

# THE NET IMPACT OF RETIREES ON FLORIDA'S STATE AND LOCAL BUDGETS

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## EXECUTIVE SUMMARY

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Although retirees contribute essentially the same per capita revenue to state and local governments in Florida as other adults (roughly \$33 more per person, before adjusting revenues to equal expenditures), their per capita expenses are significantly lower. Retirees have slightly less income than the average adult Florida resident, and spend a slightly smaller portion of that income on taxable goods, but balance this out with more valuable homes. In terms of government revenue, this causes Florida's retiree population to contribute less to sales and gross receipt tax revenue, more to property tax revenue, and slightly less to all other revenue sources. However, retirees rarely have children in the home and therefore cause little burden to the education budget, they rarely become incarcerated, and they tend to travel on the roads at less congested times. Although they do require more medical attention than the average Florida resident, this is more than offset by their using other services less.

Category	Adults Age 65 and up	Adults Age 18-64
Sales and Gross Receipts Revenue*	\$1,609	\$1,846
Property Tax Revenue	\$2,379	\$1,966
All other Revenue	\$6,255	\$6,397
<b>Total Revenue**</b>	<b>\$10,244</b>	<b>\$10,209</b>
Education Expenses	\$437	\$3,360
Health & Hospital Expenses	\$1,766	\$1,385
Transportation Expenses	\$638	\$953
Police & Corrections Expenses	\$401	\$1,178
All Other Expenses	\$4,152	\$4,152
<b>Total Expenditures**</b>	<b>\$7,394</b>	<b>\$11,028</b>
<b>Net Benefit**</b>	<b>\$2,850</b>	<b>-\$818</b>

*Summary Table: Revenues and Expenditures to State and Local Governments for Retirees and Non-retirees*

*\*Sales and Gross Receipts revenue also include several other sales tax categories (e.g. beverage tax, gasoline tax, etc.)*

*\*\*Totals may not sum correctly due to rounding*

It is worth mentioning that in the year for which we collected our revenue and expenditure data (fiscal year 2010), there was a deficit after we removed certain categories of revenues and expenditures. In 2010, Florida—and, for that matter, the U.S.—was still in the wake of the great recession, which created some unusual spending and taxation policies. Therefore, we believe that in the long-run state and local government revenues should equal expenditures, fixing the deficit. However, in the current data such a deficit will cause the net benefit (or cost) to get slightly understated in both age categories. In the case of retirees, this creates a difference of \$2,850 - \$2546 = \$304 per retiree. In the table above revenues have been adjusted to equal expenditures.

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## INTRODUCTION

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In spite of welcome hints of relief, state and local budgets in Florida face challenges in matching revenue and spending. Revenue has fallen sharply from trend with the national downward shift in job growth and the collapse of the housing boom. Meanwhile the rapid long-run growth of state and local medical spending has been joined by the need to augment funding for public pensions. The

federal government, burdened by its own deficits and under pressure to restrain taxes, is in no position to come to the rescue.

There is, however, a bright spot. The retiring baby boomers who will reside in Florida, both those who age in place after living and working here and those who move here after retiring, will ease state and local fiscal stress. At the federal level, the baby boomers are a budget burden through Social Security, Medicare and Medicaid. At the state and local level, in contrast, their Medicaid burden is more than offset by their having almost no children in school and by their paying higher property taxes.

In this note, we estimate the net benefit of an average retiree in Florida to state and local budgets. We caution that ours is not an exhaustive analysis. We simply pull together readily available data to check whether they confirm our intuition that retirees are a net fiscal benefit. That turns out to be true. Though our analysis is not detailed, we think it likely that a more rigorous investigation would come to a result in the same ballpark.

*This note may be thought of as an update or second edition of a portion of chapter 13, "Empty Nesters and Retirees," written by David Denslow for a 2005 report from the FSU-based Leroy Collins Institute titled Tough Choices, edited by Denslow and by Carol Weissert. In this update, which borrows freely from the methodology and wording in that chapter, we follow the approach of that chapter while adding a bit more detail. We begin with an average retiree's relative contribution to revenue, follow that with an average retiree's costs to state and local budgets, and conclude with a summary and thoughts about related topics. What we report for revenue is that retirees contribute more than their share in property taxes and less in other taxes, leaving them almost even with the average adult. Though retirees require much more medical spending, that is more than offset by their having very few children in school, being unlikely to be criminals, and congesting the roads less during rush hours. The net effect is that an average retiree causes only 72% as much spending as an average adult, leaving a net benefit of 28%, or, after allowing for their effect on the Medicaid funding formula, \$2,627.*

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**PROPERTY TAXES**

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Category	Taxable Value (Billions)	Share
Residential	\$930	74.7%
Commercial	\$221	17.8%
Industrial	\$ 60	4.8%
Other	\$ 34	2.7%
Total	\$1,245	100.0%

*Table 1: Taxable Property Value by Category in Florida, 2010<sup>1</sup>*

Floridians generate property taxes where they live, where they shop, and where they work. Table 1 shows how the taxable value of real property in Florida was divided in 2010.

How these categories should be divided among residence, shopping, and work is a complex issue. We think it is reasonable to assume that work accounts for 10% of all taxable value, or 40% of

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<sup>1</sup> Florida Statistical Abstract, 2011

the non-residential 25%, with shoppers accounting for the other 60%. To be conservative, we allow for the possibility that seniors per person spend less on local goods and services than do other adults (counting their children) and assume that an average senior accounts for only half as much in non-residential property taxes as an average other adult, rather than 60% as much.

That leaves residential. According to a recent national survey, the average household headed by someone 65 or older lives in housing 30% more expensive than the average household headed by an adult 18 to 64 years old.<sup>2</sup> In addition, older households have slightly fewer adults.<sup>3</sup> Per adult the average value of housing lived in by seniors is 45% more than that lived in by adults under 65. We assume that same 145% ratio applies to Florida. In Florida as elsewhere, seniors are more likely to own single-family houses or else condos, which are more expensive than rented apartments. According to the 2010 Census, only 17% of occupied housing units in Florida with a householder 65 or older were rented, whereas the same figure was 39% for householders under the age of 65.<sup>4</sup>

There remains the question of whether seniors in Florida live where countywide millage rates are higher or lower, and whether the level of service varies with the higher or lower rate. Do we need to adjust somehow for how seniors are spread across counties? Fortunately for ease of exposition, countywide millage rate averages are almost identical—14.3 mills in both cases—whether weighted by the number of seniors or by the number of adults 18 through 64<sup>4</sup>. Consequently we do not have to deal with that issue. (The 2010 weighted averages are 14.334 mills for seniors and 14.303 for other adults. We have not looked at differences within counties.) Relatedly, do we have to worry about how taxable value per adult varies across counties? Again, no. Summing all categories—residential, commercial, industrial, and other—total taxable value per adult averaged over counties is 3% higher when weighted by the numbers of seniors than when weighted by other adults, a difference small enough that we will not worry about its implications. We also ignore complications caused by homestead exemptions and Save Our Homes, thinking them to be of second-order importance to our calculation.

Pulling this together, the ratio of property tax revenue attributable to an average senior relative to that attributable to an average non-senior adult is  $RATIO = 1.45 \times 75\% + .50 \times 25\% = 1.21$ . We will use 21% as our estimate of how much more the average senior contributes to property taxes than the average adult under 65.

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## SALES TAXES AND GROSS RECEIPTS

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As a first approximation, we might expect seniors and other adults to pay about the same per person in sales and gross receipts taxes. That category includes the usual sales taxes, such as the 6% or more added to the cost of a refrigerator or a pair of slacks, plus excise taxes on everything from gasoline through cigarettes to insurance. But there are at least two reasons that retirees might pay more or less than other adults. The first is that their incomes per adult may be higher or lower. Second, having accumulated furniture and appliances, seniors may spend lower shares of their incomes on goods and more on services, which are less likely to be taxed than are goods.

Nationally, the average income of retiree households is 75.5% of that of all households. Florida's seniors, however, are relatively more affluent. In Florida, the average income of households headed by seniors is 85.0% of that of all households<sup>5</sup>. From the 2012 Current Population Survey, we calculate that Florida's households headed by seniors contained 1.61 adults on average, compared to

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<sup>2</sup> Consumer Expenditure Survey, 2011: <http://www.bls.gov/cex/>

<sup>3</sup> Current Population Survey, 2012: <http://www.census.gov/cps/>

<sup>4</sup> Florida Dept. of Revenue (<http://dor.myflorida.com/dor/property/resources/data.html>) and Census Bureau (<http://www.census.gov/>)

<sup>5</sup> Economic and Demographic Research, Florida's Economic Future & the Impact of Aging in Place, May 11, 2012, p. 14

1.95 for households 18 to 64. With 27.6% of Florida adults being 65 and over, these numbers imply that per adult the income for households headed by seniors is 100% of the per-adult income of households headed by other adults.

*Per Capita Income of retirees relative to others is:*

$$PCI_{65+}/PCI_{18-64}$$

*Where:*

*PCI is Per Capita Income = HI/A*

*HI = Household Income*

*A = Adults per Household*

*P = Percentage of Households by Age Category*

*Then Per Capita Income of retirees relative to others is calculated as follows:*

$$P_{65+}*HI_{65+} + P_{18-64}*HI_{18-64} = H_T = .276*HI_{65+} + .724*HI_{18-64}$$

*Where  $HI_{65+} = .85H_T$*

$$\text{Then } HI_{18-64} = H_T*(1-.85*.276)/.724 = 1.057*H_T = 1.244*HI_{65+}$$

*Finally,  $PCI_{65+}/PCI_{18-64} = (HI_{65+}/A_{65+})/(HI_{18-64}/A_{18-64}) = (HI_{65+}/HI_{18-64})*(A_{18-64}/A_{65+}) = .804*(1.95/1.61) = .978$*

To investigate the second consideration, the effect of the composition of spending, we use the national consumer expenditure survey, conducted by the U.S. Census for the Bureau of Labor Statistics. This survey is done with care because it serves as the basis for weighting components of the consumer price index, used among other things for adjusting social security checks. How the composition of expenditures varies by age has been explored thoroughly because of a running debate over whether older households spend more relative to their total consumption on such things as pharmaceuticals and services, whose prices may rise more rapidly than the price of the market basket purchased by other adults. To see whether the difference in the composition of expenditures matters for Florida's sales and gross receipts taxes, we have multiplied Florida's tax rates on various categories times the shares of income going for various categories in the consumer expenditure survey.

This has required some care on our part, because the categories in the consumer expenditure survey sometimes correspond imperfectly to the categories in Florida's sales and gross receipts taxes. Moreover the consumer expenditure survey, though it is the best source we have on the composition of spending, has limits. An oft-cited example is that expenditures on gambling and on alcoholic beverages estimated from the survey are far less than the totals that can be calculated from other sources. Nonetheless, the consumer expenditure survey provides the best data available. We think that its flaws have a small effect on the ratios of seniors to others in expenditures on taxable items.

To illustrate what we have done, suppose seniors spend 50% of their incomes on items subject to a 6% sales tax and 50% on non-taxed items. Suppose for other adults the same shares are 60% and 40%. Then we would calculate that the average tax rates are  $6\% \times 50\% + 0\% \times 50\% = 3\%$

for seniors and  $6\% \times 60\% + 0\% \times 40\% = 3.6\%$  for other adults. Doing that as best we can for the many categories in the survey and the imperfectly matching categories in the Florida tax code, we estimate that seniors pay sales and gross receipts taxes corresponding to 4.02% of their disposable incomes, compared to 4.24% for other adults. That is, seniors pay  $4.02/4.24 = 95\%$  as large a share of their disposable incomes. Multiply that times the estimate that their incomes are only 98% as high, and the taxes paid by seniors are only  $95\% \times 98\% = 93\%$  as high. Incidentally, the main reasons that the ratio of sales taxes to disposable income is 5% lower for seniors are that seniors spend more on health care (12% vs. 7%) and give more to charity (6.1% vs. 3.5%). Adding charitable contributions to direct sales taxes, the average senior contributes 18% more to the public than does the average adult under 65. Perhaps in a broad concept of state and local budgets giving to charity should be counted as a plus for seniors, but we will not do that. That households pay over 4% of their incomes in sales and gross receipts taxes may intuitively seem high, with the majority of their spending being on services, which are largely untaxed. But the category includes cigarettes, liquor, and other highly taxed items.

An additional complication is that not all sales and gross receipts taxes are paid by households. Businesses also pay sales taxes. A pest control company pays the gasoline tax when its trucks fuel up. Accounting firms pay sales taxes on their computer purchases. We estimate that roughly 70% of sales and gross receipts taxes are paid by households and the remaining 30% by businesses. How should that 30% be allocated? Should it be credited to the workers and investors who produce the goods and services? Or should it be allocated to the customers who buy what they produce? We think that the taxes on inputs for goods and services that will be purchased locally are passed on to local customers, since the firms are competing with local firms who pay the same taxes. Goods and services sold beyond the state, however, must compete with those produced in other states. The tax usually cannot be passed on to other consumers. We assume that 80% of the taxes paid by businesses in Florida go for inputs used to produce goods and services sold in the state. This seems likely given that Florida's business is mostly in the service sector (91%)<sup>6</sup>, and services are more likely to take place locally.<sup>ii</sup> Thus local customers pay 80% of those taxes indirectly. The other 20% could be credited to workers, who are by and large not seniors, or at least not retirees.

With these thoughts in mind, we calculate the ratio of sales and gross receipts taxes per adult paid by seniors, relative to other adults, as  $\text{Ratio} = 0.70 \times 93\% + 0.30 \times 93\% \times 80\% = 87\%$ . That is, we estimate that because of the multiplied effects of their lower average incomes and slightly lower expenditures on taxable and more highly taxed items, retirees contribute 13% less per person to sales taxes than do other adults. This estimate is biased against seniors since many other adults are not working.

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## OTHER REVENUE SOURCES

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That leaves all the other sources of revenue that do not come under property taxes or sales and gross receipts taxes. Joining state and local governments, there are hundreds of categories. We assume that retirees pay those taxes in proportion to their incomes, or 98% of the amount paid by non-senior adults. For each category comprised in this amalgam, it was either determined that there was no reason to assume retiree contributions were different than others, or it was deemed too inefficient to parse out for this study.<sup>iii</sup> Summarizing, with respect to taxes, we estimate that retirees pay 21% more in property taxes, 13% less in sales taxes, and 2% less in other taxes and fees. The amount of tax revenue per adult that is available to fund state and local spending per adult is the tax paid per adult, T. If the taxes paid per senior are S and per non-senior adult are N, then  $T = w_s S +$

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<sup>6</sup> Bureau of Labor Statistics, 2012 annual figures: <http://www.bls.gov/home.htm>

$w_S N$ , where  $w_S$  is the senior share of the adult population and  $w_N$  is the non-senior share of the adult population. An analogous equation holds for each source of revenue.

What we have estimated above for property taxes, sales taxes, and other revenue sources are the ratios of taxes paid per senior to taxes paid per non-senior, or  $R = S/N$ . For considering how a new senior coming into Florida, or a current resident senior deciding to age in place, affects the budget, it will prove useful to work with  $S/T$ , the ratio of taxes paid by seniors to taxes paid by all adults, including seniors. To calculate the ratio we can normalize  $T$  at 100, whether for total revenue or for each category. That is, we are for the moment normalizing  $S$  as  $100(S/T)$ , where  $T$  is the average revenue per adult. That gives us a system of two equations:

$$(1) T = w_S S + w_N N = 100$$

$$(2) R = S/N$$

*Solving for S:*

$$(3) S = TR / (w_S R + w_N) = 100R / (w_S R + w_N)$$

*Substituting Florida's current shares of adults, 0.223 for  $w_S$  and 0.777 for  $w_N$ , equation (3) becomes:*

$$(3') S = 100R / (0.223R + 0.777)$$

This transformation from  $R$  to  $S$  relative to 100 is useful since total revenue equals revenue per adult times the number of adults. Similarly, total expenditures equal expenditures per adult times the number of adults. Comparing a retiree to an average adult shows the impact of one new retiree on state and local budgets.

Equation (3') also holds for each revenue component. Plugging in the values of  $R$  we estimate for each component, we obtain that relative to all adults including seniors, those 65 and up pay 16% more in property taxes, 11% less in sales and gross receipts taxes, and 2% less in other revenue. That is, the values of  $S$  are 116, 90, and 98. In Florida, property taxes are estimated to be around 20% of total state and local revenue, sales and gross receipts taxes 18%, and other sources 62%.<sup>7</sup> (For simplicity, we exclude the federal contribution to Medicaid from both revenue and, later, expenditures. We also exclude investment gains from employee retirement plans from revenues and payments from these plans from expenditures.) From those shares and our category estimates, we estimate that the average senior contributes, within rounding error, 100% as much to Florida's state and local revenue as the average adult 18 and older. Lower sales taxes and other revenues are offset by higher property taxes, leaving the totals the same. We point out that a limitation of our estimate is that for the very large "other" category of revenues, 62% of the total, as we have assumed without further investigation that retiree contributions are proportional to their incomes. We think this is a good approximation but cannot be certain.

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<sup>7</sup> Census Bureau. State and local government expenditures, 2010.  
<http://www.census.gov/govs/estimate/>

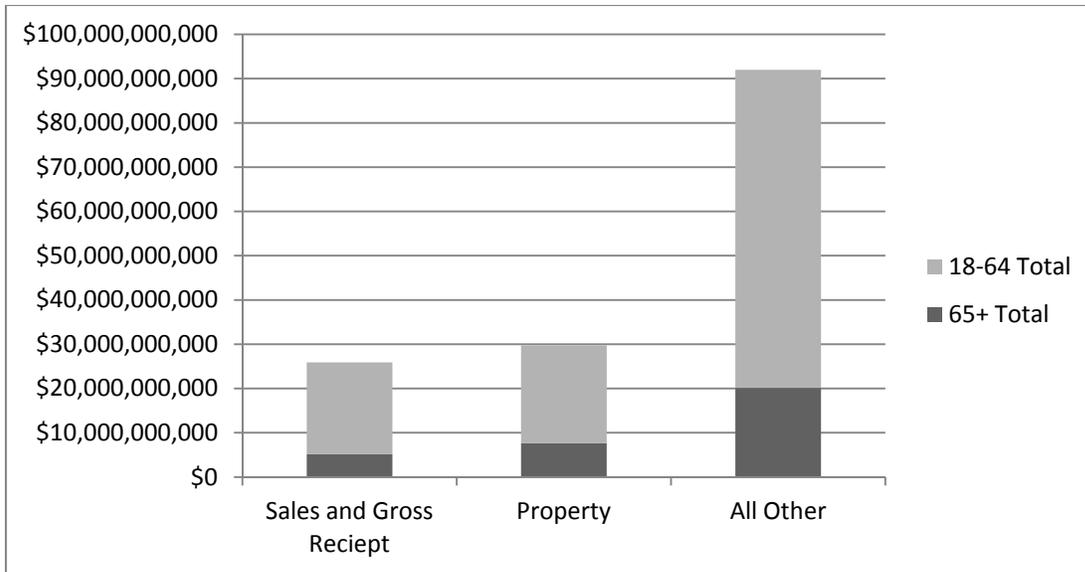


Chart 1: Three Categories of Revenue Separated by Age Groups

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## EXPENDITURES

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Turning to state and local government expenditures, we break them into education, health care, corrections, transportation, and other. If your intuition is that seniors account for far less spending on education and corrections and somewhat less on transportation, partly offset by more on health care, our estimates agree. We next try to estimate the net result of those offsetting components, beginning with education. As with taxes, our estimates are per adult, with revenues or expenditures attributable to children allocated to the adults in their households. Thus spending on children in school or young people in college is attributable to the households to which they belong. We apply national estimates of children per household adult to Florida, as well as adult enrollment in higher education or other courses. Some households headed by seniors have children present, either their own, other relatives, or simply children they are caring for. Seniors also occasionally seek school diplomas or college degrees and, more frequently, attend courses. Applying national attendance by age of household figures to Florida, we estimate that our state and local governments spend 13% as much on education per senior (including children in their households) as on other adults (again, including their children).

For Medicaid, we attribute about 27% of the Medicaid budget to retirees. This is based on 25% of all Medicaid spending being used on the elderly and a little more than 2% coming from the 20% spending on children times the estimate of 12% of children living in households headed by someone 65 years or older.<sup>8</sup> That implies that Medicaid spending per senior is 128% of the average for other adults. We arrived at this figure by calculating  $(M_R/P_R)/(M_A/P_A)$ , where M is total Medicaid

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<sup>8</sup> This 25% is from Fiscal Year 2010 data. Kaiser Family Foundation, statehealthfacts.org. It can also be confirmed by the report from Florida's Agency for Health Care Administration entitled *Medicaid Managed Care: Long-term Care Overview*, September 2012. The estimate of children in elderly households comes from the Consumer Expenditure Survey.

Spending, P is population, R is retirees, and A is 18-64 age adults.<sup>9</sup> We assume that the average senior also accounts for 28% more non-Medicaid local health-related spending than the average adult 18 to 64, including—in both cases—children in their households. With respect to the Department of Corrections, the relevant measure for seniors deciding whether to remain in Florida or to come to Florida is the share of seniors who become newly incarcerated, relative to those shares for other adults and their children. (Seniors already incarcerated have no choice but to remain.) Very few seniors are newly incarcerated, but when they are, their burden on the Department of Corrections is relatively high because of their need for medical care. Putting the factors together, seniors account for 11% as much spending per person on incarceration and the court system as the average for other adults. For police we somewhat arbitrarily charge the average retiree with half the cost of the average adult. With respect to police spending, we reason that it varies both with who needs protection and from whom they need protection, and retirees are but a tiny fraction of the latter. Of the total spending on corrections and police, corrections are 40% and police 60%. The weighted average ratio for retirees is  $40\% \times 11\% + 60\% \times 50\% = 34\%$ . Roughly, we estimate the cost of corrections and police per retiree to be one-third the cost per other adult. Among the other adults, a large share of the cost is of course caused by young males.

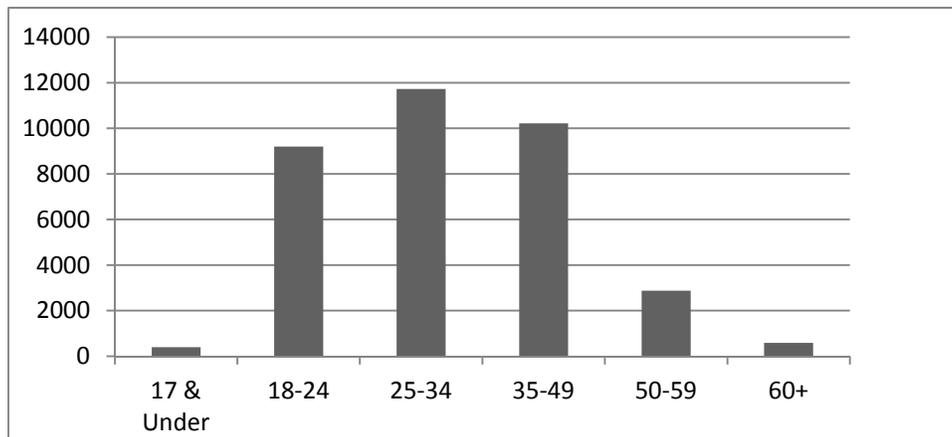


Chart 2: Inmate age at admission in Florida for FY 2011<sup>10</sup>

For transportation, the major costs associated with highways are maintenance and building more roads or providing public transit to alleviate congestion. Maintenance varies partly with lane-miles, climate, and soil characteristics and partly with traffic by heavy trucks. Cars cause little damage. All adults are responsible for the heavy truck traffic, since they buy the goods delivered by them. Retirees are roughly the same as other adults in that regard. Retirees cause less congestion than other adults, however, since during rush hours they travel less, travel shorter distances, and travel different routes. From a preliminary analysis of the most recent National Household Transportation Survey (as part of a project that is underway), we think that retirees cause only a third the congestion of working adults. Other evidence is that gasoline consumption falls off sharply with age after 52.<sup>11</sup> Putting

<sup>9</sup> Medicaid Spending was taken from the 2013 SFY budget:

<http://letsgettowork.state.fl.us/web%20forms/Budget/BudgetAgency.aspx>. Population data was obtained from the Bureau's Population Studies program, 2011 estimates: <http://www.bebr.ufl.edu/population>

<sup>10</sup> Florida Dept of Corrections Annual Report: <http://www.dc.state.fl.us/pub/annual/1011/index.html>

<sup>11</sup> Schmalensee, R. & Stocker, T. (1999). Household gasoline demand in the United States. *Econometrica*, 67(3), 645-662. <http://www.jstor.org>. For trip rates and distances by age, see Steven E. Polzin, "Analysis of Florida Travel Patterns: 2009 National Household Travel Survey," Center for Urban Transportation Research, USF, pp. 13-14.

maintenance and construction together, we estimate that the per-person cost of transportation infrastructure is only 67% as much for retirees as for other adults.

That leaves the large classification “all other categories.” For that classification we assume that the average retiree accounts for the same amount of spending as the average adult. Partly, this study is too brief to consider the other items in detail and partly they wound up in the “all other” group because—in contrast to the categories we looked at—we had no reason to think retirees differed much from other adults. Perhaps, for example, retirees use parks more but public welfare less. Public utilities generally charge user fees. Our assumption is that any differences in these various categories between retirees and other adults roughly balance. A possible substantial error is that we are assuming that spending in the “other” category is proportional to the number of adults. If it also has a large component—sports and recreation would be a possibility—that is proportional to the number of children, then we are underestimating the net benefit from retirees.

Type of Spending	Share
Education	27%
Health and Hospitals	14%
Transportation	9%
Corrections and Police	10%
All Other Categories	41%
Total*	100%

Table 2: State and Local Spending in Florida by Type in 2010<sup>12</sup>

\* Totals may not sum correctly due to rounding

Summarizing expenditures, we estimate that relative to other adults, retirees—per person—cost Florida’s state and local governments 13% as much for education, 128% as much for health, 67% as much for transportation, 34% as much for corrections and police, and 100% as much averaged over all other categories. Using a spending model analogous to equation (3), the costs per retiree relative to that for all adults (including retirees) are 16% for education, 120% for health, 72% for transportation, 40% for corrections and police, and on average 100% for all other expenditures. From this we can calculate that expenditures per retiree were just over 72% as high as expenditures per adult ( $.27 \times 16\% + .14 \times 120\% + .09 \times 72\% + .10 \times 40\% + .41 \times 100\% = 72.4\%$ ). In summary, we estimate that the average retiree contributes 100% as much to state and local revenues as the average adult, but is responsible for only 72% as much spending. The Census Bureau estimates that in 2010 (the data for local spending are available only with a substantial lag), state and local spending per adult in Florida was \$9,704, excluding the federal component of Medicaid. Adjusted for inflation, that number becomes \$10,217. It may turn out to be higher or lower, but if lower it should at least reach that in the near future. Our estimated retiree net contribution, relative to the average adult, is  $(100\% - 72\%) \times \$10,217 = \$2,850$ . Retirees contribute roughly the same amount per adult to state and local revenues in Florida, but require only 72% as much spending.

There is an odd way in which an extra senior resident reduces Florida’s revenue that we have not yet taken into account. The matching formula for the federal share of Medicaid is  $FMAP = 1 - 0.45(Y_{FL}/Y_{US})^2$ , where FMAP is the federal medical assistance percentage,  $Y_{FL}$  is a three-year average income per capita in Florida and  $Y_{US}$  is a three-year average of income per capita in the United States.<sup>13</sup> The income of an average Florida retiree is 20% higher than the income of an

<sup>12</sup> Source: Census Bureau: <http://www.census.gov/govs/estimate/>

<sup>13</sup> The source for both state and national per capita income is the Bureau of Economic Analysis, current year estimates are derived from average 2009 to 2011 data: <http://www.bea.gov/index.htm>

average resident (child or adult) of Florida. Thus an extra retiree in Florida slightly raises the income ratio for Florida and consequently reduces FMAP from Florida's current 58.79%.<sup>14</sup> Taking the appropriate derivative, and applying it to anticipated Medicaid spending, we estimate that through this effect the average retiree reduces the federal Medicaid allotment to Florida by \$223. That reduces the estimated retiree net contribution to \$2,850 - \$223 = \$2,627. It is also important to observe that there is a 2-year lag on per capita income data in addition to using the 3 year average; hence it would take about 5 years before the full impact of a new retiree would be realized, making this a conservative estimate.

*The calculation for Florida's FMAP:*

$$Y_{fl} = \$38,277$$

$$Y_{us} = \$39,996$$

$$F = 1 - 0.45(Y_{fl}/Y_{us})^2 = 1 - 0.45(\$38,277/\$39,996)^2 = 58.79\%$$

*Taking the derivative with respect to  $Y_{fl}$  yields:*

$$F' = (-0.9*Y_{fl})/(Y_{us})^2 = -0.0000215$$

*If we let M equal Florida's total Medicaid Spending in FY 2013 then:*

$$M*F' = -\$456,033.83$$

*This represents the amount of Federal dollars lost to Florida's Medicaid for a \$1 change in the state's per capita income. Since the calculation is based on a 3-year average, we take a look at the effect if a retiree has been in the state for:*

$$1 \text{ year: } -\$456,033.83*0.00019 = -\$87$$

$$2 \text{ years: } -\$456,033.83*0.00035 = -\$160$$

$$3 \text{ years: } -\$456,033.83*0.00049 = -\$223$$

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## THE MULTIPLIER EFFECT

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The \$2,627 corresponds to the direct advantage to the budgets of Florida's state and local governments to retaining one more retiree who ages in place or of attracting one more retiree to the state. There are several other considerations to think about. One is that retirees' spending creates jobs, a multiplier effect, which in turn has budget implications.

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<sup>14</sup> For FY 2014. Congressional Research Service, *Medicaid's Federal Medical Assistance Percentage (FMAP), FY 2014*.

*To conceptualize this, let:*

*B = total net benefit to the state and local purse from each extra retiree*

*T = state and local taxes paid by a retiree*

*C = the extra direct cost to state and local governments the retiree causes*

*m = the number of in-state jobs a retiree generates (a multiplier effect), and*

*A = the additional net benefit to the state-and-local purse from each generated job*

*The total net benefit to the state and local budget is:*

$$(4) \quad B = T - C + mA$$

Estimates of  $m$ , the multiplier effect, vary. It represents jobs created by the spending of the retiree, plus jobs created by the spending of the people holding those jobs, and so on. In normal times, the value of the multiplier would not matter much to  $B$ , the total net benefit, because  $A$  would be close to zero. The new job holders would pay taxes roughly equal to their costs. Currently, however,  $A$  is likely to be positive. Florida's economy is still treading water in the wake of the housing bust and the great recession. Florida's structural and frictional unemployment—that due to skill and locational mismatch and to ordinary job turnover—is probably between 4 and 5%, compared to the current unemployment rate of almost 8%. Added to that are over one percent of the work force that are working part time but would prefer a full-time job.<sup>15</sup> Many Florida small businesses—restaurants, stores, hair care, plumbing—have excess capacity. Extra retirees would increase the incomes of their owners even if they do not result in more employment.

Florida's excess economic capacity characterizes not just the labor market. The housing market is equally over-supplied, and will be for a long time as underwater houses work their way through the foreclosure process. The more retirees stay in or come to Florida, the sooner the glut of houses will be absorbed. If retirees create jobs, keep small businesses going, and absorb houses, they will lift sales tax and property tax revenue without causing much increase in government spending. Whether parents are employed or unemployed, their children go to school. Neighborhoods with fewer vacant houses or real-estate-owned properties pay more in property taxes, without requiring much in the way of extra services. In fact, welfare payments, unemployment benefits, and state and local medical spending may well fall. Currently, and probably for the next few years, the net benefit ( $A$ ) created by new jobs will be clearly positive, adding to the net benefit from extra retirees.

What about the split of the net benefit of retirees between state and local governments? At first glance, local governments would be the chief winners. The major fiscal advantage of retirees is having no (or almost no) children in preK-12, largely a local responsibility. But through the required local effort and state funding for local districts through the Florida Education Finance Program, state and local funding for schools is so intertwined that separating the components has little real meaning. The extra property taxes paid by seniors help the state and the school districts jointly.

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<sup>15</sup> Current Population Survey, all Florida respondents for 2012: <http://www.census.gov/cps/>

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## RELATED FLORIDA STUDIES OF RETIREES' FISCAL IMPACT

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To help place our study in perspective, we compare it to three other studies or presentations. The first is Fishkind & Associates, “Economic and Fiscal Impacts of Florida’s Retirement Industry,” analyzing data for 1996 and published in 1999. The second is the portion of a chapter mentioned earlier from *Tough Choices*, done in 2005, and the third is a presentation from May 2012 by The Office of Economic and Demographic Research. The Fishkind report explores both the overall economic impact of retirees and their fiscal impact on local (not state) government budgets. It estimates retirees in 1996 contributed \$1.3 billion more into local governments than they added to those governments’ spending. Chiefly, they paid more in property taxes and required no spending on education. Other revenues and expenditures were assumed to be the same per capita, in contrast to our per-adult assumption for the “other” category of expenditures and our proportional-to-income assumption for the “other” category of revenue. Using their own proprietary retail model, Fishkind & Associates analyze the spending sources of commercial property taxes in more detail than we do. They also make different assumptions about housing values. In summary, Fishkind & Associates handle the problem of missing data with assumptions they find reasonable and come to a plausible result. The reasons for our undertaking this new study are that theirs is now dated and that they do not consider the state budget. We find assurance in their coming to a similar conclusion with respect to local budgets, the ones they study.

With respect to the chapter in *Tough Choices*, the methodology and result are closely related to this effort —not a surprise, given that Denslow wrote the former and is the senior author of the latter. The 2005 study estimated that the net benefit of a retiree to state and local budgets was \$1,200, lower than the current estimate even adjusted for inflation. The chief difference is that the 2005 chapter assumed that retirees paid the same residential property taxes as other adults, whereas national housing data show their houses are more valuable. The 2005 chapter credited retirees with only 90% of all property taxes per adult, and then applied that 90% to all state and local revenues. In the current work we also take much more care by matching data from the Current Expenditure Survey to Florida’s sales and gross receipts taxes. We use updated estimates, from EDR, about retirees’ relative income per adult. We base our estimates on greater attention to details of education and prison spending by age. Moreover, we have drawn charts for ourselves based on age-related driving patterns from the latest National Household Travel Survey, instead of just making reasonable assumptions about driving. A final difference is that in the old study we failed to note that by raising Florida’s per capita income, retirees reduce the Federal Medicaid share.

Turning to the EDR presentation, we include it not because it too estimates the current fiscal impact but because it calls attention to two aspects of the presence of retirees that we have ignored: (1) they are spread unevenly across Florida, with heavy concentrations in some counties and municipalities; and (2) we need to look ahead. With respect to the first, local governments that attract affluent retirees will benefit fiscally more than others. With respect to the single most important fiscal advantage of retirees, which is the school system, their benefit is spread across the state through the required local effort of the Florida Education Finance Program. School districts with more taxable value per student receive less from Florida’s general revenue. Moreover, the state is responsible for Medicaid, where spending on seniors is high. Thus these two major imbalances are evened out across the state. It remains the case, however, that local governments with large shares of retirees living in upscale houses will have an edge in funding local government, and roads.

Looking ahead to 2030, as EDR emphasizes, there will be more retirees in their eighties and probably a larger share in nursing homes. The absolute numbers in extended care facilities are unlikely to be large enough, however, to reduce the net fiscal benefit from retirees substantially. EDR also points out that state and local governments are planning transportation, utilities, housing, and zoning with the growing number of retirees in mind, and perhaps could do more in this regard. EDR brings up the budgetary implications of the rising share of retirees among voters in an earlier

presentation, “Florida’s Economy and the Influence of Population,” October 7, 2009. It is likely that by 2030 over half of those who vote will be retirees or empty nesters. What are the implications of that for funding public services they use less, such as education? Studies suggest that the more they feel themselves to be part of the community, not strangers to be exploited, the more they support everything from education to transportation improvements to public places.

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### CLOSING THOUGHTS

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We close by noting that Florida’s fiscal advantage from retirees exceeds that of most other states, where more revenue comes from the income tax. In fact, most states that have no income tax are able to substitute revenue from carbon exports, oil or coal. Florida is able to substitute revenue from retirees. Though EDR’s long-run projections implicitly include the effects of retirees, it could be useful to break out the retiree implications of long-run budget projections. In that could be included how they will be spread across Florida, how they can be welcomed into their communities and helped to better health and social interactions, and how they may influence the allocation of taxes and spending.

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<sup>i</sup> The 145% national ratio may understate the ratio for Florida. As noted later, nationally senior households average 75.5% of the income of all households versus 85.0% in Florida. Having relatively higher incomes, seniors in Florida could be expected to own relatively more expensive housing. If so, that would boost our estimate of their relative contribution to state and local revenue above 100%. However, there may be other factors that offset this, such as the fact that incoming retirees might choose to downsize their home upon relocating to Florida.

<sup>ii</sup> In this case we do not count tourism and, for that matter, retirees as exports. Since the service takes place in Florida, there is really no competition with other states’ tax rates.

<sup>iii</sup> In the case of both revenues and expenditures, it is reasonable to assume that there are categories in which retirees would have a higher impact and categories in which retirees would have a lower impact. Therefore, it was deemed that the error coefficients would roughly cancel out. However, it would be possible at later time to pick up where this analysis left off and create estimates for these smaller categories.