

LARGE RETAILERS, ECONOMIC DEVELOPMENT, AND THE LOCAL PROPERTY TAX BASE: EVIDENCE FROM WAL-MART IN NEW YORK STATE

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ABSTRACT

This study assesses the impact large, national retailers have on local governments. Specifically, the research investigates the impact of Wal-Mart on property values and property tax rates in a set of municipalities in New York State from 1990 to 1997. Results from regression analyses imply no change in total municipality property value. Property tax rates, however, are found to be higher: the combined city-village-town and special district tax rate increased a statistically significant 2.4 percent annually each year a Wal-Mart was present in a municipality. Disaggregation shows that special-district tax rates rose 2.6 percent annually and the city-village-town property tax rate rose similarly.

INTRODUCTION

The question of economic development is especially problematic in smaller communities. While some are doing quite well, often few options exist for small communities isolated from larger market centers as the traditional manufacturing base declines, removing a primary source of high-paying employment for local citizens. As a result, local governments have been forced to look elsewhere for economic stimulus. Meanwhile, large national retailers such as Wal-Mart have identified smaller, rural markets as a growth area. For these reasons, smaller communities have courted large retailers -- often offering large subsidies and tax expenditures¹ -- with the hope that the new retailers will provide jobs and stabilize the tax base and revenues, while stimulating the overall local economy (Mitchell, 2000; Hornbeck, 1994). Retailers and public officials insist that these expenditures are justified and this view is reinforced by advocates of the retailers such as the International Mass Retailers Association (1995, p. 57) which asserts "... a community, whether rural or urban, can benefit from the presence of mass retailers, and is likely to lag economically if they are not present."

But not all agree. Opponents concede that retailers such as Wal-Mart enlarge a community's trading area and bring greater product selection with lower prices, but contend that the new retailers only shift employment from smaller retailers, many of whom eventually close, to the new stores; that they decrease the aesthetic qualities of small-town life; and that they cause property values to fall and property tax rates to rise -- as local government spending increases and/or the property tax base falls. Mitchell (2000, p. 15) argues that promised gains in employment and tax base will invariably be off-set over the long term by job and tax losses at existing retailers, producing only marginal overall improvement or even a net decline in some cases. She comments that "even without additional subsidies, the public cost of

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development -- expanding roads and providing services such as water and sewers -- combined with declines in property values and sales taxes in existing retail centers may actually exceed the tax revenue generated by the new retailer." Adding fuel to the fire are statements such as this one by a lawyer for Wal-Mart in Upstate New York: "Do you try to pay taxes? Not if you don't have to."²

Such wide-spread, and in some cases bitter, disagreement has garnered much attention in the popular press (e.g. Alexander, 1993; Shiller, et al. 1992; Kaufman, 1999), but not the academic press. Research by Stone (1995) and Barnes, et al. (1996) appear to be the primary exceptions. The impact of Wal-Mart on employment and sales at the county level has received most of the attention, but other indicators of the value of these retailers, such as their impact on the tax base and revenues of local governments remain understudied. Winders (2000, p. 102) notes that "little discussion of the role of retail and service businesses, *per se*, has appeared in either academic or professional development literature. Yet many non-metropolitan communities are responding to opportunities and threats from this type of development." We address this gap in this paper. In particular, we examine the impact of one large retailer, Wal-Mart, on the tax base and tax rates of smaller communities in upstate New York. Our research questions emanate from one primary question: do large retailers deliver on the promise of revitalization that so many rural municipalities count on?

We begin with a brief discussion of the background of large retailers in smaller communities and the theoretical justification for viewing them as economic development tools. The potential impact of large retailers on local government finances is then discussed. This is followed by a presentation of the econometric model used to address the impact on property values and property tax rates. Results are then presented and discussed.

BACKGROUND

After years of expansion, the retail sector began a long period of consolidation in the mid 1980s, fueled by changes in demographics, technology, and consumer preferences (Standard & Poor's, 1999; Shiller, et al., 1992). The growth in the number of retail establishments slowed nationwide while, between 1982 and 1992, the number of retailers operating at two or more locations grew by 27 percent. As a consequence, employment in the retail sector shifted from smaller to larger retailers: the share of employment in firms with sales of less than \$1 million decreased from 37 to 35 percent while the share of employment in firms with more than \$100 million in sales increased from 31 to 43 percent. These changes occurred in urban as well as rural markets. Winders (2000), for example, finds that nearly half of all net job growth in nonmetropolitan Georgia was attributable to large non-manufacturing businesses. The consolidation was led by national chains such as Home Depot, Staples, and Wal-Mart, which opened thousands of new stores during this time.

The trend toward bigger, chain-operated retail establishments was more pronounced in states with relatively less robust economies. New York State, for instance, actually experienced a decline in the number of retail establishments between 1987 and 1997. Even more striking, though, were the changes taking place in smaller communities. With stores exceeding 100,000 square feet, a single, large retailer

such as Wal-Mart may capture a significant share of retail sales. Schoharie County in New York State may represent an extreme. The 1992 Census reports that 149 establishments existed in the county, with total sales of \$143 million. When a Wal-Mart opened a "supercenter" in the small village of Cobleskill, in central Schoharie County, in 1995, its estimated annual sales of \$45 million represented 31 percent of *county* retail sales.³ This share rises to over 50 percent when the subgroups "gasoline service stations" and "eating and drinking establishments" are excluded.

Large retailers brought with them a promise of improved economic conditions that seemed especially enticing to smaller communities with stagnant or declining economies and tight government budgets. It was hoped that the large retailer would expand the economy's market area by attracting shoppers from out of town. It would also keep local shoppers from going to larger cities for goods previously unavailable locally, essentially shifting the hierarchical position of smaller places within the classic central place system (Berry and Parr, 1988). As a result, employment and sales tax revenue would increase, the property tax base would stabilize or rise, and consumers would enjoy lower prices and greater selection. Existing local retailers of course opposed additional competition, and with good reason. By virtue of scale economies, large retailers enjoyed lower costs and therefore often replaced a significant portion of higher cost independent and regional chain retailers in smaller communities (Muller, 1995; Kaufman, 1999; Stone, 1995). When the new retailer built on the outskirts of town it drew traffic away from businesses located in the traditional downtown, or main street, area. Reduced foot traffic also led to decreased sales of retailers who might not have directly competed with Wal-Mart, furthering the decline in the traditional downtown.

The increase in market area by itself increases the local multiplier (Olfert and Stabler, 1999) and increases the sales tax revenue which is so important to local governments (Snodgrass and Otto, 1990). The latter can have far reaching implications for local governments: as market area expands, the municipality attracts shoppers from outside the taxing jurisdiction. Municipalities which control local sales tax rates then find that they can export some of their sales tax to non-residents,⁴ lowering the cost of public goods to residents (Tannenwald, 1997; Morgan, et al., 1996; Sokolow, 1981). This may lead to overprovision of public goods, or a shifting of tax preferences from the property tax to the sales tax, creating its own distortions (Wildasin, 1986; Krmeneč, 1991).

On the other hand, a large retailer also increases 'foreign' ownership, which translates into leakages that decrease the local multiplier (see Levy, 1990, and Shaffer, 1989, for discussion of rural economies). The leakages occur via two routes. First, locally-owned firms are more likely to buy inputs (such as supplies, and accounting, insurance, payroll, and banking services) locally. A decline in local ownership reduces those indirect contributions to local economies if the out-of-town owners buy those inputs elsewhere.⁵ Second, profits of large retailers are removed from the local economy whereas profits from locally-owned businesses are more likely to stay within the region (Pred, 1976).⁶ Even though the net effect was (and remains) uncertain, many (although certainly not all) local development officials pressed on, pledging support for large retailers. Large retailers became increasingly important in rural

areas in the Northeastern United States. Wal-Mart, in particular, expanded aggressively in the northeast during the 1990s after years of expansion in the South and West left those areas saturated.

The impact of large retailers received considerable attention from the popular press and public officials (Hornbeck, 1994). The Committee on Small Business of the House of Representatives (1995), for example, held public hearings to consider the "impact of discount superstores on small business and local communities," with testimony arguing both for and against retailers such as Wal-Mart. In the academic arena, Stone (1995) documented the shifting market structure and the widening market area created by Wal-Mart in rural Iowa towns (using Pull Factors -- the ratio of local per capita retail sales to statewide per capita retail sales). He concluded that competitors of Wal-Mart suffered in terms of decreased sales. University of Missouri researchers (Franz and Robb, 1988, 1991) reported that large retailers had a positive economic impact -- in terms of increased sales and employment -- on the economies in rural counties in the Midwest. Yet Barnes, et al. (1996) found "that as Wal-Mart entered the Northeast market, the company's impact was diluted compared to that in the Midwest and South" in terms of sales and employment. The study presented below adds to the discussion by considering the impact in a new geographic area and along a new dimension: the effect of Wal-Mart on property values and tax rates at the municipal level. Although much discussion has occurred concerning the impact of Wal-Mart on tax bases, tax rates, and local government spending, no published research to date has directly examined the impact of Wal-Mart on these measures. Our first hypothesis is that the entry of a large retailer significantly alters the retail landscape, leading to a decline in municipality-wide property values, primarily as a result of lower commercial values as smaller retailers close. Commercial property represents a significant portion of the property tax base. The value of older commercial property is largely a reflection of sales; thus a sales decline will lower the market value of a commercial property. Its assessment for tax purposes, while it may lag changes in market value, ultimately is a function of the market and will also decline (Muller, 1980). As extant (small) businesses lose sales to the new (large) retailer their assessments decline. This paper tests whether the decline in property values attributable to the failure of smaller businesses outweighs the increase attributable to Wal-Mart itself.

Furthermore, we hypothesize that property tax rates will rise either (1) as the tax base declines (assuming municipal spending is not decreased), or (2) as municipal spending is increased to meet new demands associated with Wal-Mart. The property tax is the most frequently used local taxing option and provides the lion's share of local own-source revenues (Dearborn, 1993; Miels, 1993). For example, it is much greater in magnitude than fees and is under greater local control than the sales tax.⁷ It is also the most adjustable of the main local revenue sources, moving up or down with spending needs. Consequently, property tax rates change often and are closely watched by residents and government officials. They are frequently viewed as a barometer of local government performance. To test our hypotheses, we will examine municipal-wide property values and effective property tax rates in non-metropolitan upstate New York municipalities, some of which saw a Wal-Mart open within their jurisdiction in the 1990s.

DATA AND ECONOMETRIC APPROACH

At the end of 1999, Wal-Mart had more than 50 stores in New York State. During the period 1990 - 1997, Wal-Mart opened 24 stores in relatively small municipalities, defined as municipalities with fewer than 35,000 people in counties with fewer than 80,000 people.⁸ These 24 municipalities, along with 85 similar municipalities which did not have a Wal-Mart, comprise our panel data set totaling 872 observations. Limiting the dataset to smaller municipalities has several advantages. First, municipalities selected in this manner are more likely to be similar in economic and government fiscal characteristics. This will lead to a more homogeneous data set. Second, smaller, rural areas represent an important area for expansion by big-box retailers, especially Wal-Mart. Third, the smaller size allows for a greater opportunity to observe the impacts of a single large retailer. Fourth, with stagnant economies, smaller communities in New York State are likely to feel the impacts of major market restructuring the most. Some of the municipalities in our study are in counties defined by the U.S. Census as urban - i.e. part of a metropolitan statistical area (Cobleskill, in Schoharie County for example). Yet even these communities can be thought of as non-metropolitan.⁹ Our definition of smaller community refers to the set of choices afforded retail consumers - as limited by travel time to larger urban centers.

Data on property value and property tax revenue by municipality for each year from 1990 to 1997 (the latest year for which data were available) were obtained from the New York State Office of the State Comptroller. The Comptroller's data on assessed property value from the municipalities were adjusted by a sales-to-assessment ratio to get full property value.¹⁰ Store locations and opening dates were obtained directly from Wal-Mart and local assessors provided information about which municipalities had taxing authority for property tax purposes. Summary data are presented in table 1. Non-Wal-Mart municipalities have a slightly higher average population than Wal-Mart municipalities while Wal-Mart municipalities have a somewhat higher average property value. Both Wal-Mart and non-Wal-Mart groups had wide variation in municipality population and property values. Five municipalities had a Wal-Mart for exactly six years during the sample period; six had a Wal-Mart for exactly five years; three for four years; and ten for three years. All municipalities had a Wal-Mart for at least three years.

Two sets of regressions were performed: the first used property values as the dependent variable and the second used property tax rates. The econometric models take advantage of the panel data at our disposal to control for jurisdiction-specific effects when estimating the impact of Wal-Mart (Balestra, 1992 and Hsiao, 1986; see Papke, 1994, for a similar application to urban enterprise zones). Thus, the models allow the effects of the retailer to be correlated with unobservable factors that affect municipality property values. It also allows for the possibility that municipalities with rising property values were chosen as sites for stores by Wal-Mart over municipalities with a less favorable economic climate. This approach contrasts with previous studies of Wal-Mart (such as Franz and Robb, 1988, 1991) which did not make such allowances.

Table 1
Summary Statistics
1990

		<u>Population</u>	<u>Property Full Value</u>	<u>Property Full Value per Capita</u>		
All Municipalities n = 109	ave =	9,771	193,447,873	20,230		
	stdev =	6,022	143,496,957	7,553		
	min =	2,913	44,449,095	7,676		
	max =	33,724	936,000,000	45,365		
Non-WM Municipalities n = 85	ave =	10,017	186,404,491	19,194		
	stdev =	6,270	119,094,972	7,038		
	min =	5,002	44,449,095	7,676		
	max =	33,724	622,000,000	45,365		
WM Municipalities n = 24	ave =	9,023	214,838,885	23,375		
	stdev =	5,232	201,778,020	8,306		
	min =	2,913	62,053,730	9,615		
	max =	23,016	936,000,000	41,361		
# of Municipalities with a Wal-Mart open x years during the sample period:	1 year 0	2 years 0	3 years 10	4 years 3	5 years 6	6 years 5

The basic model is given by equation (1). In it, property value is a function of the jurisdiction-specific α_i , a time trend, t , and a dummy variable, WM_{it} , that equals 1 if a Wal-Mart is present in municipality i in year t , 0 otherwise:

$$(1) \quad \log P_{it} = \alpha_i + \beta t + \delta WM_{it} + u_{it}$$

where P_{it} represents the property value in municipality i in year t .

The α_i , which reflect jurisdictional fixed effects, control for unobservables that are time-invariant over the sample period.¹¹ The time trend controls for macro factors that affect all jurisdictions. δ measures the impact of Wal-Mart on the property values. If δ is greater than 0, the presence of Wal-Mart increases property values in that municipality by $100 \cdot (e^\delta - 1)$ percent (Halvorsen and Palmquist, 1980). A consistent estimate of the WM effect will be obtained with OLS without including other potential explanatory variables - provided they are not systematically related to placement of Wal-Mart stores, after controlling for these fixed effects and aggregate-economy effects (e.g., Papke, 1994, p. 43). Local characteristics are omitted from the regression since they are either subsumed into the time-invariant fixed effects or are assumed to be orthogonal to placement of Wal-Mart in the municipality. This is acceptable since the regression is not seeking to explain property values, only the influence of Wal-Mart.

Due to the nature of the data, the unobservables in equation (1) are likely to be correlated over time -- that is, the OLS requirement of independent error terms is likely to be violated (which will lead to inefficient estimators) -- and tests indicate that this is in fact the case with the data used here. To correct for this we estimate the magnitude of the correlation and perform the appropriate differencing to equation (1) for successive time periods. The result is expressed in equation (2),

$$(2) \quad P^* = \alpha_i^* + \beta t_t^* + \delta WM_{it}^* + u_{it}^*$$

where the * indicates that differencing was performed on that variable (see Maddala, 1992, for handling of dummy variables in this context). With these transformations, one can estimate equation (2) using OLS. The first indication is that Wal-Mart has no effect on property values (see the column labeled 'Model 1' in Table 2). The value of the coefficient (δ) is 0.0046 and the t-statistic is less than 1. Equation (2), however, assumes an initial effect of the Wal-Mart that remains constant over time. That is, it imposes the restriction that the Wal-Mart has the same effect in each year after opening (a permanent shift). One might expect the impact of Wal-Mart to take time. As consumers become better informed, pre-Wal-Mart retailers close, property values and municipal spending adjust. To allow for changes over time we replace the dummy variable WM_{it}^* with WMT_{it}^* to measure the effect for each year the Wal-Mart was open:

$$(3) \quad P^* = \alpha_i^* + \beta t_t^* + \varphi WMT_{it}^* + u_{it}^*$$

where the * once again indicate that the data have gone through general differencing. WMT_{it} counts the number of years Wal-Mart had been open in the municipality at time t. Thus, WMT_{it} equals 1 the first year a Wal-Mart is present in municipality i, 2 the second year a Wal-Mart is present in municipality i, and so on (and zero otherwise). The coefficient φ measures the impact of Wal-Mart on the property values each year Wal-Mart is in the municipality. Thus, the total effect of Wal-Mart on a municipality is φ in year one, φ^*2 in year two, and so on. OLS was run using this specification and again the results were not statistically significant (see Model 2 of Table 2).

The implication to this point is that Wal-Mart does not affect property values in the municipalities in which it operates. The models used so far, though, may obscure trends that emerge only slowly. Equation (3) limits the impact of Wal-Mart to a constant increase from year to year (φ). To allow for changes in the magnitude of the impact over time, the model is made even more flexible. A series of dummy variables for each year the Wal-Mart was open in a municipality replaces WMT_{it}^* in equation 3 to get:

$$(4) \quad \log P_{it} = \alpha_i + \beta t + \sum \delta_y WM_{yit} + u_{it} \quad \text{for } y = 1 \text{ to } T$$

Table 2
Effects of Wal-Mart on Property Values
Small, Rural Communities in New York State
1990-1997

Property Values			
	Model 1	Model 2	Model 3
WM	0.0046 (0.009)		
WMT		0.0034 (0.006)	
WM1			0.0019 (0.009)
WM2			0.0083 (0.012)
WM3			0.0161 (0.013)
WM4			0.0092 (0.015)
WM5			0.0089 (0.018)
WM6			-0.0036 (0.023)
	R ²	0.99	0.99
	Obs.	763	763

Standard errors are in parentheses.

Note: This table does not contain the values for the 109 α_i and β in equation 3 as they are not meaningful to the primary discussion and would be too numerous to be presented compactly.

where T is the length of the maximum number of years any municipality hosted a Wal-Mart (six years). WM_{yit} is set to 1 if Wal-Mart was present for y years in jurisdiction i at time t, 0 otherwise. The δ_y in this formulation measures the impact of Wal-Mart through year y. That is, δ_y is the cumulative effect through year y of the presence of Wal-Mart on the property tax rate in municipality i. The net effect of year y alone is δ_y minus δ_{y-1} . After the appropriate adjustments to correct for autocorrelation, one can estimate equation (4) using OLS. The results, presented in the column labeled 'Model 3' in table 2, again suggest that a municipality's aggregate property value is not affected by the presence of a Wal-Mart within the municipality. None of the coefficients are economically large or statistically significant.

The lack of statistical significance in the early years of a Wal-Mart's presence in a municipality is surprising given the addition of Wal-Mart itself to the tax rolls. Furthermore, it does not appear that the presence of Wal-Mart subsequently leads to a significant decline in municipal-wide property values when smaller businesses that compete with Wal-Mart fail. What is clear is that claims that the presence of a Wal-Mart in a municipality increases property values and the tax base appear unfounded. This is noteworthy in that it contradicts the perception of local officials and claims by large retailers and their proponents. Of course, it also implies that the worst fears of opponents are not realized.

To assess the critics' argument (and our second hypothesis) that Wal-Mart leads to increased local spending and a long-term increase in the tax burden, we perform a second set of regressions using various effective property tax rates as the dependent variable. The effective property tax rate is defined as property tax revenues divided by full property value in each municipality. Local governments first determine spending needs and then set the property tax rate accordingly (dividing the spending needs to be financed by the local property tax by the property tax base). Thus, a change in local spending to be financed by property taxes or a shift away from the property tax to reliance on the sales tax will lead to a corresponding change in the property tax rate.

The first regression in this set uses the combined city-town-village and special district property tax rate as the dependent variable. These taxes are decided locally, based on spending needs within the municipality. The results are shown in table 3. The initial model ('Model 1', based on equation 2) indicates that Wal-Mart has a statistically insignificant effect on property tax rates (although the coefficient suggests a 2.3 percent increase). Model 2 (equation 3), however, shows that tax rates climb with the number of years a Wal-Mart has been open in a municipality. The coefficient on the WMT variable in this model is statistically significant at the 1 percent level. The combined local property tax rate increases almost 2.4 percent each year a Wal-Mart is open in that municipality. That is, municipalities with a Wal-Mart experienced an increase in the combined locally-controlled property tax rate that was almost 2.4 percent per year greater than in similar municipalities without a Wal-Mart. After six years the combined tax rate is estimated to be 14.2 percent higher.

The results of applying equation 4, which allows the effect of Wal-Mart to vary from year to year, are shown in table 3 as Model 3. Here the results are somewhat less clear. The coefficients are greater than zero for years one through three, but are statistically insignificant while the coefficients for years four through six are statistically significant (at the 5 percent level). But the implication is the same: after six years, a municipality with a Wal-Mart has a higher property tax rate (of just over 10 percent in this formulation). An F-test testing whether all δ_y jointly equal 0, indicated the marginal usefulness of the equation ($F=1.22$). This formulation of the model (equation 4) may be asking too much of the data, as the number of observations is quite small (with 26 Wal-Marts split over six years).

Table 3
Effects of Wal-Mart on Property Tax Rates for Small, Rural Communities in New York State
1990-1997

	Combined City/Village/Town and Special Districts			Special district only			City/village/town only		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
WM	0.0226 (0.0180)			0.0507*** (0.018)			-0.0066 (0.018)		
WMT		0.0234*** (0.009)			0.0256** (0.013)			0.0264** (0.013)	
WM1			0.0150 (0.019)			0.0532*** (0.018)			-0.0189 (0.022)
WM2			0.0360 (0.023)			0.0436* (0.023)			0.0186 (0.028)
WM3			0.0385 (0.025)			0.0453* (0.026)			0.0287 (0.030)
WM4			0.0059** (0.029)			0.0494 (0.031)			0.0579 (0.036)
WM5			0.0742** (0.033)			0.0657* (0.035)			0.0835** (0.041)
WM6			0.1010** (0.045)			0.112*** (0.047)			0.0617 (0.055)
R ²	0.99 for all								
Obs.	763 for all								
*	statistically significant at the 10% level.								
**	statistically significant at the 5% level.								
***	statistically significant at the 1% level.								

Standard errors are in parentheses. Note: This table does not contain the values for the 109 α_i and β in equation 3 as they are not meaningful to the primary discussion and would be too numerous to be presented compactly.

The results support the hypothesis that the existence of Wal-Mart leads to increased spending needs by local governments, which in turn leads to higher tax rates. It is possible that the increase in tax rates is reflective of the additional revenue needed to cover increased local spending on public services, such as highway, water, sewer, and fire. It is common knowledge that Wal-Mart prefers to build on the outskirts of town, sometimes arguing for extension of town or village boundaries so as to be included in those public service areas (as happened in the Village of Cobleskill -- where the village boundary was extended, a main highway route altered, and an intersection with a traffic light built). Much of the new local government spending may be for special districts (the water, sewer, and fire just noted). To address this possibility we disaggregate the taxes into a special district only tax rate and a city-village-town only tax rate. Special district tax rates rose a statistically significant 5.1 percent as indicated by model 1, suggesting that municipalities incur long-term costs associated with the opening of Wal-Mart (see middle set of columns in table 3). Models 2 and 3 indicate similarly robust results: a 2.6 percent annual rise in property tax rates (model 2) with year-six taxes more than 11 percent higher (although, again, the F-test on model 3 indicated weak usefulness of that formulation: $F=1.21$). The important implication is that public spending associated with the presence of a Wal-Mart causes the tax rate to increase. If a municipality has a Wal-Mart it can expect to experience higher special-district tax rates -- presumably reflecting increased spending on those services.

Wal-Mart also affects city-village-town-only tax rates. This tax rate was statistically insignificant using model 1, but seemed to increase (by almost 2.7 percent) each year the Wal-Mart existed using model 2. The coefficient in model 2 was statistically significant at the 5 percent level. Model 3 offered no conclusive evidence of a trend. The conclusion one should draw is that the bulk of the effect of Wal-Mart is on special district taxes, not taxes for general town funds.

As noted earlier, we recognize that a change in property tax rates may result from tax exporting or shifting. But exporting or shifting does not appear to have played a factor in the results presented above: most of these municipalities were unable (or were unwilling) to substitute the sales tax for the property tax. Implementation of the sales tax in New York State is limited to county and city governments; so the ability to substitute this tax at the municipality level is severely limited (Office of the State Comptroller, 1998). Of those municipalities with autonomy over the sales tax only one increased it (Auburn, from 0 to 2 percent) during the time Wal-Mart was present, while one municipality (Amsterdam) actually decreased its local portion (from 1.5 to 0 percent) just prior to Wal-Mart opening. Four counties with a municipality hosting a Wal-Mart increased their county sales tax rate just prior to or after the Wal-Mart opening.

Increases in the locally-decided property tax rate may be off-set by decreases in the county-wide property tax rates, as more sales tax revenue is collected by the county. An increase in county sales tax revenue implies either (1) attracting new customers from outside the county, (2) retaining customers who previously left the county to shop elsewhere, or (3) both. Additional investigation revealed no evident link between placement of Wal-Mart and sales tax revenue at the county level for the years between 1992 and 1997. More sophisticated work - taking into account trade patterns with surrounding counties -- needs to be done to investigate this relationship more rigorously. If county sales tax revenue increases when Wal-Mart comes to the county, because, for example, shoppers stay within the county to shop (as is suggested by conclusions of Stone), then county-level and/or city and town property tax rates may decline as more sales tax revenue is collected and distributed to them. In New York State, the local portion of the sales tax usually is collected by the county and then is either retained by the county or distributed to cities and towns within the county (whether they have a Wal-Mart or not), based on a negotiated agreement among local officials. Either way the regression results presented in table 3 suggest that while municipalities without a Wal-Mart may benefit from the increased sales tax revenue they do not suffer from additional local government spending requirements. But this is really speculation. To confirm this one needs to compare Wal-Mart municipalities with municipalities within the same county, attempting to identify the extent of changes to local (town and special district) taxes in non-Wal-Mart municipalities.

CONCLUDING REMARKS

While big-box retailers in general, and Wal-Mart in particular, claim that their presence leads to improved local economies and local government finances, most often stated in terms of increased property values and decreased property tax rates, this was not in fact the case in small, non-metropolitan

municipalities in New York State during the 1990s. As Wal-Mart and other "superstores" pursue a "saturation strategy," placing stores in municipalities so as to achieve contiguous market areas, local officials and citizens alike need to understand the effects of changing market places on local government finances. Given that the property tax has historically been, and remains, the major source of non-grant revenue for local governments (Dearborn, 1993; Miels, 1993), the results above should trouble local government officials -- and citizens. Property values are unchanged and tax rates are rising, thereby increasing the already tight fiscal position many smaller municipalities find themselves in.

Our first hypothesis that the entry of a large retailer leads to a decline in municipal-wide property values, primarily as a result of lower commercial values as smaller retailers close, was unsubstantiated. Our second hypothesis that property tax rates will rise in the presence of a Wal-Mart as a result of increased public spending was substantiated with statistically significant increases in the overall city-town-village-special district tax rate and its components. The results presented in this paper parallel those of Muller (1970, 1980) which appeared long before Wal-Mart burst onto the national spotlight. And they appear to support, at least in part, Mitchell's (2000) assertion that "even without additional subsidies, the public cost of development -- expanding roads and providing services such as water and sewer -- combined with declines in property values and sales taxes in existing retail centers may actually exceed the tax revenue generated by the new retailer."

Still, several qualifications must be noted. The research here has not accounted for the benefits of public spending. Higher tax rates are not, by themselves, necessarily bad - they finance increased public spending, which may be more highly valued by taxpayers than the taxes they pay. Nor has the suspected increased tax burden been weighed against the benefits (greater product selection, convenience, reduced costs, reduced travel time for goods previously purchased out of town) of a single large retailer. We admit property values and tax rates are not all-encompassing measures of the impact of Big-box retailers on local economies. With the appropriate data, many other economic costs and benefits might also be measured: retail bankruptcies, reduced demand for local services such as banking, increased demand for public goods such as roads and sewer, reduced retail prices, increased product selection, and so on. Of course, social and ecological implications exist and should also be considered in the bigger picture.

The results presented here represent an initial attempt to examine the impact of big-box retailers on local government finances. This is obviously an important issue and deserves much more research attention. It is hoped that this study contributes to that understanding and spurs additional inquiry.

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END NOTES

1. Examples in New York State include several millions of dollars in subsidies to Wal-Mart in Johnstown (one hour west of Albany) and the Village of Cobleskill, which extended its village boundary to accommodate a new Wal-Mart.
2. Tom Ulasewicz, Wal-Mart's attorney in Lake Placid, quoted in the *Sunday Times Union*, Albany, New York, March 5, 1995, p. A-3.
3. The \$45 million figure is obtained using 150,000 square feet, the size of the Cobleskill store, times the nationwide average annual sales per square foot from Wal-Mart of \$300 (Wal-Mart, 1997).
4. This assumes that the sales tax rate is set at the municipality level. Since the implementation of the local sales tax is restricted in New York State to county and city governments, many of the Wal-Mart municipalities do not have autonomy over and hence cannot export the sales tax, except to consumers from outside the county.
5. Wal-Mart has implicitly acknowledged this with their "We buy local" campaigns.
6. Nelson and Beyers (1998) apply an economic base model that decomposes sources of income accruing to a typical regional economy into local and non-local components. A wealth effect via changes in real property value may also influence local economic activity.
7. This is the case in New York State, which places several restrictions on imposition of the sales tax. See Office of the State Comptroller (1998).
8. Municipalities, communities, and market areas are not necessarily delineated along the same lines, but data availability leads to use of municipalities.
9. Schoharie County has 53 people per square mile compared to 556 for Albany County. Most of the counties with municipalities included in this study have fewer than 100 people per square mile.
10. Two notes are in order. First, big-box retailers build new structures on recently sold parcels and thus are more easily assessed than older established businesses (Popolizio, 1999). Second, Using full property value is intended to mitigate differences in assessment practices, as it is widely recognized that assessment practices are not standardized from jurisdiction to jurisdiction. Additional differences can be accounted for in the econometric model and so should not have an impact on the econometric results presented.
11. α_i also capture differences in the age and composition of the housing stock and municipality location (e.g. highway access). We expect the α_i to hold much of the 'explanatory' power of the regression, due to common structural characteristics of municipalities during the sample period.