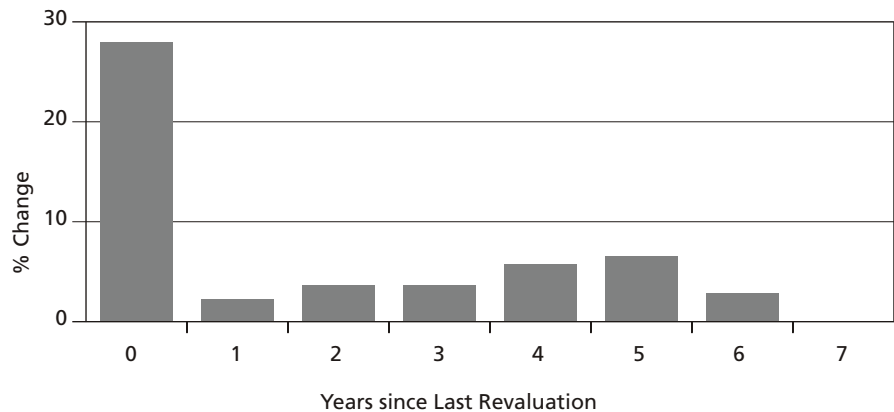


Figure 4. Change in Assessed and Market Values of Real Property, 1988–1995

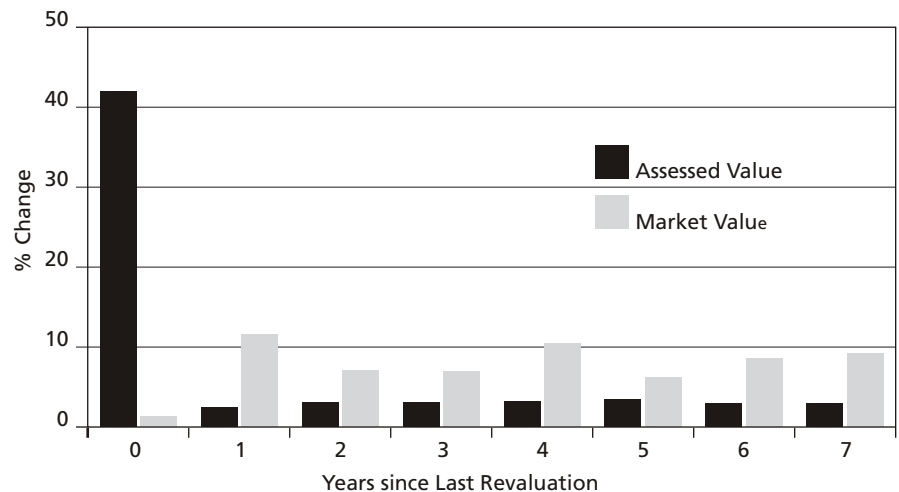


Table 1. Assessed Value and Tax Collection Calculations Using an Annual Inflation Adjustment

Year since Last Revaluation	Tax Rate	Inflation Rate	Assessed Value, Existing Bldgs.	New Construction Value	Total Assessed Value	Tax Collection
0	\$.50 per \$100	—	\$100,000,000	—	\$100,000,000	\$500,000
1	\$.50 per \$100	5%	$\$100,000,000 \times 1.05 = \$105,000,000$	\$2,000,000	\$107,000,000	\$535,000
2	\$.50 per \$100	3%	$\$107,000,000 \times 1.03 = \$110,210,000$	\$3,000,000	\$113,210,000	\$566,050
3	\$.50 per \$100	4%	$\$113,210,000 \times 1.04 = \$117,738,400$	\$1,000,000	\$118,738,400	\$593,692
4	\$.50 per \$100	2%	$\$118,738,400 \times 1.02 = \$121,113,170$	\$2,000,000	\$123,113,170	\$615,566
5	\$.50 per \$100	2%	$\$123,113,170 \times 1.02 = \$125,575,430$	\$3,000,000	\$128,575,430	\$642,877
6	\$.50 per \$100	3%	$\$128,575,430 \times 1.03 = \$132,432,690$	\$4,000,000	\$136,432,690	\$682,163
7	\$.50 per \$100	2%	$\$136,432,690 \times 1.02 = \$139,161,340$	\$5,000,000	\$144,161,340	\$720,807

bounty of revenues during revaluation years but stingy revenue increases in subsequent years. Also, to obtain the increases in years between revaluations, elected local officials must raise property tax rates.

An alternative system is to apply a constant tax rate to annual estimates of market values of real property. To see the impact of such a system, I conducted an experiment using the property tax data for 1988–95. I held the tax rate for each county constant at the rate prevailing in the year that a property revaluation was done. This typically was the lowest rate until the next revaluation. Then I applied this rate to the estimates of annual *market* values of real property to obtain the tax collections that would have occurred if market values had been used.

The results showed that the alternative system would have produced significant revenue gains for North Carolina counties. The gains would have increased with the number of years since the last revaluation. Compared with revenues using the current property tax system, on average, North Carolina counties would have had 5 percent more property tax revenue in the first year after a revaluation, and the gains would have steadily risen to 12 percent in the seventh year after the revaluation. The average annual total increase in property tax revenues for all counties would have been \$324 million, or 7 percent of the actual total revenues collected.

Institution of a New System

The study clearly showed that holding property tax rates constant and taxing market values of real property would provide a greater stream of revenues for counties than the current system of keeping assessed values constant and taxing them at a gradually rising rate over the revaluation cycle.

However, several questions would need to be addressed before such a system could be instituted:

- Methods of calculating market values of real property if full revaluations are not performed annually
- Methods for resolving differences between actual market values and estimated market values when full revaluations are performed
- The political acceptability of the new system compared with the existing system

Three methods are available for estimating market values in years between full revaluations. The easiest method annually adjusts values by changes in some external index, such as the Consumer Price Index. A similar but somewhat more complicated method adjusts all real property values in the same class (single family, multifamily, commercial, etc.) by an external index specific to that class. An example would be a national price index for a specific class of property. The third method bases adjustments in value on an annual sample of full revaluations in the county.

The first two methods have the advantage of simplicity. Consider a hypothetical county with a tax rate of \$.50 per \$100 of value and a total assessed value after a full revaluation of \$100 million (see Table 1). In the years until the next revaluation, the previous year's assessed value is increased by an external inflation rate (see the third and fourth columns of the table). Added to this amount is the full market value of new construction (see the fifth column). The sum becomes the total assessed value (see the sixth column), to which the tax rate is applied to derive tax collections (see the seventh column). The total assessed value becomes the starting value in the next year, to which that year's inflation rate is applied.

Contrast that process with the existing method (see Table 2). The initial assessed value again is \$100 million, but it is increased only by the value of new construction. Also, new construction is valued at an amount approximating its value in the year of the last full revaluation (Year 0). Therefore, to generate the same tax collections as in Table 1, the tax rate in Table 2 must continually rise.

The disadvantage of the simple method is that it is not tied to local conditions. Situations can easily arise in which national and local conditions are dissimilar. The third method has the advantage of being closely tied to local conditions, but it is the most expensive. Also, many details would need to be specified with the method, such as the

Table 2. Assessed Value and Tax Collection Calculations Using the Current Method

Year since Last Revaluation	Tax Rate	Assessed Value, Existing Bldgs.	New Construction Value*	Total Assessed Value	Tax Collection
0	\$0.500 per \$100	\$100,000,000	—	\$100,000,000	\$500,000
1	\$0.525 per \$100	\$100,000,000	\$1,904,762	\$101,904,762	\$535,000
2	\$0.541 per \$100	\$101,904,762	\$2,773,925	\$104,678,687	\$566,050
3	\$0.562 per \$100	\$104,678,687	\$886,839	\$105,565,526	\$593,692
4	\$0.574 per \$100	\$105,565,526	\$1,743,291	\$107,308,817	\$615,566
5	\$0.585 per \$100	\$107,308,817	\$2,563,664	\$109,872,481	\$642,877
6	\$0.603 per \$100	\$109,872,481	\$3,318,659	\$113,191,140	\$682,163
7	\$0.615 per \$100	\$113,191,140	\$4,066,984	\$117,258,124	\$720,807

*Calculated as the value in Table 1 for the same year, discounted by the compound inflation rate to that year; for example, for Year 2, $\$2,773,925 = \$3,000,000 / (1.05 \times 1.03)$.

size of the sample and the application of the results to individual properties.

If anything less than a full revaluation is done each year, there will inevitably be conflicts between the estimated market value of some properties and the actual property value when a revaluation is performed. Standards and procedures would have to be established to handle two situations: (1) the on-site revaluation reveals a property's past estimated values to have been too high, and the owner has overpaid past property taxes; and (2) the on-site revaluation reveals a property's past estimated values to have been too low, and the owner has underpaid past property taxes.

Political acceptability is a key to the institution of a new property tax system in North Carolina localities. The current system has been in place for more than forty years. Certainly, many taxpayers have issues with the current system, in particular, with the large increase in assessed values occurring in revaluation years and the



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pressure for increases in property tax rates in interim years. Yet to accept an alternative system of taxing estimated market values at a fixed property tax rate, taxpayers will have to be convinced that the new system is fair and logical. This would require an educational program to explain the rationale and workings of a new method, perhaps coordinated by the Institute of Government and the Cooperative Extension Service.

Summary

The property tax is the single most important source of tax revenue for local governments in North Carolina. Yet with long periods between revaluations, localities must continually increase property tax rates to keep collections in pace with economic growth. An alternative system would keep property tax rates constant but apply them to annual estimates of market values of real property. A study of North Carolina counties from 1988 to 1995 showed that such a system would have provided a greater and

more constant stream of property tax revenues for counties.

Several issues would have to be addressed before such a system could be instituted. Local leaders will have to decide if these issues can be easily overcome. If not, then the current system, even with its flaws, may be the better alternative.

Notes

1. The percentage is for county and city governments combined. The supporting data are available at the North Carolina State Data Center, http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show (last visited July 24, 2003).
2. In North Carolina the property tax is applied to real property and to personal property. Real property accounts for approximately three-fourths of total taxable property. The supporting data are available at the North Carolina State Data Center, http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show (last visited July 24, 2003).
3. Currently, 65 counties revalue real property every eight years, 9 counties every seven years, 2 counties every six years, 6 counties every five years, and 18 counties every four years. The supporting data are available at the North Carolina State Data Center, http://data.osbm.state.nc.us/pls/linc/dyn_linc_main.show (last visited July 24, 2003).
4. INTERNATIONAL ASS'N OF ASSESSING OFFICERS, PROPERTY TAX POLICIES AND ADMINISTRATIVE PRACTICES IN CANADA AND THE UNITED STATES (Chicago: IAAO, 2000).
5. NORTH CAROLINA ASS'N OF COUNTY COMM'RS, FISCAL SUMMARY OF NORTH CAROLINA COUNTIES (Raleigh, N.C.: NCAC and North Carolina Dep't of State Treasurer, fiscal years 1988-1996).