

The Costs of Sprawl: Measured in Benefits?

By Wendell Cox and Joshua Utt

Summary

1. Anti-growth critics contend that more sprawling suburban development imposes significantly higher government costs. These studies are principally based upon consultant developed forecasts of future expenditures, or micro-level cost analyses that are virtually never reconciled to actual overall spending levels.
2. However, our recent national analysis of the *actual* US Census Bureau spending data for more than 700 municipalities found that newer, more suburban municipalities have generally lower government expenditures per capita, despite more than 50 years of unprecedented suburbanization (www.heritage.org/Research/SmartGrowth/bg1770.cfm).
3. The Victoria Public Transport Institute (VTPI) in Canada published criticisms of our report, none of which have merit.
4. This article is a summary of the issues raised by VTPI. A more detailed analysis will follow.

The “Costs of Sprawl”

A cardinal doctrine of the anti-growth movement is that more sprawling development (less dense suburban development) results in higher government costs than more dense development. We characterize this and related claims as “Current Urban Planning Assumptions” in *The Costs of Sprawl Reconsidered*.

Anti-growth advocates have invoked near hysterical language in characterizing the imperative for dealing with what they claim are the higher government costs of more sprawling development. Columnist Neil Pearce mused about a connection between suburbanization and Columbine. A widely quoted anti-growth report proclaimed that “we can no longer afford” to continue our suburban development patterns (Burchell, et al, *Costs of Sprawl – Revisited*, 1998). Yet a sequel to that very same report (*Costs of Sprawl --- 2000*) finds that the *theoretical* cost of future suburbanization will be only \$29 annually per capita. This amount won’t be found in the report. Only the gross billions over 25 years are shown, which while producing an impressive figure, amounts to less annually than some people pay for a single bottle of wine.

Virtually all of the research purporting to demonstrate that the “suburbs-cost-more” relies either on forecasts of future costs or on micro-level cost comparisons that are never reconciled to local government unit spending levels (and, indeed, never appear to have any impact on overall spending levels). What has been missing is any analysis of local government expenditures based

upon their land use patterns. The data exists at the US Census Bureau and other federal government databases. We analyzed a database containing more than 700 municipalities and found exactly the opposite of the popular view --- that suburbanization costs less.

Separating Fact from Fiction

The first problem with the VTPI critique is that it wrongly stated our conclusion. VTPI rightly indicates that we found a weak econometric relationship in which density was associated with slightly lower municipal government costs per capita. But that was just the beginning. We went on to show that even this relationship was more than nullified by other municipal cost factors, especially variations in government employee compensation. Older, more dense municipalities generally have higher employee compensation costs, and this may be why virtually none of the micro-level cost analyses on which the “suburbs-cost-more” doctrine is based ever actually show up in overall municipal spending data.

While our econometric research showed a cost moderating effect for higher density, its impact was small and economically insignificant. If more than 40 years of suburbanization were reversed and urban densities of the mid-1950s were to be restored, the net effect would be a theoretical annual savings per capita barely sufficient to buy a dinner for two at a moderate priced restaurant (\$43). Even that, however, never gets to the pocket of taxpayers, because of other costs associated with density brings with it (see “Further Analysis” below).

In designing the econometric formula, we considered every issue that might impact local government expenditures that we could imagine and for which reliable data was available. All variables were included except for those that were so closely related to others that they were measuring the same thing. This included 13 factors, from population density, to poverty rate and median house price to crime rate, which were examined relative to municipal expenditures per capita (not including sewer and water systems, which were separately examined).

Based upon the “suburbs-cost-more” doctrine, we expected the results to be robust. They were anything but. Not only was the density-expenditure relationship miniscule, but also the model explained less than 30 percent of the variation in municipal expenditures per capita. (Other urban planning variables of population growth and average municipality age, estimated using median house age did not even rise to the level of statistical significance --- that is they had no material impact on local government expenditures).

No statistically significant relationship was found between density, population growth or municipality age in municipal sewer and water systems. This may be a more important finding than the overall municipal government results, because sewer and water systems are among the first that anti-growth advocates cite as costing more in newer, more suburban settings.

VTPI expresses satisfaction at our econometric formula finding a statistically significant but policy insignificant relationship between density and municipal expenditures. This is akin to a buyer celebrating the free tank of gas that goes with the \$20,000 car that could have been purchased across town for \$18,000.

Further Analysis: But econometrics is just the beginning. What about the other 70 percent not explained by the Census Bureau and other federal government data? Ziliak and McCloskey (www.econ.mq.edu.au/seminars/McCloskey.pdf) eloquently argue that econometric testing is not an end in itself, and that analysts should look beyond the results of econometric testing.

We reviewed nominal rankings of the data and found that the most dense quintile of municipalities did not exhibit the predicted small, but lower expenditures. In fact, the highest density quintile had expenditures well above average. Further analysis indicated that expenditures were higher than average in the oldest (more dense) quintile of municipalities, an outcome that contradicts the assumption that suburbs cost more.

The examination was extended to the largest element of local government cost, employee compensation. The oldest quintile of municipalities had by far the highest wages and salaries per capita, nearly 25 percent above the newest quintile (less dense) municipalities. In fact, the wage and salary difference was nearly equal to the overall expenditure difference. This effect --- that wages and salaries per capita are substantially higher in most dense municipalities, could be the reason that the predicted small downward effect of density on expenditures is not apparent in the actual spending data. The conclusion is that local government expenditures per capita tend to be lowest in the newest, more sprawling municipalities and highest in the oldest, less sprawling municipalities.

Public Expenditures are Real, Not Theoretical

VTPI cites a number of studies to demonstrate that costs are higher in more sprawling areas. But virtually all of these studies are theoretical, not based upon actual public budgets or expenditures or are micro-level studies whose results are never reconciled to actual government budgets. In fact, the data shows that the costs of providing the same services can vary significantly in *adjacent* municipalities in the *same* metropolitan area. This is why it is important to look at the actual data, not just theoretical forecasts. Theoretically, Boston's Big Dig was to have cost \$5 billion. The nation's highway users paid the real \$15 billion. Theoretically, the Hiawatha light rail line in Minneapolis was to have cost \$500 million. Taxpayers, however, paid the actual more than \$700 million. Reality, not ivory tower forecasts is what counts. And the reality is revealed by the actual US Census Bureau data. All things considered, sprawl is associated with *lower* public expenditures per capita, not higher.

Municipalities: The Appropriate Governmental Level

VTPI contends that the "costs of sprawl" cannot be effectively measured at the municipal level and must instead be measured at a more micro-level. This would be largely meaningless. Municipalities generally have uniform tax rates, and reliable spending data is simply not available for smaller areas, such as council districts or wards. Further, while sub-municipal data simply does not exist, no higher level of government (such as states, counties or townships) is sufficiently urban for a density-based analysis to be meaningful.

Public and Private Costs: There is A Difference

VTPI would have preferred that we include private, non-government costs in our analysis. The voluntary costs that we pay for a particular life style is not of public policy concern. People are generally free to buy more or less expensive houses close to or far away from the urban core. They make trade-offs between the residential environments they prefer, the length of their commutes and other quality of life factors, which may cost more or less. For some, an hour commute is a small price to pay for the bucolic life style of the American or European exurbs. Others value being able to walk to work from an urban apartment. What is important is that government not interfere with the people's choices unless there is good reason. This sense was well stated in the Lone Mountain Compact:

The most fundamental principle is that, absent a material threat to other individuals or the community, people should be allowed to live and work where and how they like.

Government Employee Compensation

VTPI offers theories to justify the higher employee costs typical of the older, more dense local government units, including statements with respect to “agglomeration” economies and higher “productivity.” But how is it that agglomeration economies produce higher costs? Where is the higher productivity in schools that have been abandoned by all who can afford a choice, streets rife with potholes and transit systems spending twice as much per service hour than in the suburbs? The data speaks for itself.

The data shows that local government employee compensation *is* higher in the older central cities. And it’s not because they’re providing better service. Long ago, Tiebout showed that part of the reason people left the older cities for the newer suburbs was to get better services and pay a fair price for them. More recently, Robert Bish of the University of Victoria (Canada) put it this way, after decades of studying municipal finance on both sides of the border:

There is overwhelming evidence that the least expensive local governments are found in polycentric systems of small and medium-sized municipalities that also cooperate in providing those services that offer true economies of scale. Large municipalities do not seem to be as capable of cooperating in this way, of decentralizing their services, or of using alternative delivery mechanisms for services that lack economies of scale

Bish also notes that larger local governments are more responsive to special interests. The problem is that government employee compensation is not determined by the market, but rather by politics. For example, Indianapolis has long been perceived as a relatively efficient city, long under the control of what had been perceived as fiscally responsible leadership. Unlike Cleveland, Philadelphia, Pittsburgh or New York, municipal bankruptcy had never been threatened. Yet, Mayor Stephen Goldsmith was able to reduce government employment levels 25 percent and per capita spending levels 20 percent in just six years (1992 to 1998). In the early 1990s, Governor Ed Rendell of Pennsylvania became Mayor of Philadelphia and rescued the city virtually from the steps of bankruptcy court. His first *Five Year Financial Plan* (1992-1996) indicated that:

When all wages and benefits are taken together, the city of Philadelphia pays a premium for its labor, whether contrasted with other public employers nationally or comparable private employers in the region.

The plan went on to document excess labor costs ranging from 20 percent to 70 percent by job classification. The evidence is clear --- the per capita costs of government employment tend to be higher in the older, less sprawling municipalities *within* metropolitan areas and more than enough to account for their overall higher costs.

50 Years is enough

For more than 50 years the nation has experienced unprecedented suburbanization. Yet the most sprawling, suburbanized municipalities have lower costs than municipalities that are older and sprawl less. How much longer will it take for the theoretical higher costs of suburbanization to manifest themselves in the actual data?

The answer is probably never, because the political factors that impose higher costs with municipality age and density are not likely to disappear. In fact the suburbs cost less, because as the late Mancur Olson put it in *The Rise and Decline of Nations*, the entrenched structures of older nations, states and municipalities exact a heavy economic price.

Indeed, the costs of sprawl may be measured in benefits.

Postscript: The Withdrawn EPA Report

One of the references used by VTPI against us was a United States Environmental Protection Agency (EPA) report entitled “Characteristics and Performance of Regional Transportation Systems.” The report has been withdrawn by the EPA for because of fundamental methodological difficulties (www.heritage.org/Research/SmartGrowth/bg1782.cfm).

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