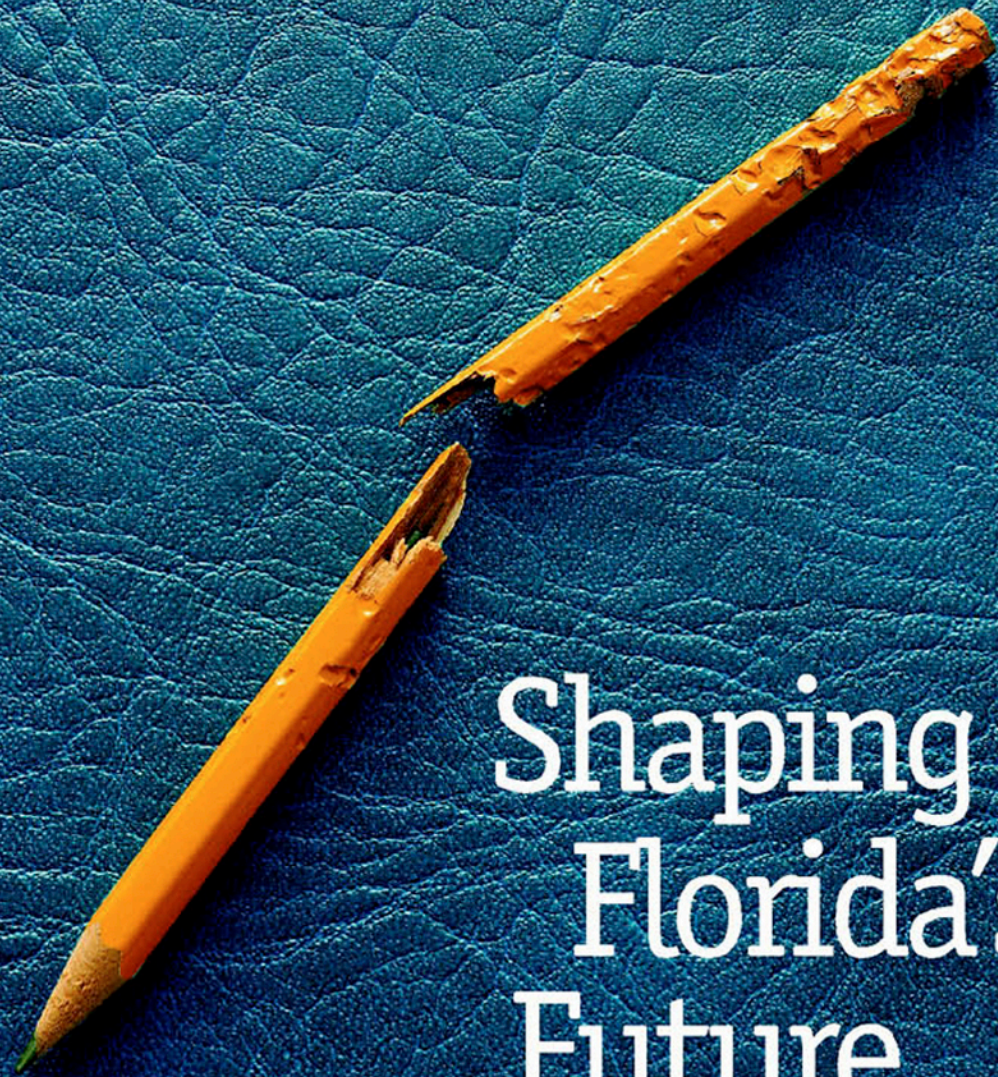


# TOUGH CHOICES



Shaping  
Florida's  
Future

A Report from the LeRoy Collins Institute

# Tough Choices: Shaping Florida's Future

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October 2005

# Tough Choices: Shaping Florida's Future

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ISBN 1-932901-03-5

# Preface

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Two years ago, the trustees of the Jessie Ball duPont Fund approved a request from Florida State University to produce a politically neutral study of Florida's tax policy, one that would include researchers from the Collins Institute and the University of Florida.

Researchers argued, and the Fund's trustees accepted their argument, that the people of Florida deserved a clear understanding of the future challenges current demographic shifts will place on the state's tax structure. In other words, researchers proposed answering this question: will Florida's current tax structure support the future needs of Floridians?

We trust that this study by Carol Weissert of Florida State and David Denslow of the University of Florida will attract the interests of thoughtful Floridians throughout the state and that they will have an opportunity to think about the study's implications.

Sherry Magill  
President  
Jessie Ball duPont Fund

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# Acknowledgements

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The authors would like to acknowledge and thank the various chapter authors and co-authors for their contributions to this volume: David Lenze (Revenue), Lynne Holt (PK-12), Jim Dewey (Property Tax), Chifeng Dai (Expenditures, Budget Balance, and Empty Nesters and Retirees), J. C. Zannis (Immigrants).

The Jessie Ball duPont Fund funded our research. The Fund's officers gave us both insightful comments and complete editorial freedom. Jim Apthorp, Terri Jo Barron, Allison DeFoor, Jon Hamilton, Lynda Keever, Curtis Kiser, Buddy MacKay, Ed Montanaro, and Glenn Robertson read and commented on various drafts. Lester Abberger, Jane Collins Aurell, Brian Ballard, Margaret Flynn Black, Ann Bussel, Sandy D'Alemberte, Gerry Garcia, Marshall Harris, Liz Lindsay, William Maloy, Mike Michalson, David Rasmussen, Kathy Fernandez Rundle, Stella Ferguson Thayer, and Parker Thompson also made useful comments.

Stefan Rayer provided population and migration data for the Empty Nesters and Retirees chapter. Survey data used in the Appendix was prepared by the UF Survey Research Center at the Bureau of Economic and Business Research.

A special thank you is offered to Dr. Carol Dubard of the Florida Office of Economic and Demographic Research for her review and valuable feedback on the PK-12 chapter in this volume. Babak Lotfinia coordinated the production of this volume, serving as liaison between the authors and editorial assistants. Jaclyn Cahan, Marla DeVicente, Sandra Maguire, Jeremy Martin, Audrey Rice, and Ryan Zaborske assisted with research. Susan Floyd and Judy Tifton provided editorial review and assistance. Susan Floyd and Phoebe Wilson prepared the graphics and the volume for printing.



# Introduction

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**Carol Weissert**  
LeRoy Collins  
Eminent Scholar  
Florida State University

In recent years, numerous reports have analyzed Florida's tax system and argued for change. Although these reports are useful in documenting the current situation, they tend to be one-dimensional—

focusing only on the revenue side. In fact, state budgets reflect both revenues and services those revenues support, and thus analysis should take into account both elements—and the tradeoff between them. This analysis does just that, taking into account both taxes and the level of services they support. It examines the history of spending and taxing in Florida and projects spending and taxing over the next five years. In recognition of the importance and complexity of state programs including Medicaid, PK-12 and higher education, it includes detailed analysis of the history and future of these programs in Florida. In recognition of Florida's demographic makeup, it highlights the impact of immigration and retirees on the state's current and future budgets.

The analysis highlights the fact that Florida is a low-tax, low expenditure state, even compared to other Southern states. It is a growing state with a highly mobile population. The demands on the programs, especially education and Medicaid, are growing. International immigration is a major factor in both revenues and expenditures. Revenues have benefited from the increasing price of housing. Florida's business cycle benefits from its high level of service jobs which are not highly cyclical, although the pay is generally lower than jobs in other sectors.

It is important to note that Florida's system of governance, including its taxing and spending, should reflect the desires of its citizens. As part of this study, we included a series of questions on taxing and spending in the University of Florida Bureau of Economic and Business Research monthly surveys of Floridians in May and June 2004. As expected, Floridians surveyed were leery



**Table 1. Percentage Feeling Taxes are Too High About Right or Too Low**

	State Sales Tax	State Gas Tax	Local Property Tax
Too high	19%	60%	37%
About right	76%	31%	54%
Too low	3%	2%	2%

N = 825.

of new taxes, even if they are coupled with additional program benefits, and are dissatisfied with the governmental output from their taxes.

- Well over a third of respondents (38%) feel that Florida’s state and local taxes are about the same as the state and local taxes in other states. Nearly one-fifth (18%) believe that the state and local taxes in Florida are higher than those in other states. Some 37% believe correctly that taxes are lower in Florida than in other states.
- Respondents were much more likely to feel that the state gasoline tax was too high. While some 60% felt that the gas tax was too high, only 37% felt the property tax was too high and 19% felt that the sales tax was too high (Table 1).
- If taxes must be raised, respondents prefer the corporate income tax (34%) or “other” taxes (22%). The income tax is viewed as the worst way to raise taxes (by 53% of respondents).
- When asked what programs respondents wanted to spend more money on—and increase the taxes that fund them—health care programs for the poor and near poor (Medicaid) and K-12 garnered the most support, although the percentages were only slightly more than one-fourth (Table 2). On the other hand, relatively few respondents supported cutting taxes and reducing spending. Highways were the area most likely to be chosen for cuts and reduced taxes.
- If forced to decrease state funding, respondents seem to favor cutting roads, followed by cuts in colleges and universities. Some 20% of respondents chose highways for

**Table 2. Percentage Supporting Increased Taxes for More Services in Five Areas**

Tax Support	High-ways	Health care/Poor and near poor	Environment	K-12	Universities
More taxes, higher spending	7%	27%	17%	28%	14%
Lower taxes, less spending	18%	9%	11%	12%	11%
Maintain same taxes and spending level	68%	56%	66%	53%	70%

N = 825.

cuts, 19% responded colleges and universities. The least likely to be chosen was K-12 where 12% reported they would support cuts.

- Finally, respondents were asked how much they feel they receive in benefits from state and local government. Only 9% reported they receive much more than they pay or somewhat more than they pay. In contrast, over 55% reported they receive somewhat less or much less than they pay!

When responses are examined by whether the respondents were recent residents of Florida or urban residents, surprisingly few differences emerged. Those who lived in Florida for more than 10 years are MORE likely to feel that Florida taxes are lower than those of other states. Those who have lived in the state for five years or less tend to think the sales tax is too high (22% compared to 16% for those over 10 years), are less supportive of more gas taxes for more highway programs (4% compared to 10% for those over 10 years) and are less supportive of higher sales taxes for more health services for poor and near poor (23% compared to 28% of those who lived in the state more than 10 years).

Interestingly, the income tax is disliked uniformly by newcomers or those with a decade of life in Florida.

Urban residents were more likely to think that they receive much more or somewhat more in benefits and services than they pay but the percentages are still low. Some 12% of urban residents agree that they receive much more or somewhat more compared to 7% of non-urban residents.

Perhaps the most disheartening finding is the widespread feeling that Florida residents are not getting their money's worth from their current taxes. When asked to compare taxes, they feel that the gas tax is too high and if taxes must be raised, they should be imposed on corporations and businesses. On the more positive side, Florida residents seem to be satisfied with the current level of sales tax and the main levels of taxes and spending. They are most likely to support new taxes for K-12 education and health care for the poor and near poor. Given that these two policies dominate the Florida budget, are featured in this report, and are likely to continue growing in the future, this finding is not insignificant.

Overall these findings suggest that there is a current tax/service balance that citizens view as about right. However, as we discuss throughout the report, there is a strong likelihood that this balance may not last. With increased demands and limited revenues, an imbalance across the budget and within individual programs may be in the state's future.

### ***Major Themes of Study***

This study cast its net broadly across the tax-services tradeoff, looking at the past, present and future. It examined economic and political issues and compared Florida to other Southern states and the rest of the country. Emerging from this analysis came the themes listed below, most accompanied by far-reaching, and as yet unanswered, questions:

- Florida has weathered the most recent recession with fewer difficulties than many other large states for two major reasons: (1) without an income tax, we were not adversely affected by stock market drops in value that slammed many states which tax capital gains; and (2) rapidly increasing property values, especially along the coasts, have led to

higher property taxes which have eased state responsibilities in K-12 education. But can this revenue engine continue to purr—and if so, for how long?

- Florida is currently a low-spending and low-taxing state. This situation has no doubt led to some impetus for innovation. In a number of areas, including health, criminal justice, and environment, the state leads the way in new ideas often copied by other states and the national government. But innovation can only carry the state so far. Will the economies of innovation fade compared to the mismatch caused by keeping taxes low at the same time that program needs in Medicaid, higher education, K-12 are expanding?
- Retirees tend to use few services but also get many tax advantages in this state. Is this policy appropriate in future years? Would increased taxes on this group decrease their migration into the state? What type of taxes might be most feasible?
- Immigrants pay taxes but also use services at greater rates than retirees. Are these costs offset by budget benefits of “empty-nesters” and retirees and if not, what plans should be made to deal with any imbalance?
- Are there efficiencies that can be undertaken on the expenditure side? Programs like Bright Futures and the Pre-paid College Tuition program are politically popular but may need further study and analysis of their current and future impact on state spending and the quality of higher education.
- Demographic trends have to be taken into account in taxing-spending discussions. Florida is expected to continue to have a large population of children and immigrants. The programmatic needs and revenue implications of these groups must be considered in state policy decisions.
- The issue of safety nets is key as well. In the past federal grants have served as key components of safety net programs. With the ballooning federal deficit and continuing military and war-related expenditures, few predict increased federal support (especially on-going

commitments) in areas such as health and welfare programs for the needy. Realistically, Florida needs to develop a strategy that calls for the states to basically go-it-alone for new or expanded social service programs.

- Finally, the issue of what happens if the revenue and expenditure mismatch gets worse. Florida has been able to patch together budgets, based often on using non-recurring revenues for recurring programs. Sometimes (as in child health), there is a recognition that eligible children will simply not be served if there are no state dollars for the program. What happens to those children and what happens when the expenditure demands exceed available recurring and nonrecurring dollars in other programs, such as Medicaid? What happens if the property assessment bubble bursts?

### ***Organization and Purpose of the Report***

This report is divided into three sections. Section One provides an overview of Florida's state and local revenues and expenditures. Section Two contains chapters analyzing key programs such as Medicaid, education, children's health and welfare, public safety, and transportation. Section Three contains chapters dealing with the tax base structure of the state including job structure, retirees, and immigrants.

There are no formal recommendations for action in this report which outlines the issues and makes our best predictions as to the future. However, recommendations are obviously important for policymakers and others whom we may convince of the seriousness of the situation and who want guidance for how to alleviate current and future problems. The Collins Institute board, a broad representation of the state's informed citizenry, has made recommendations that will accompany this report. It is our hope that the research contained here—and the recommendations that adjoin it—will serve to alert and inform citizens, interest groups, the media, and policymakers of the Florida tax-services tradeoff and its implications for the future well-being of the state.

# Florida's State and Local Revenues

# 1

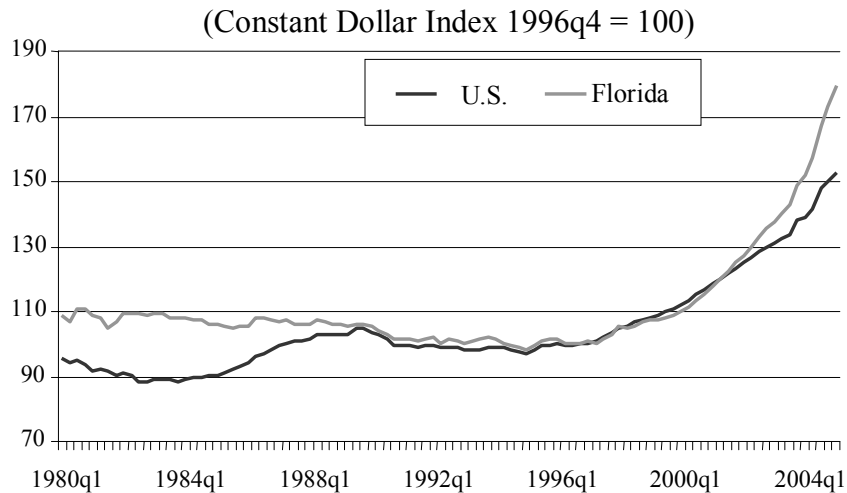
**David A. Denslow**

Economic Analysis  
Program  
Bureau of Economic  
and Business Research

## *Introduction*

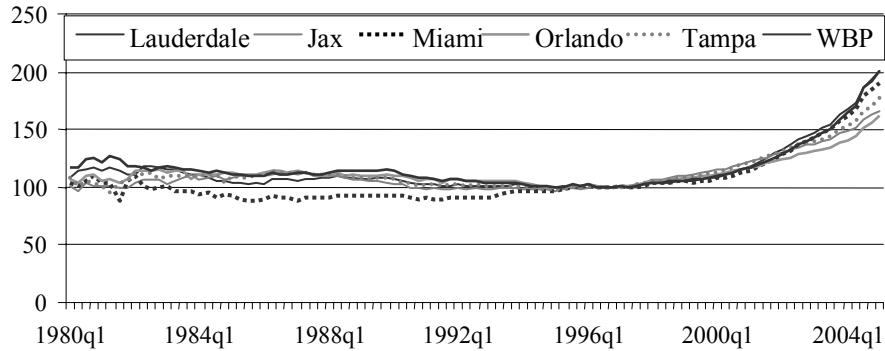
Floridians are enjoying a housing boom unlike any the state has experienced since the 1920s, eighty years ago. In the 16 years from the end of 1980 to the end of 1996, Florida house prices adjusted for inflation fell by 7%, according to the constant-quality repeat-sales index of the Office of Federal Housing Enterprise Oversight (Figure 1). Over the next eight years prices rose by 70%, compared to 50% nationally.

**Figure 1. Inflation-Adjusted House Price Indexes  
1980q1 to 2005q1, U.S. and Florida**



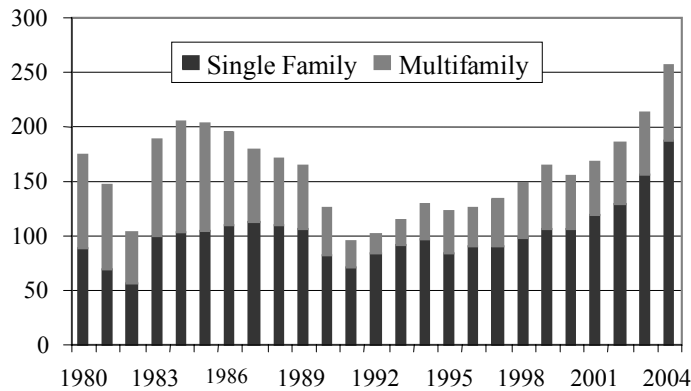
The gains have been particularly impressive in Miami-Dade, Broward, and Palm Beach, averaging close to 90% (Figure 2). But even the interior and northern areas of the state have seen

**Figure 2. Inflation-Adjusted House Price Indexes  
Largest Florida Urban Areas, 1980q1 to 2004 q4**



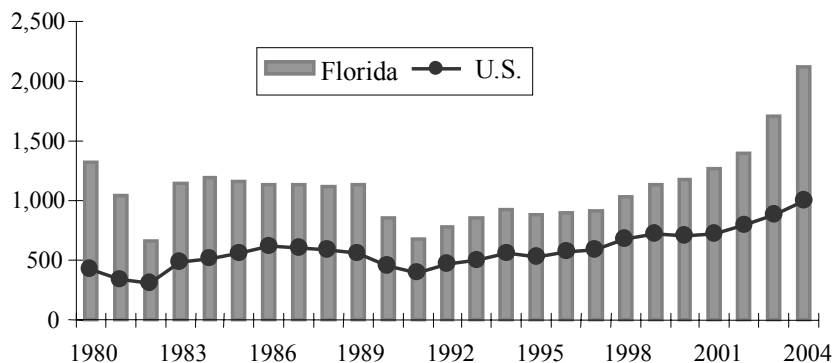
unprecedented increases. The soaring prices are not caused primarily by Florida's cities restricting the supply of housing. On the contrary, in most parts of the state the number of units being built reached levels not seen before (Figure 3).

**Figure 3. Florida Housing Permits, 1980 to 2004  
(thousands)**



Source: U.S. Census Bureau, [www.census.gov/const/www/permits/index.html](http://www.census.gov/const/www/permits/index.html), August 5, 2005.

**Figure 4. Housing Construction per Resident  
1980 to 2004**  
(constant 2004\$)



Calculated from U.S. Census Bureau.

The value of new construction permitted per resident in Florida reached \$2,000 in 2004 (Figure 4), twice the national level and twice the normal level (in constant dollars) for Florida.

One major consequence of the boom is soaring revenue for Florida's state and local governments. Housing construction boosts sales tax revenue as builders buy lumber and concrete and as owners buy new furniture, curtains, and mailboxes. Documentary stamp tax revenue is up. Property taxes fill the coffers of cities and counties not only from the new houses, which are both more expensive than existing homes and appraised at closer to their true market values. Property taxes on existing houses rise when they are sold by families moving up to new residences.

The revenue gains lead to the question of what to do with the money: cut taxes and charges and fees? Increase the level of public services? Build infrastructure? There are strong arguments for each of the three positions, and each has reasonable and well-informed advocates. The outcome is likely to be a mixture of the three, coupled with changes in the composition of Florida's revenues and expenditures. In choosing the best mixture, it would help if we knew the future. Of course we do not. One thing that is reasonably certain is that the boom will end. What we do not know is when and how, though looking at previous land booms can at least



provide a context.

The soaring land prices of the 1920s, stimulated by low interest rates and surging real estate prices nationally as well as a new technology, inexpensive travel by auto, ended when the Federal Reserve tightened monetary policy in 1926 and the United States entered the mild recession of 1926-27. A hurricane that struck the state in September 1926 is often blamed for the demise of the good times, but monetary policy and economic conditions were the fundamental causes. Oddly enough, the boom and bust were associated with distant monetary policies. When England returned to the gold standard with an overvalued pound, the Federal Reserve flooded the United States with liquidity, keeping interest rates here low in an effort to help the British stay on the gold standard. But in 1926, however, the French returned to the gold standard with a hugely undervalued franc, causing gold to flow out of the United States and forcing the Fed to tighten up, reducing liquidity.<sup>1</sup> The land market in Florida responded to both the increase and the decrease in liquidity. When the Fed restored rapid monetary growth, the funds did not flow back into the Florida land market, where speculators had been burned, but were drawn off instead into speculation in corporate stocks.

The next major Florida housing boom was that of 1972 and 1973. Again the origins of events in Florida were new technologies and international monetary conditions. The new technologies were cheaper air conditioning, the Interstate system, and commercial jet travel, making the state more livable and more accessible. The international monetary change was the abandonment of fixed exchange rates, as the United States left the gold standard between 1968 and 1973. The transition to flexible exchange rates gave the Federal Reserve more freedom to increase liquidity, which it did with a vengeance. Funds flowed into the housing market, especially in Florida, until another international event, the success of OPEC, ended the good times. Between 1973 and 1975, housing

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<sup>1</sup> This episode is described in Allan H. Meltzer, *A History of the Federal Reserve: Volume 1: 1913-1951*, (Chicago, University of Chicago Press, 2003), pp. 137-270. Also, see Charles P. Kindleberger, *The World in Depression: 1929-1939*, (University of California Press, Berkeley, 1973), pp. 60-68, and Cynthia Crossen, "Land in 1920s Florida So Hot, People Sold Underwater Lots," *The Wall Street Journal*, August 5, 2005.

starts plunged.

The third major Florida housing boom of the twentieth century, in the mid-1980s, was clearly supply driven. Adjusted for inflation, housing prices fell as savings and loans institutions and banks shoveled out money to any developers who were at least marginally qualified. Again, international monetary events played a role. Throughout the early 1980s, the Japanese, owners of the world's largest pool of savings, more and more allowed their pension firms, banks, and insurance companies to invest outside of Japan. Once freed of the constraint to keep their funds in low-return assets in Japan, these investors poured money into the higher returns, safety, transparency, and liquidity of the U.S. capital markets. OPEC, flush with cash from the 1979-80 doubling of oil prices, did the same. Much of the money found its way into the U.S. housing market. Toward the end of the decade, however, the Japanese began to diversify into Europe, the price of oil fell, the thrifts crashed, and housing starts in Florida fell from 185,000 in 1986 to 80,000 in 1990-91. Adding to the state's woes were the national recession of 1990-91 and reduced retiree in-migration reflecting the birth dearth of the 1930s. The state's income per resident relative to the nation's has never since reached the level it attained in the late 1980s.

Though causes of the current Florida housing boom will be better known once we have a longer perspective, it seems likely that once again the primary causes are new technologies and an international financial development. The new technologies are those related to information and communications, linking Florida's amenities more closely to the rest of the continent, allowing people and firms to be more footloose. The international financial development is an enormous shift in the flow of funds among nations, shown in Table 1.

The numbers, in billions of dollars, represent net annual lending or borrowing by groups of countries. They represent our very rough estimates, based on an April 14, 2005 speech by Ben Bernanke, vice chairman of the Federal Reserve Board at the time and now head of President Bush's Council of Economic Advisers.<sup>2</sup>

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<sup>2</sup> Remarks by Governor Ben S. Bernanke at the Homer Jones Lecture, St. Louis, MO. Updates speech given on March 10, 2005, at the Sandridge Lecture, Tough Choices: Shaping Florida's Future

<b>Table 1. Current Account Balances after Bernanke May 10, 2005 (billion \$)</b>			
Nation	1996	2004	Change
U.S.	-120	-670	-550
Industrial	166	270	104
Developing	-88	265	353
Error	42	135	93

In 1996, the United States was a net borrower to the tune of \$120 billion. The developing and emerging nations (including Eastern Europe) were also net borrowers, by \$88 billion. The \$208 billion borrowed came from industrial economies other than the United States, especially Japan, plus \$42 billion that the World Bank's analysts could not trace.

Eight years later, in 2004, the U.S. net international deficit on current account had swollen to \$670 billion and the net surplus of the other industrial economies as a group had grown to \$270 billion. Aside from the enormous U.S. deficit, the most striking change was that the developing and emerging nations, normally net borrowers on the international markets because of their appetite for capital, had become net lenders of \$265 billion, a reversal of \$353 billion. For the first time in modern history, the world's richest large economy had become a net borrower of funds at an annual rate exceeding five percent of its GDP, with most of the money coming from countries in the process of development.

Bernanke's explanation of what's happening is quite similar to that of Alan Greenspan.<sup>3</sup> Beginning with the Mexican peso devaluation of 1994, the emerging and developing nations experienced a series of financial crises. The East Asian

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Virginia Association of Economists, Richmond, VA, April 14, 2005, *The Global Saving Glut and the U.S. Current Account Deficit*, retrieved July 19, 2005, from <http://www.federalreserve.gov/boarddocs/speeches/2005/20050414/default.htm>

<sup>3</sup> Remarks by Chairman Alan Greenspan, *Current Account*, at Advancing Enterprise 2005 Conference, London, England, February 4, 2005, <http://www.federalreserve.gov/boarddocs/speeches/2005/20050204/default.htm>, accessed July 19, 2005.

devaluations of 1996 and 1997 were followed by the Russian default of 1998, the Brazilian default of 1999, and the Argentine default of 2002. In 1994, the United States put together a package that saved Mexico from default, reinforcing the notion that sovereign nations were too large to fail. They were attractive investments because they offered high interest rates and were safe because the United States would intervene to keep them afloat. But the East Asian and Russian problems revealed that money lent to sovereign nations could, in fact, be lost.

Now that investing in developing and emerging nations was perceived to be riskier, investors channeled more funds into the United States. Even more importantly, the developing nations, wanting to avoid future crises, brought their current account deficits and their governmental deficits under control. Seeking to be perceived as safe, they are building up large holdings of foreign exchange. Moreover, China and Japan have been buying dollar assets, such as U.S. Treasury securities, in an effort to keep their currencies from appreciating. Both countries depend on exports to absorb excess industrial capacity, and a depreciation of the dollar might brake the absorption of their products by the American market. Adding to the global supply of savings, the rise in oil prices has given OPEC more funds to invest.

The three sources of funds—the developing and emerging nations avoiding crises, China and Japan trying to maintain the value of the dollar, and OPEC—cause a global glut of saving, which is being absorbed by the United States. One large share of it goes into financing the U.S. federal deficit, enabling the United States to provide a fiscal stimulus to economic activity without boosting interest rates. Another large share is funneled by the institutions of American financial markets—Fannie Mae and Ginnie Mae, the government sponsored entities (GSEs)—into residential construction by funding mortgages.

Japan and the developing and emerging nations are funding an American housing boom, which is especially vigorous in Florida. At some point the boom will end. No one knows when and how—abruptly or gently—but it *will* end. The challenge to Florida's fiscal policy makers is to be ready for that time. In the late 1990s, with their treasuries flush from the revenues generated by the rising incomes and stock market indexes of the new economy,

many states raised spending and cut taxes. When the markets tumbled and the economy slowed, the result was trouble.

Florida, which escaped the brunt of the state and local budget difficulties of those years, can plan to be in good shape when the housing market either plateaus or sinks, whichever occurs. The impact on Florida should be more moderate than it was when construction collapsed in the early 1990s. In those years, Florida was hit by a perfect storm: the troubles of the construction sectors and other sectors important to Florida; the national recession; and a slowdown in retiree migration. Shifting industrial composition, the business cycle, and demographic trends all conspired against us. That is unlikely to happen this time, since structural shifts, the cycle, and demography are all working in Florida's favor. The weakening dollar is boosting tourism and making Florida property more valuable in dollar terms to Europeans and to Latin Americans. Few analysts are predicting a national recession. The baby boomers, born between 1946 and 1964, are just beginning to retire.

The prospect that the cooling of the housing market will not damage Florida's economy seriously gives the state choices that are more pleasant than those now facing many others. That does not mean, however, that how we divide our resources among the possibilities—cutting taxes, raising the level of service, and building infrastructure—will not have major consequences. There is the danger the housing boom will lull policy makers into complacency, since the gains come early and the pain later. The immediate benefits are the rising revenue and increasing employment. The costs are the gradually declining levels of public services as government operations are stretched thin and infrastructure is increasingly crowded.

### ***State and Local Budgets: Florida and the Nation***

Residents of every state, and their state and local governments in particular, face trade-offs in providing public services. Of course, all governments should strive to improve the efficiencies of their taxes and services, but their leaders face political and practical constraints hampering such efforts. We might think that schools, for example, would be more effective if local voters took

a stronger interest in school board elections, that the state legislature could create a more efficient tort system if it were less influenced by lawyers, and that state licensure laws could be rationalized if special interests had less political influence. But such inefficiencies exist, and while they should not be accepted without contest, responsible budgeting cannot be based on wishful thinking that they will disappear. We live in a world of second best, the possible rather than the ideal, and must do the most we can with it. Once the highest possible efficiency of service possible in this actual world has been reached, there remains a trade-off between low tax rates and high levels of service. Additionally, Florida, like all other states, must work within the framework of policy set by the federal government.

In Florida, this trade-off is made more difficult as a result of the state's constitutional prohibition of an income tax on natural persons, a fiscal constraint that will not—and indeed should not—soon be removed<sup>4</sup>. With so many visitors and temporary residents, Florida would be foolish to attempt to impose an income tax. Two political developments have made the constraint imposed by the absence of an income tax even more binding now than formerly. The first is that state governments, most of which rely strongly on income tax revenues, have taken on more of the fiscal responsibility as federal revenue sharing has declined as a share of state and local budgets and as federal mandates have increased. Urban areas, for example, receive less significant federal assistance than in earlier decades, and states and localities are required to meet the mandates of Homeland Security and of No Child Left Behind with only partial federal funding.

The second political development is term limits. Representatives in particular have only a few years to master an overwhelming torrent of issues and, even more importantly, to learn how the system works. Senators often advance to the Senate after serving in the House, giving them more time to master a variety of issues and to learn how to forge compromises.

Besides the absence of an income tax, other constraints restrict

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<sup>4</sup> Article VII, Section 5(a), Florida Constitution. Tax on the income of corporations is explicitly permitted.

**Table 2. State and Local Revenue Shortfall or Expenditure Excess per Adult Resident in Florida Compared to Other States, FY 2000**

No Income Tax	\$1,146
Less from Federal Government	\$459
Less from Tuition	\$122
More on Public Safety	\$98
More on Solid Waste	\$45
Less from Property Tax	\$38
Less from Hospital Charges	\$23
Other	\$140
<b>Total</b>	<b>\$2,071</b>

Source: Calculated from budget and population data in U.S. Census Bureau, *Statistical Abstract of the United States: 2004-2005*, Washington, D.C., 2004. Funding for retirement funds is omitted.

Florida's state and local governments. Florida receives less than its per-resident share of transfers from the federal government, collects less from education charges (primarily college and university tuition), and spends more on public safety (police, corrections, and fire protection). Tables 2 and 3 compare Florida's state and local budgets per adult resident (ages 18 and over) to those of other states. Table 2 shows categories in which Florida's governments either (a) receive less revenue per adult than those in other states, or (b) spend more than those in other states.

What Table 2 illustrates is that in FY 2000, because of the state's lack of an income tax, lower revenue sharing from the federal government, lower receipts from tuition, property taxes, and hospital charges, and higher spending on public safety and solid waste, Florida's state and local governments started out over \$2,000 behind others with respect to the remaining categories. As a group, they had to choose some combination per adult of (a) collecting more from other taxes and charges, and (b) spending less on other services. Table 3 shows what they did.

Florida's state and local governments made up the \$2,000 shortfall shown in Table 2 partly by collecting an extra \$364 in sales tax revenue per adult. Most of the difference however came from their spending \$1,214 less on education and welfare.

When comparing public budgets across states, it is important to include local revenues and expenditures, since services that are provided by the state level in some states are provided by local governments in others, and states transfer widely varying amounts of funding per adult to local governments. This complicates comparisons, since there are over 80,000 local governments and they use varying accounting categories.

The Census Bureau estimates expenditures by local governments and places them in consistent categories that allow comparison. But the data are published only with a long lag. Figures on employment by state and local governments are available more quickly. From them, we calculate that in March 2003, Florida had 47 state and local employees per thousand residents, compared to 54 nationally. Per thousand residents, Florida had roughly one more state and local employee in public safety and one fewer in health and welfare. As with expenditures, the major difference is education. Per thousand residents, Florida had seven fewer employees in K-20 education. Adjusted for population, Florida hires only 82% as many school personnel. Moreover, the pay per employee is only 83% of the national average, making total compensation for education employees per resident 30% lower than the national average.<sup>5</sup>

This will be one theme of this report: Florida spends less than other states on education, a characterization of the state that holds even after obvious adjustments. Part of the reason for the lower spending, for example, is demographic. Only 26% of Floridians, compared to 28% of Americans, are between the ages of 5 and 24. But that explains only a small fraction of the difference, and is offset by the fact that Florida is given a disproportionate share of the challenge of tapping the talent and drive of the nation's immigrant families by lifting the educational attainment of their children far above the average attainment of their parents. Another explanation of low spending on education is that Florida's amenities allow the state's employers to hire workers of a given skill level for about 5% less than their national average pay. That

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<sup>5</sup> This is not to say that teachers, for example, make 17% less in Florida. The figure includes the effect of Florida's hiring a disproportionate number of aides relative to teachers, and relatively few college and university faculty.



**Table 3. State and Local Revenue Excess or Expenditure  
Shortfall per Adult Resident in Florida  
Compared to Other States, FY 2000**

Less on Education	\$859
More from Sales Tax	\$364
Less Public Welfare	\$355
Less on Retirement	\$277
Less Interest on Debt	\$71
Less on Roads and Highways	\$64
Less on Housing	\$53
Less on Administration	\$28
<b>Total</b>	<b>\$2,071</b>

holds for teachers too, but still accounts for only a proportion of the difference. More than offsetting that, Florida spends far less per resident on private colleges and universities than do other states. The unavoidable conclusion is that Florida scrimps on education.

Not only does Florida spend little on education, dollar for dollar what it does spend for K-12 schooling has in the past been less effective than in many other states because of weak governance at the district and school levels. The weak governance came from ineffective accountability in three areas: budgetary, political, and social. Budgetary accountability is weak because the state has fully equalized funding across districts. Local voters cannot reward their schools for good performance by boosting their budgets. Political accountability is weak because Florida's districts are large, reducing voter interest in school board elections. Social accountability is weak because Florida averages the largest school size in the nation. Parents feel less able to influence schools and teachers are less acquainted with their students and with other teachers, which reduces their ability to elicit good behavior and teamwork.

The governor and the legislature are attempting to counter the effects of weak district and school governance by imposing consequential accountability at the state level through standardized testing and grading individual schools. By several objective measures, the results are promising. Test scores, AP test takers, and graduation rates have risen, much more than in other states,

though admittedly from a low starting point. Schools are achieving higher grades. But critics claim that much of the gain comes from gaming the system—teaching to the tests, serving high-carbohydrate meals on test days, expelling less-able students on test days, or placing less-able students into non-tested special education categories. Even more seriously, some observers worry that the gains are temporary, extracted by placing extra burdens on teachers that they are willing to endure in the short run but that will make hiring and retaining the best teachers more difficult in the long run.

It is critical that the effort to improve Florida's schools succeed. The experiment in statewide accountability coupled with low funding is occurring at a time in which the returns to education have doubled. "In 1979, the average thirty-year-old man with a bachelor's degree earned just 17 percent more than a thirty-year-old man with a high school diploma. Today, the equivalent college-high school wage gap exceeds 50%, and the gap for women is larger"<sup>6</sup> (Levy & Murnane, 2004, p. 6). With the expanding premium for skill, Florida's educational shortfall is large enough to be costly even from a national perspective. Consequently, a large share of this report addresses educational issues.

***The History of Florida's State and Local Revenues,  
1981 to 2003***<sup>7</sup>

The state of Florida collected \$52 billion in revenue in fiscal year 2003, up 481% from 1981 (Table 4). Most of the increase is due to inflation and the state's rapid population growth. But even on a real per capita basis Florida's revenue almost doubled over this period, growing by \$1,516, compared to \$1,859 for the other forty-nine states (Figure 5).

Revenue growth in Florida relative to other states was particularly rapid in the 1982 to 1996 period (Figure 6). Many factors contributed to this very rapid expansion of state

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<sup>6</sup> Levy is an MIT professor of economics and Murnane is a Harvard professor of education.

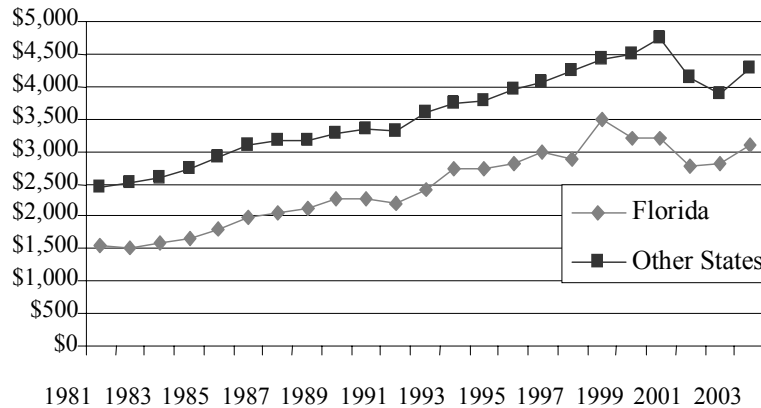
<sup>7</sup> The first version of this section was drafted by David Lenze.

**Table 4. State Revenue (billion \$) and Real Per Capita Revenue (constant 2000\$), Florida and Other States, FY 1981 to 2003**

Fiscal Year	Florida		Other States	
	Revenue	Real Per Capita Revenue	Revenue	Real Per Capita Revenue
1981	9.0	1,562	301.8	2,434
1982	9.4	1,494	321.6	2,507
1983	10.6	1,575	347.1	2,575
1984	11.9	1,663	385.2	2,734
1985	13.8	1,816	425.2	2,902
1986	15.8	1,977	465.4	3,080
1987	17.4	2,044	499.5	3,173
1988	19.4	2,133	522.4	3,172
1989	22.2	2,278	564.5	3,263
1990	23.9	2,275	608.3	3,328
1991	24.5	2,196	635.5	3,310
1992	28.4	2,424	716.5	3,582
1993	33.2	2,716	772.0	3,737
1994	34.8	2,726	806.9	3,781
1995	37.4	2,806	869.0	3,941
1996	41.7	3,002	925.1	4,069
1997	41.3	2,862	998.9	4,257
1998	51.7	3,481	1,051.5	4,424
1999	49.2	3,200	1,103.7	4,497
2000	51.6	3,216	1,209.2	4,747
2001	45.4	2,774	1,110.7	4,133
2002	46.8	2,807	1,055.5	3,891
2003	52.3	3,078	1,175.7	4,293

Source: Revenue from Florida Consensus Estimating Conference, Revenue Analysis FY 1970-71 through FY 2013-14, Vol. 20, 2004; U.S. Census Bureau, State Government Finance, [www.census.gov/govs/www/index.html](http://www.census.gov/govs/www/index.html); Population from REIS, BEA, U.S. Department of Commerce, [www.bea.gov/bea/regional/spi](http://www.bea.gov/bea/regional/spi) Table SAI-3; Personal consumption price deflator from National Income and Product Accounts, BEA, [www.bea.gov/bea/dn/nipaweb/FootNotes.asp?Table\\_id=64](http://www.bea.gov/bea/dn/nipaweb/FootNotes.asp?Table_id=64) Table 2.3.4.

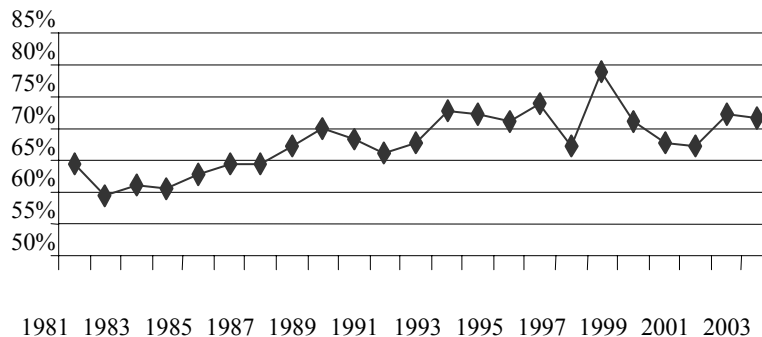
**Figure 5. Real Per Capita State Revenue  
FY 1981 to 2003**



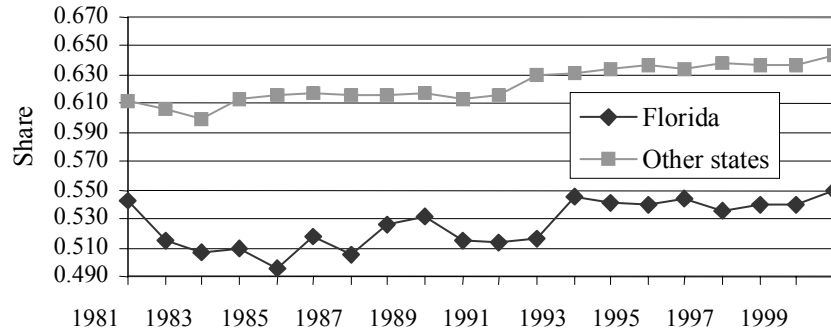
government. Here we will focus on just three: (1) the expansion of insurance trust funds; (2) growing centralization of revenue collection by state government; and (3) rising tax rates.

Expansion of insurance trust funds. One of the fastest growing components of state revenue is that received by insurance trust funds operated by the state. This revenue increased more than ten-fold since 1981 and is now one of the biggest components of revenue. In Florida, it accounts for nearly 20% of total revenue. The largest trust fund provides benefits to retired government employees. Smaller trust funds have been established to provide

**Figure 6. Real Per Capita State Revenue: Florida Relative to  
Other States, FY 1981 to 2003**



**Figure 7. State Share of State and Local General Revenue  
FY 1981 to 2000**



social insurance for workers (e.g., unemployment insurance). Pension funds could easily be operated by private pension companies such as TIAA-CREF (which handles defined contribution benefit programs for many state university employees). If the state relied entirely on the private sector for these services, rather than performing them itself, both the level of state revenue collected and its growth rate would fall substantially without any reduction in the level of public services provided to state residents (or beneficiaries of the trust funds).

Growing centralization of general revenue collection by state government. Florida has been much more liberal than other states in delegating revenue collection authority to local governments. Nevertheless, over time the state government has reduced somewhat the liberty of local governments in this area (Figure 7). From 1982 to 1992 about 51% of total state and local general revenue (not the same as total revenue) was collected by state government. In 1993, this jumped to almost 55% where it has remained (with some fluctuation) ever since. The state share in the other forty-nine states also has trended up since 1981, reaching 64% in 2000.

Because of the interdependence of state and local government revenue policy, it is short-sighted to consider state revenue in isolation. Table 5 presents the revenue of local governments in addition to that of state governments. Figure 8 compares real per capita local revenue growth in Florida to that in other states.

Clearly, the level of total revenue collected locally in Florida has always been greater than that collected by the state

**Table 5. Revenue (billion \$) and Real Per Capita Revenue (constant 2000 dollars), by Level of Government in Florida and Other States, FY 1981 to 2003**

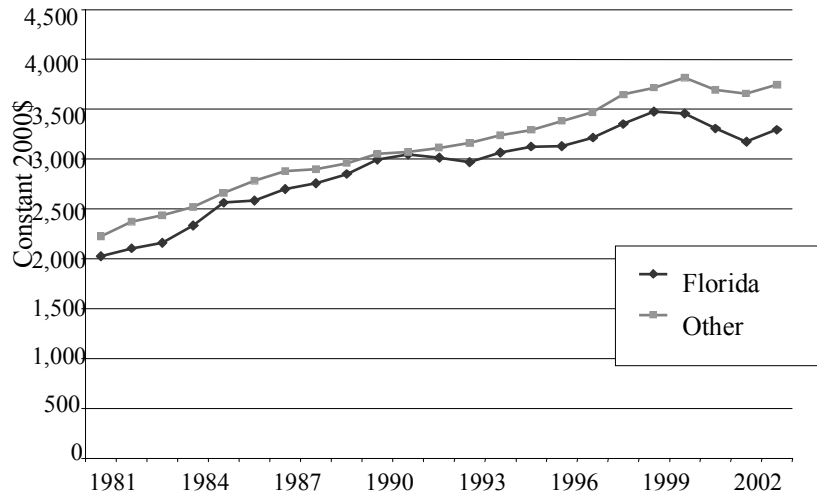
Year	Florida				Other States			
	Revenue		Real Per Capita Revenue		Revenue		Real Per Capita Revenue	
	State	Local	State	Local	State	Local	State	Local
1981	9.0	11.7	1,562	2,028	301.8	276.1	2,434	2,227
1982	9.4	13.2	1,494	2,107	321.6	299.9	2,507	2,372
1983	10.6	14.5	1,575	2,160	347.1	323.6	2,575	2,435
1984	11.9	16.7	1,663	2,336	385.2	349.4	2,734	2,521
1985	13.8	19.5	1,816	2,563	425.2	383.1	2,902	2,662
1986	15.8	20.7	1,977	2,585	465.4	414.1	3,080	2,783
1987	17.4	23.0	2,044	2,699	499.5	446.3	3,173	2,880
1988	19.4	25.0	2,133	2,758	522.4	470.0	3,172	2,899
1989	22.2	27.7	2,278	2,851	564.5	504.3	3,263	2,959
1990	23.9	31.4	2,275	2,996	608.3	548.8	3,328	3,054
1991	24.5	34.0	2,196	3,048	635.5	578.2	3,310	3,070
1992	28.4	35.3	2,424	3,014	716.5	612.2	3,582	3,114
1993	33.2	36.3	2,716	2,967	772.0	645.5	3,737	3,164
1994	34.8	39.2	2,726	3,067	806.9	681.7	3,781	3,238
1995	37.4	41.6	2,806	3,126	869.0	715.8	3,941	3,293
1996	41.7	43.5	3,002	3,127	925.1	760.3	4,069	3,383
1997	41.3	46.5	2,862	3,216	998.9	801.3	4,257	3,469
1998	51.7	49.8	3,481	3,352	1,051.5	859.8	4,424	3,648
1999	49.2	53.5	3,200	3,476	1,103.7	898.9	4,497	3,715
2000	51.6	55.5	3,216	3,458	1,209.2	958.3	4,747	3,817
2001	45.4	54.1	2,774	3,306	1,110.7	992.2	4,133	3,693
2002	46.8	53.0	2,807	3,178	1,055.5	993.0	3,891	3,660
2003	52.3	56.0	3,078	3,295	1,175.7	1,025.0	4,293	3,744

Note: Local and per capita revenue for other states includes DC.

Source: Same as Table 4.

government. The opposite is true in other states. On a real per capita basis, local government revenue growth has been slower than state government revenue growth. In Florida, real per capita local revenue grew 62% from 1981 to 2003 while state revenue grew 97%. As was the case at the state level, insurance trust funds are one of the fastest growing components of local revenue.

**Figure 8. Real Per Capita Local Revenue  
FY 1981 to 2003**



Because of its character, size, and rapid growth, for the purposes of this report it is more useful to exclude these insurance trust funds. This is done in Table 6, which reports general revenue. General revenue excludes the revenue of insurance trusts, as well as the revenue of liquor stores (which Florida does not operate) and the revenue of utilities (which is trivial at the state level in Florida, though the revenue of local electricity, gas, and water utilities is substantial).

Returning to Table 5, real per capita total state and local revenue rose by \$2,783 in Florida from 1981 to 2003, compared to \$3,376 in other states, widening the gap by \$593. Of the total increase in Florida, 54% was local, compared to 45% nationally. Compared to the nation, the relative role of local governments rose in Florida. This revenue trend is somewhat misleading, however, in that the distribution of most property tax revenue used for K-12 funding is determined by the state. Local governments have no more spending autonomy in Florida than nationally.

Rising tax rates. Rising tax rates is a third factor contributing to the growth in per capita revenue in Florida over this period. The two taxes that raise the most revenue for state and local governments in Florida are the sales tax and the property tax. The

**Table 6. General Revenue of State and Local Government  
Florida and Other States, FY 1981 to 2003**  
(billion \$)

Year	Florida	Other States	Year	Florida	Other States
1981	14.9	408.5	1993	50.7	990.9
1982	16.2	440.0	1994	54.5	1,045.9
1983	17.9	469.0	1995	57.4	1,112.1
1984	20.3	522.6	1996	60.7	1,162.1
1985	24.0	573.7	1997	63.8	1,225.5
1986	25.7	615.7	1998	68.2	1,297.6
1987	28.6	657.6	1999	72.7	1,361.4
1988	32.0	695.1	2000	75.9	1,465.5
1989	36.3	749.5	2001	81.3	1,565.9
1990	40.1	809.4	2002	86.6	1,601.2
1991	43.0	859.2	2003	93.9	1,669.4
1992	46.0	929.2			

Note: Values for 2001 and 2003 are estimated.

Source: U.S. Census Bureau, State Government Finance, retrieved July 29, 2005, from [www.census.gov/govs/www/index.html](http://www.census.gov/govs/www/index.html)

state sales tax rate was only 4% in 1981, currently it is 6%. In 1980, the county-wide millage rate was less than 10 mills in five counties and no county had a rate as high as 20 mills (Table 7). In 2003, only Monroe had a rate less than 10 mills and 15 counties had rates exceeding 20 mills.

**Table 7. Total County-wide Ad Valorem Millage Rates  
1980 and 2003**

Mills	Number of Counties	
	1980	2003
< 10.0000	5	1
10.0000-14.9999	47	5
15.0000-19.9999	15	46
> 20.0000	0	15

Source: *Florida Statistical Abstract*, Table 23.93, various years.



**Figure 9. Per Capita State and Local General Revenue: Florida Relative to the Rest of the U.S.  
FY 1981 to 2003**

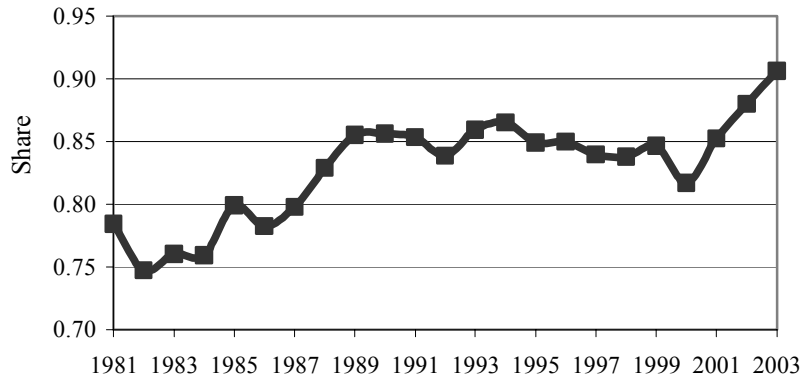
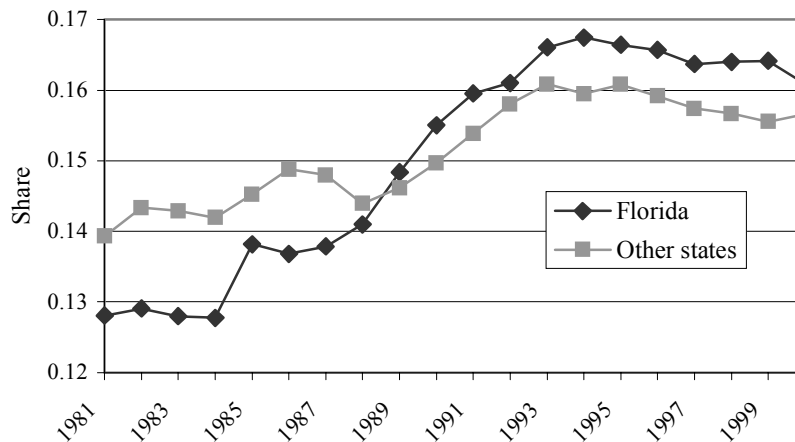


Figure 9 shows that per capita state and local general revenue in Florida has been persistently lower than in other states over the 23 years depicted in the chart, in spite of the recent upturn caused by the housing boom.

The same impression is conveyed by Figure 10 during the 1980s. State and local general revenue as a share of Gross State

**Figure 10. State and Local General Revenue as a Share of Gross State Product  
FY 1981 to 2000**



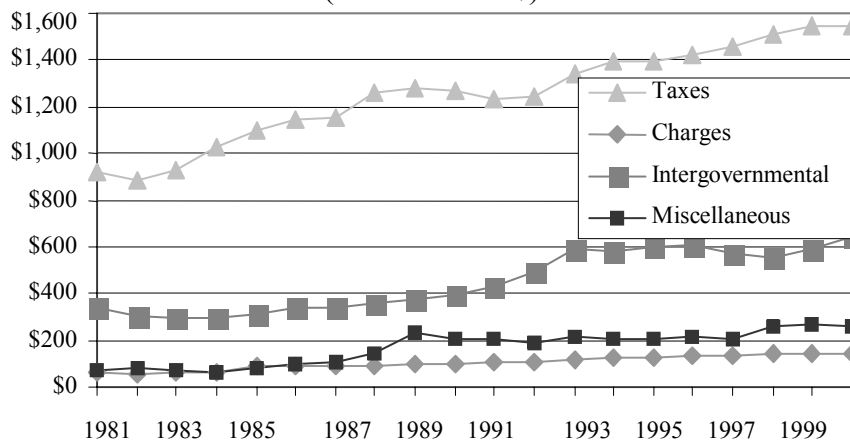
Product (GSP)<sup>8</sup> was lower than the rest of the country.

However, by 1989 governments in Florida were absorbing a larger proportion of what workers were able to produce with the state's stock of capital. The share of output absorbed by state and local government peaked at 16.7% in 1994 (the corresponding figure for the rest of the country was only 15.9%). Since then, state and local government revenue has grown a slightly slower pace than GSP, but Florida continues to be higher than other states.

### Composition of General Revenue

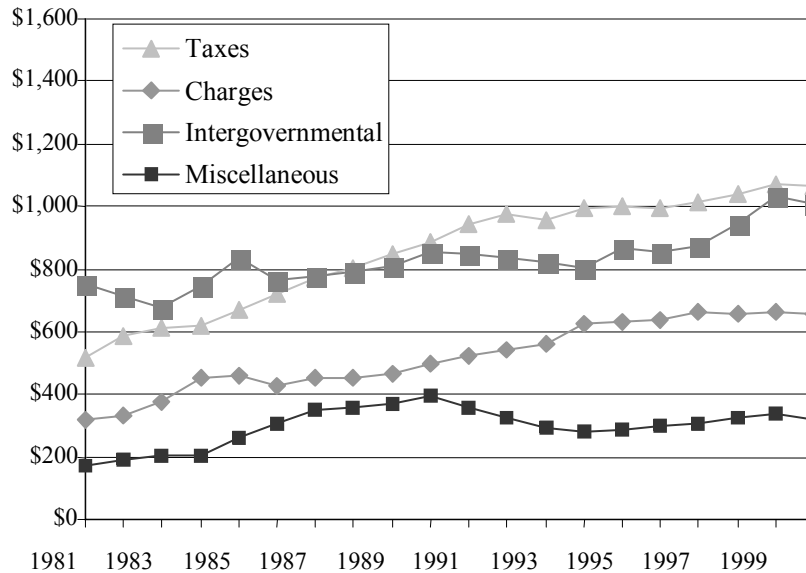
Florida's state government relies on taxes for more than half of its general revenue. In FY 2000, the state collected \$24.8 billion in taxes, \$2.4 billion in user charges, and \$4.2 billion in miscellaneous revenue such as interest. It also received \$10.3 billion from the federal government (approximately one-fourth of all general revenue). In contrast, local governments collected nearly equal amounts in taxes (\$17.1 billion) and revenue (\$16.2 billion) from state and federal governments. Local governments relied far more heavily on user fees than state government,

**Figure 11. Real Per Capita State General Revenue in Florida  
1981 to 2000  
(constant 2000\$)**



<sup>8</sup> Gross State Product is from the Bureau of Economic Analysis, U.S. Department of Commerce.

**Figure 12. Real Per Capita Local General Revenue in Florida, FY 1981 to 2000**  
(constant 2000\$)



collecting \$10.5 billion (22%) in this fashion.

On a real per capita basis, the four main components of general revenue at the state level have trended upward since 1981 (Figure 11). Real per capita charges have grown 146%, intergovernmental revenue (federal grants) has grown 88% and taxes have grown 68% from 1981 to 2000. Despite the remarkably high growth rate of charges, they still remain a relatively minor source of revenue. The figure illustrates some sensitivity of taxes to the business cycle, particularly in 1982 and 1992. Higher frequency data would show even greater sensitivity. Federal grants were relatively constant 1993 through 1999. The small up-tick in 2000 was followed by rapid growth in subsequent years.

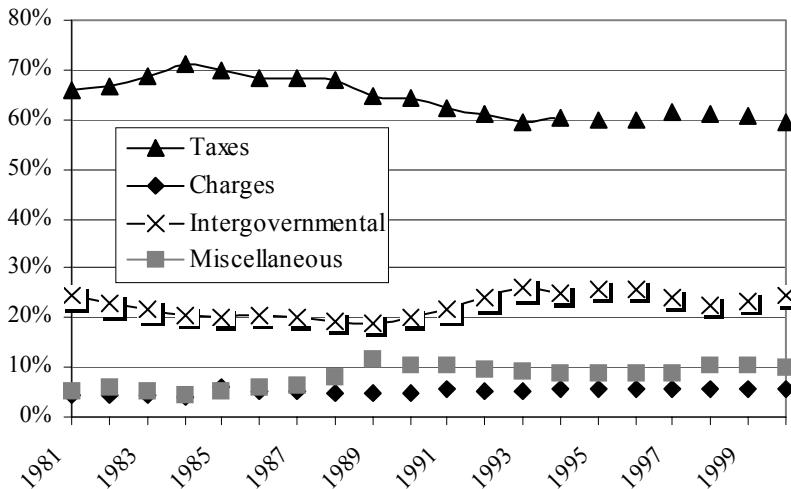
Figure 12 illustrates similar trends for local governments in Florida. Local tax revenue, primarily property taxes, is largely insensitive to the business cycle. So are charges. There is substantial year-to-year variability in intergovernmental revenue (largely from the state). The decline in real per capita miscellaneous revenue is largely a consequence of falling interest rates. In nominal dollars, local interest earnings peaked in 1989 at \$2.9 billion, a level never again reached.

The primary tax levied by the state—that on sales and gross receipts—generated \$19.1 billion in FY 2000. The corporate income tax generated \$1.2 billion, and other taxes \$4.5 billion. The primary tax levied by Florida's local governments—that on property—generated \$13.3 billion. Local governments also collected \$3.1 billion from sales and gross receipts taxes and less than \$1 billion from all other taxes.

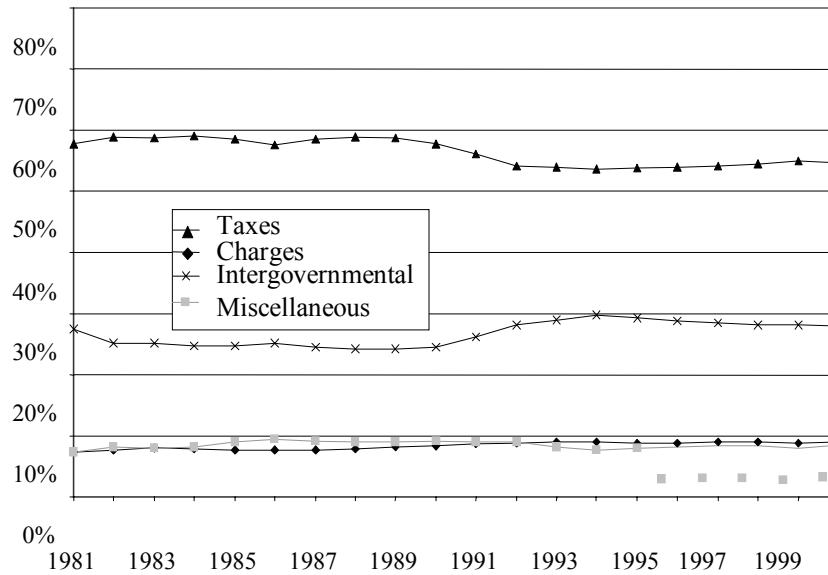
Since 1992, the sources of general revenue have been remarkably stable at the state level (Figure 11). Between 59 and 61 percent are taxes; 5 to 6 are charges; 23 to 26 is intergovernmental; and 9 to 11 is miscellaneous.

In contrast, the share of local government tax revenue rose from 29% in 1981 to 35% in 2000; the share of user fee revenue rose from 18% to 22% while intergovernmental revenue declined from 43% to 33% (Figure 12). Federal grants constituted more than 10% of Florida's local government general revenue in 1981 but less than 4% in 2000.

**Figure 13. Share of State General Revenue in Florida, FY 1981 to 2000**



**Figure 14. Share of State General Revenue, Other States  
FY 1981 to 2000**



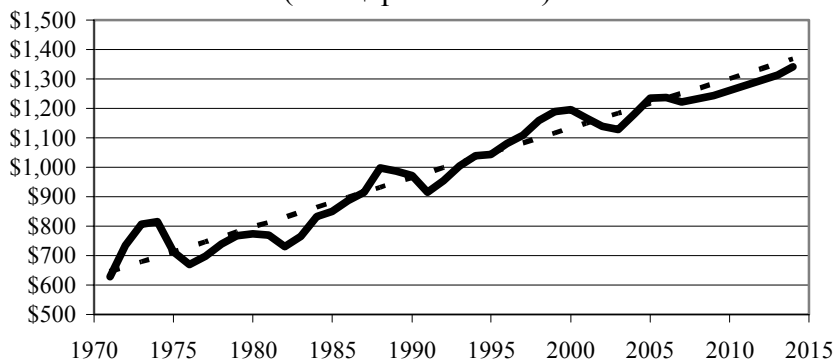
Charges (or user fees), such as tuition at state universities, tolls on congested state highways, and entrance fees at state parks, are efficient in the sense that they do not have the large dead-weight losses associated with taxes. Over the last twenty years, local governments in Florida have not only generated a larger share of their revenue in this manner than the state has, local governments have also increased the share raised in this manner more than the state has.

Compared to other states, Florida relies more on taxes for general revenue (60% vs. 55% in 2000). This can be seen by comparing Figure 13 with Figure 14. Florida relies less on charges (5.7% vs. 8.9%) and on intergovernmental revenue (25% vs. 28%). Florida's local governments rely more on charges (22% vs. 15%) than local governments in other states and less on taxes (35% vs. 38%) and less on intergovernmental revenue (33% vs. 40%).

***Forecast***

The outlook for Florida's general revenue is displayed in Figure 15. It is computed by us from the projection by the Fall

**Figure 15. General Revenue per Resident,  
Florida: Actual, Trend, and Projected  
1971 to 2014  
(2005\$ per Resident)**



2004 Florida Revenue Estimating Conference. Figure 15 requires a bit of effort to understand. The full line has two parts: (1) history (FY 1971 to FY 2004); and (2) the Conference projection (FY 2005 to FY 2014). Both the history and the projection represent simple calculations by us of real capita values using historical and projections data provided by the Conference. The slashed line is ours. We fit it to the data for FY 1971 to FY 2004 represented by the solid line, and then extrapolated it to FY 2014. After FY 2004, the solid line represents the projections by the Conference and the slashed line represents a simple extrapolation of the past trend.

The Conference concept of general revenue differs from that used in our historical discussion in the previous section. In our previous section we used the U.S. Census Bureau's definition of general revenue because that made it possible for us to compare Florida to other states. We now (in this section) use the Florida Conference definition in order to be able to present data that are more recent and that serve as the common basis for discussions of Florida's budgets.

The Revenue Estimating Conferences (also known as the Consensus Estimating Conferences, since they represent agreements hammered out by representatives from various parts of Florida's government) have very good track records, as Table 8 indicates.

There is very little bias in their forecasts in the short term: the

**Table 8. Florida Consensus Estimating Conference Forecast**

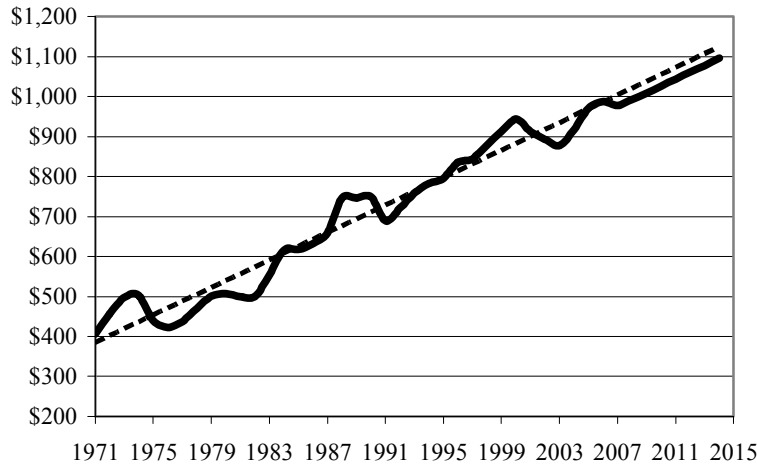
Forecast Length	Number of Forecasts	Log Change Forecast Errors	
		Algebraic Average	Absolute Average
1-year	17	-0.00373	0.02286
2-years	16	-0.00227	0.03753
3-years	15	0.00802	0.04183
4-years	14	0.01249	0.04179
5-years	13	0.02085	0.04357
6-years	12	0.02447	0.04748
7-years	11	0.03160	0.06196
8-years	10	0.04530	0.07228
9-years	9	0.06258	0.08181
10-years	7	0.09617	0.10140

Source: Florida Consensus Estimating Conference, *Revenue Analysis*, various issues.

average algebraic forecast error one year ahead is less than 0.4 log points and an even smaller 0.2 log points two years ahead (a log point is roughly a percentage point). For longer horizons there is a tendency to over-predict revenue by about 10%.

Our best guess is that the tendency to over-predict general revenue is also present in the projections shown in Figure 15, which displays general revenue per resident in constant 2005 dollars. The Conference projections for general revenue per resident—which are not actually theirs but rather constructed by us from their population, inflation, and revenue projections—are \$1,260 for 2009-10 and \$1,341 for 2013-14. Our belief that those numbers will be too high is not one that we hold with great confidence. For one thing, the Conference projections are about \$30 below the simple linear trend (shown by the dashed line in Figure 15) fitted to the fiscal years 1971 through 2005 and extrapolated. Second, the Consensus projections represent an agreement by a large group of well informed and skilled people. These are estimates created by experienced professionals. A more

**Figure 16. Sales Tax Revenue per Resident  
Florida: Actual, Trend, and Projected  
1971 to 2014  
(2005\$ per Resident)**



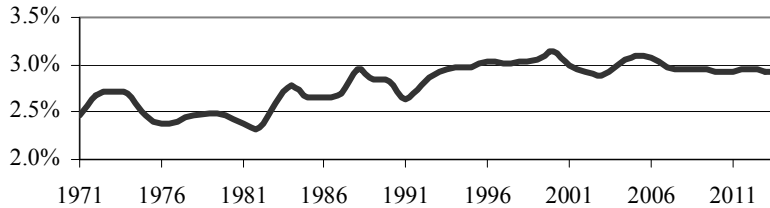
cautious way of stating our view is this: Florida should be prepared for a future in which real general revenue per resident turns out to be 10% less than the Consensus projection.

The major component of general revenue comes from the sales and use tax. Figure 16 shows past, trend, and projected sales tax revenue per resident in constant 2005 dollars. As with general revenue, the Consensus projection is about \$30 below the 1971 to 2005 linear trend. Figure 16 shows the effect on revenues of recessions (1973-75, 1980-82, 1990-91, and 2001), an increase in the tax rate during the Graham administration, the temporary extension of the sales tax to cover services (1987) and, following its repeal, another increase in the rate. Clearly the trend in revenue has been upward. Without the 50% increase (four cents to six cents) in the sales tax rate, however, revenue per resident would be not \$1,000 but less than \$700.

That the trend would be upward is not surprising, given that tax rate and real income per resident have risen. What may be surprising, however, is the ongoing strength of the sales tax as a revenue source. Experts on sales taxes think that states will be forced to rely more and more heavily on income taxes. The sales



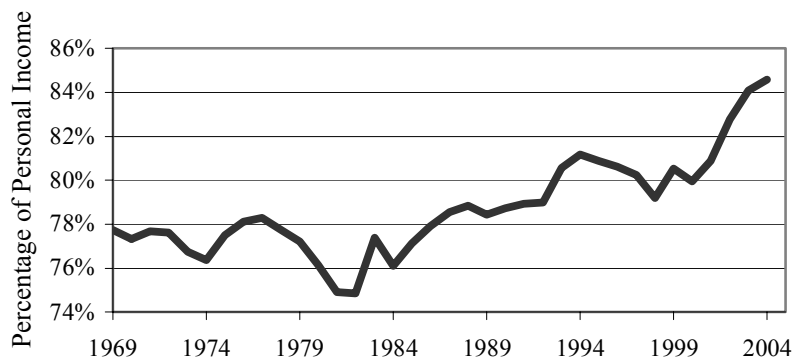
**Figure 17. Ratio of Sales Tax Revenue to Personal Income Florida: Actual and Projected 1971 to 2014**



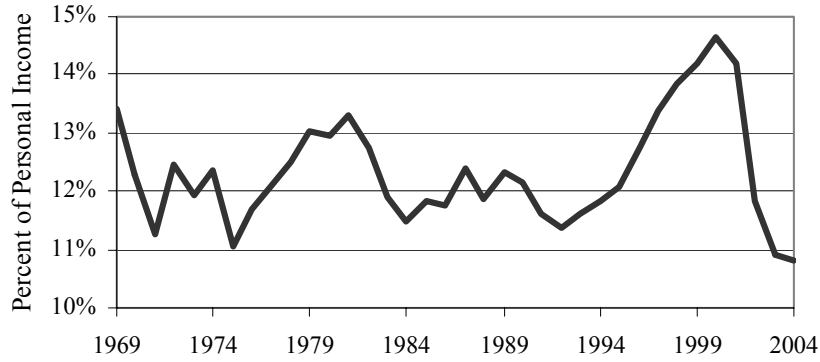
tax base, they say, is eroding for several reasons (Fox, 1998; Brunori, 2001). First is the well-known decline in the ratio of goods to services in consumer spending. Second, because of pressure from groups affected by the tax, more previously covered items are exempted than vice versa. Third, each year Internet purchases are giving vendors with no in-state bricks and mortar a stronger competitive advantage. Fourth, many sales taxes are paid not by final consumers but by businesses on intermediate goods. When those taxes are not offset by the value of public services provided to the businesses, there are solid efficiency arguments for removing them as well as pressure from inter-state competition to attract firms.

What has kept Florida's sales tax revenue so strong? Figure 17 shows that, averaging out cyclical fluctuations, the ratio of sales tax revenue to personal income in the state has risen from around 2.4% in the late 1970s to around 3.0% today. Most of the increase,

**Figure 18. U.S. Consumption 1969 to 2004**



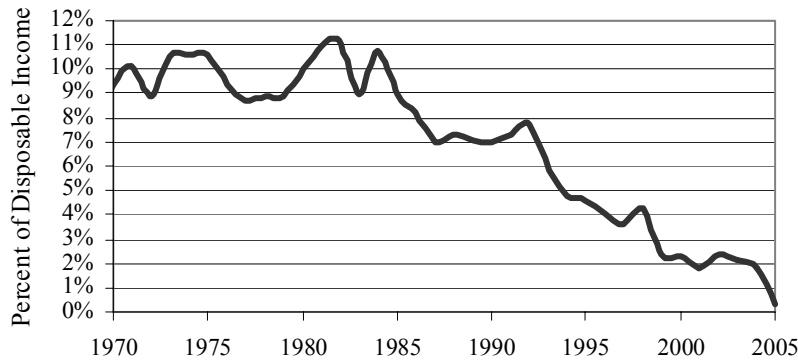
**Figure 19. U.S. Personal Current Taxes  
1969 to 2004**



Source: Bureau of Economic Analysis, National Economic Accounts, <http://bea.gov>

as noted, stems from a higher sales tax rate. But there are other factors, which may be less obvious. The most important is the national increase in the ratio of consumption to personal income, which has risen from around 78% in the 1980s to over 84% last year (Figure 18. Data are from the U.S. national income and product accounts, available at the web site of the Federal Reserve Bank of St. Louis and from other sources.) In the past five years, consumer spending has been boosted by income tax cuts, as shown in Figure 19. The long-term question is whether these cuts will be sustainable if federal spending on health care continues to rise rapidly, as the Congressional Budget Office projects it will, and spending on national security remains high.

A second force boosting sales tax revenue is a long-run trend by Americans to spend a larger-and-larger share of their disposable or after-tax income. Figure 20 shows how the personal saving ratio has fallen from 10% in the 1970s to 2% in the current decade, an incredible drop. During the first half of calendar 2005, in fact, the saving ratio was less than one percent (0.26%). Over the past five years, the low saving out of personal income has been supported by rising equity in housing, which in turn is supported by an inflow of capital from other countries (as stressed earlier in this chapter), associated with our amazingly large national current account deficit with respect to the rest of the world.

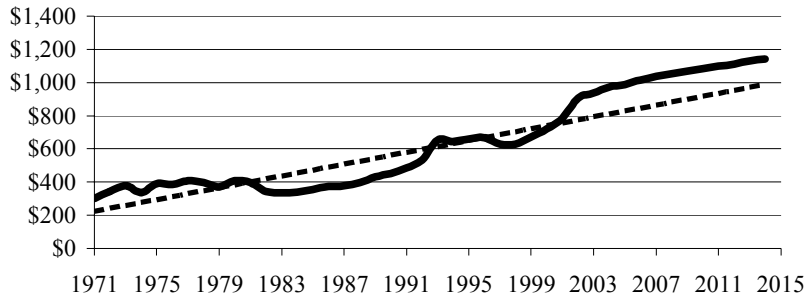
**Figure 20. Personal Saving Ratio, 1970 to 2005**

Source: Bureau of Economic Analysis, National Economic Accounts, <http://bea.gov/bea/dn/nipaweb/TableView.asp>

The point, of course, is that sales tax revenue arises from what households spend, not from what they pay the federal government in income taxes or from what they save. Given that fact, we think it would be imprudent to base long-range general revenue budgeting on the assumption that the very low personal saving ratio, low federal income taxes and a large national current account deficit will last. Moreover, few observers see either an increase in Florida's sales tax rate or a large broadening of its base on the horizon.

We have similar concerns about a second source of revenue for the state government, one that closely trails the sales tax in amount: the category grants and donations, mainly of funds from the federal government. Past values and the Consensus projection, in 2005 dollars per resident, are shown in Figure 21, with the simplified label "Federal Funds to Florida." According to a linear trend line fitted to 1971 through 2004, the current amount would be just over \$800, whereas the actual amount is close to \$1,000. The Consensus projection is that over the next ten years federal funds will rise at the historic trend rate but from their current above-trend level. That projection is as good as anyone's, since no one can say how the federal government will respond to its budget pressures. But it would be prudent not to count on those resources to rise at the historical pace from the current above-trend level. A complication is that half of the federal resources are for Medicaid,

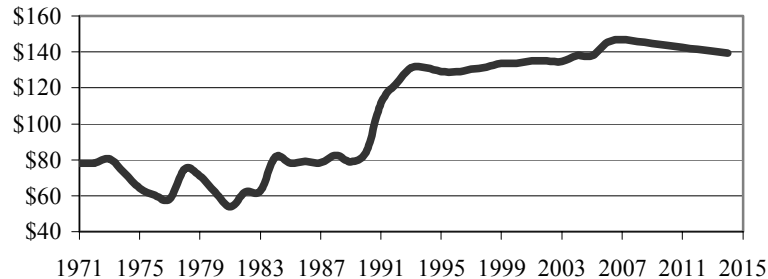
**Figure 21. Federal Funds to Florida:  
Actual, Trend, and Projected, 1971 to 2014**  
(2005\$ per resident)



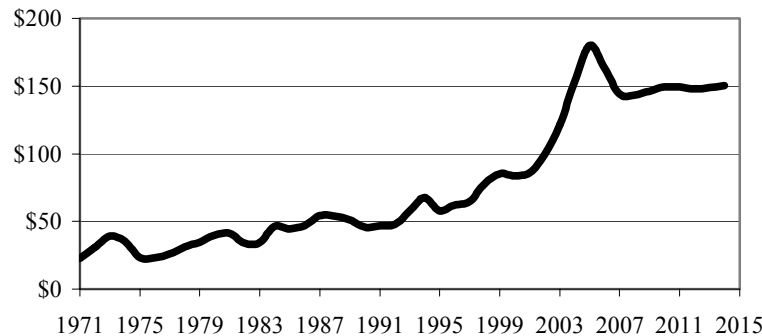
so much depends on whether the federal support becomes independent of state spending on that program, as discussed in Chapter 3 of this volume.

Two lesser revenue categories, the transportation trust fund and documentary stamp tax, are shown in Figures 22 and 23, with both historical values and Consensus projections, again in 2005 dollars per resident. In Figure 22, the effect of the 1990 gasoline tax increase is evident. One result of that hike has been much better maintenance of the Intrastate Highway System. The projection that transportation trust fund revenue per resident will remain near \$140 is quite reasonable, based on the assumptions that Floridians already have as many vehicles per household as they are going to

**Figure 22. Transportation Trust Fund Revenues  
in Florida, Actual and Projected, 1971 to 2014**  
(2005\$ per resident)



**Figure 23. Total Documentary Stamp Tax  
Revenue in Florida, Actual and Projected  
1971 to 2014**  
(2005\$ per resident)



and that fuel efficiency will improve. (The gasoline tax per gallon is adjusted for overall inflation but is not otherwise linked to the price per gallon.) Revenue from the documentary stamp tax has doubled in the past four years, even after adjustment for population growth and inflation. The Consensus projection is that it will decline a bit as the housing boom subsides, but will remain above the pre-2000 trend.

We defer discussion of revenues that are targeted specifically to education—such as PECO—to chapters 5 and 6 and summarize this section briefly. For forecasts of long-run state revenues, we turn to the state's Consensus Estimating Conference. Their estimates are the best available. We urge caution in their use and are confident the participants would too. Aside from the unavoidable uncertainty surrounding any projections, the strong growth of Florida's revenue from the sales tax and from the federal government is based on changes in recent years that are likely to prove unsustainable: cuts in the federal income tax, a large federal deficit, an unprecedented low personal saving rate, a housing boom, and an unprecedented national current account deficit. As has been often noted, what is unsustainable will end. Whether the end of these recent changes that have boosted Florida's state revenue will be offset by other favorable changes cannot be known. Obviously it would be unwise to count on it.

*The Tax System and Business in Florida*

In this section we discuss the effects of Florida's state and local business taxes on business decisions about whether to locate production of goods or services in Florida for sale either to other states or to other countries. We choose this focus for two reasons. First, no matter what the tax system, businesses that produce and sell local goods and services are likely to locate in Florida. This includes everything from retail stores through residential construction to medical care. If the property tax is high, supermarkets will pass on part of the tax burden backward to employees and part forward to customers. They will still locate in Florida. Their customers will have to bear a large share of the tax burden of supermarket A because supermarket B is also paying the same state and local taxes, which means it cannot easily draw away customers from A by charging lower prices. We are not claiming this is an absolute law. A higher sales tax on clothing, for example, will encourage Floridians to buy more apparel through the Internet or when traveling. Nonetheless, locally-oriented businesses are far less mobile and thus, less sensitive to state and local taxes than are export-oriented businesses, which face price competition from firms located in low-tax states.

A second reason we focus on export-oriented production arises from Florida's goal of creating high-value-added jobs. In Florida, on average—again it is not an absolute law—firms producing goods and services for sale elsewhere create higher-value-added jobs. Florida has less than its share of the nation's production for sale at a distance, but what it does have is often in technology-related sectors, and the state is trying to build on the existing firms to create high-value-added clusters providing jobs that will keep our ablest youth in the state. A major exception to the tendency of “exporting” sectors to create high-value-added jobs is tourism, but the demand for that sector's output is relatively inelastic, at least compared to other exporting sectors, because of its geographic dependence. Its locational response to taxes will be lower than higher-value-added sectors. The tourism industry is loosely analogous to Alaska's petroleum industry. When Alaska taxes oil production, it reduces the wealth of producers and reduces their output slightly. But as long as the taxes are not too high, its oil

industry does not move to other states.

An underlying premise is that when choosing where to locate, businesses do in fact consider state and local taxes along with the supply of labor and other factors of production, transportation and other infrastructure, materials and energy supplies, and amenities. If the effect of taxes were minor, business location would not be a relevant consideration when state and local governments change their tax structures. Early academic research supported the notion that the locational response to taxes was slight. For the past twenty years, however, studies have found stronger impacts (Hodge, Moody, & Warcholik, 2004, p. 15). A recent survey is that by Helen Ladd (1998).<sup>9</sup> An earlier one is by Timothy Bartik (1991).<sup>10</sup>

From a national perspective, inefficiency results if varying state and local taxes, infrastructure, and public services affect where producers locate more strongly than do natural advantages. From the perspective of Florida, if its tax system pushes away export-oriented high-value-added and environmentally friendly firms, whether those already here or those starting up or those relocating, that cost needs to be weighed when changes are considered. Also, if Florida is trying to understand why its share of the nation's high-value-added jobs and producers is low, state and local taxes need to be considered as a possible cause.

The most useful measure of the effect of state and local taxes on export-oriented business locational decisions would be the differential effect of taxes on costs. This will vary by industry, by firm, and by location within the state. Firms making choices of location that risks hundreds of millions of dollars have specialists analyze tax details for the leading contenders for a site selection. There is no fully satisfactory measure of the differing burdens of state and local taxes that applies to all industries and all locations. Robert Tannenwald (2004), assistant vice president and economist at the Federal Reserve Bank of Boston, however, has prepared three useful indicators for fiscal year 2003, building on business tax and profit data given him by Ernst and Young, the accounting firm.

Tannenwald's first indicator is the business share of state and

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<sup>9</sup> Cited by Hodge et al., 2004.

<sup>10</sup> Ibid.

local taxes. The idea is that state and local governments provide services—education, public safety, use of infrastructure—useful about equally to businesses and to households, or if not equally at least in roughly the same proportion across states. Whatever the level provided of those services, if businesses are taxed disproportionately to fund them, their gain from the services will be small relative to their cost of funding them. Thinking that a bad bargain, businesses locate elsewhere if they can easily.

The second Tannenwald indicator is business taxes as a percent of statewide personal income. The indicator is used because of difficulties in estimating the preferred third indicator, business taxes as a share of business profits. Business taxes as a share of business profits is probably the most relevant choice variable for firms deciding where to locate, since it is most closely related to their return on investment. For some firms whose production processes are intensive in professional labor, however, what is officially measured as compensation is actually better thought of as profit. Moreover, allocating the profits of a multi-state firm among the states in which it has activities is both empirically and conceptually difficult. To have a chance at bracketing the true measure, Tannenwald offers measure two in which all income is counted in the denominator and measure three in which only profits are counted. We consider the first and third measures more relevant for Florida, because of the large share of personal income going to retirees, not a suitable part of the denominator for measuring the tax burden on businesses.

For each of the three Tannenwald measures, lower is better. Florida's scores relative to the nation and to the Southeast are:<sup>11</sup>

	U.S.	Southeast	Florida
Business Share of S&L Taxes (%)	43	43	48
Business Taxes as % of Total Income	4.5	4.2	4.3
Business Taxes as % of Profits	34	33	40

Business taxes relative to total income are the same in Florida

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<sup>11</sup> The Southeast is AL, AR, FL, GA, KY, LA, MS, MO, NC, SC, TN, VA, and WV. Both the U.S. and Southeast averages are population weighted. Calculations from Tannenwald Tables 1, 2, and 3.



as in the nation and in the Southeast. Both of our preferred measures, the business share of taxes and business taxes as a percent of profits, however, are higher in Florida. In the Southeast, only Louisiana and Tennessee extract higher shares of their tax revenue from businesses and only Louisiana and West Virginia take higher shares of business profits.

By an alternative measure, that of the Tax Foundation, Florida's business taxes fare much better, ranking second lightest in the nation after Alaska in 2004 (Hodge et al., 2004). We prefer the first and third Tannenwald measures, however. The Tax Foundation provides an outstanding service by gathering detailed and current information on state taxes. But its tax index is too flawed conceptually to be useful. First, instead of adding dollars to dollars to construct an overall tax burden, the "overall index is a composite of five specific indexes ... [that] are themselves composites of more than 100 separate variables." Obviously the amount of information aggregated is enormous, but the weighting used is arbitrary, resulting in no particular meaning to the index. Second, local taxes are ignored. As a minor example, Florida is listed at 14.3 cents per gallon for the gasoline tax, fifth lowest in the nation, even though combined state and local option taxes would charge Florida with being above the national average in fuel taxes.

More importantly, ignoring local taxes omits property taxes, which nationally average 38% of total state and local business taxes.<sup>12</sup> This is particularly important for states such as Florida that have imposed limits on residential property taxes, shifting more and more of the burden to businesses as property values rise. The shifting could be accelerated through constitutional amendments. In 2004, for example, Families for Lower Property Taxes, headed by Vero Beach businessman Jeffrey Saul, tried to place an

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<sup>12</sup> The Tax Foundation runs from low (better or lighter burden) to high (worse or heavier burden). If it conveys some of the same information as our preferred first and third Tannenwald indexes, it should be negatively correlated with them. But the (population-weighted) correlations are positive, 0.57 and 0.19. If, as we think, the Tannenwald measures are useful, then the Tax Foundation measure is perverse. The Tax Foundation warrants commendation for providing detailed and current information. Unfortunately, aggregating it correctly is beyond the scope of our study.

amendment on the ballot to raise the homestead exemption from \$25,000 to \$50,000. In June 2004, a “panel of state financial analysts agreed that the initiative could cost cities, counties and school boards \$2 billion in lost property-tax income” (Kleindienst, 2004). Though the initiative failed to make the ballot in 2004, it may well do so soon and would be likely to pass. Businesses, as a consequence would face either higher taxes or lower levels of service. Former House Speaker Jon Mills, arguing against the amendment before the Florida Supreme Court, said that if it passed school boards alone would lose \$800 million a year.

### *Impact Fees*<sup>13</sup>

Impact fees are one-time charges on new construction that pay a proportional share of the cost of the capital outlay needed to serve the new development. Over the fiscal years 1993 to 2004, impact fees generated \$5 billion for Florida's counties, municipalities, independent special districts, and school districts to pay for infrastructure. Impact fee revenue in 2004 was \$54 per Florida resident, up more than fourfold from 1993, as individual fees rose and as the number of governmental entities imposing them increased from 160 to 249.

With more at stake, the issue has become more and more controversial. Impact fees are volatile income streams dependent on the growth of the building industry. A county could find itself in a fiscal crisis if there is a rise in interest rates or any other shock to the housing market and it has come to rely heavily on impact fees. Builders oppose impact fees, saying they are usually passed on to consumers, adding up to \$15,000 to the price of a new home. Groups concerned with affordable housing are worried that impact fees push lower-income working families out of the owner-occupied housing market. On the other hand, many realtors approve of impact fees because the oft-mentioned alternative is an extra charge on all real estate sales. Groups that suffer from rapid growth, such as school districts and other governmental entities, tend to favor impact fees because they are a relatively easy way to

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<sup>13</sup> For drafting this section we are grateful to Jeremy Martin, who bears no responsibility for its current form.

raise revenues to meet infrastructure needs without raising the taxes of existing residents.

There currently are no set state criteria for local governments to follow when calculating, imposing, or collecting impact fees. Impact fees are governed by case law, not statutory law, first set in *Contractors v Dunedin* (1976). The Florida Supreme Court found that impact fees were “permissible if the use of the money collected is limited to meeting the costs of expansion.” In other words, new development should not impoverish existing residents, and impact fees should not enrich them. In a separate decision, *Volusia County v Aberdeen* (2000), the same court found that age-restricted developments could not be required to pay school impact fees: no children, no school impact fees. As counties and other local governments continue to impose impact fees for a range of services and facilities, builder’s associations and other groups will continue to challenge them in court.

During the 2005 session, the Florida Legislature created a 15-member advisory committee, the Florida Impact Fee Review Task Force, to study the current use of impact fees as a method of financing local infrastructure and make recommendations to the Governor’s office. The Task Force includes representatives from county commissions, city councils, school boards, developers, homebuilders, and realtors. According to SB 360, the committee’s report should survey and consider: (1) the methodology used to calculate impact fees; (2) the relative burden of impact fees compared to other areas in the state; (3) the ratio of impact fee revenue to total capital costs; (3) revenue-sharing agreements between counties and cities; (4) the timing of impact fee payments; and (5) ways to reduce the effect of impact fee costs on affordable housing.

Retired Florida legislator, lieutenant governor, and governor Buddy MacKay compares the state’s policy of drawing in new residents with low taxes and later revealing that their coming has caused infrastructure deficits that must be funded out of higher property taxes or local option sales taxes to the “bait and switch” technique used by unscrupulous retailers. After the customer has come to the store in hopes of an advertised bargain, the sales representative reveals the defects that make the advertised item useless and switches the customer to a higher-priced model. After

local governments have attracted new residents, they reveal that they are now short of the classrooms and roads the growth requires.

To keep local governments competing for growth from baiting and switching, MacKay proposes a statewide education impact fee to help pay for schools. To be fair to developers, the fee “should not be charged until closing of the first sale of the completed residence.” In this way it could be covered by the mortgage, with the advantages that brings. MacKay also favors recapture requirements on land that receives greenbelt tax favors. “When Greenbelt land is converted to a non-agricultural use,” he says, “the appropriate city and county governments [should] recapture the amount of the last five years’ Greenbelt subsidy. Florida is unique among high-growth states in not having a Recapture provision.”<sup>14</sup>

### *Extending the Sales Tax to Services<sup>15</sup>*

An occasional refrain in Floridian politics is that the retail sales tax should be extended to include the sale of services. Such calls to end the exclusion of services, beyond the strong efficiency and equity arguments supporting them, seem especially compelling when the state’s revenue ability to provide public services threatens to fall short and constitutional restrictions inhibit the legislature’s recourse to property and income taxes (Goldman, 2002). The history of Florida’s experiences with the services sales tax are documented and analyzed thoroughly elsewhere, so only a brief sketch is provided here (Hendrix & Zodrow, 2003; Kirk, 2003).<sup>16</sup> In spite of the strong case for extending the sales tax to services, the political and practical difficulties of doing so are so severe that we think a better course of action is for the legislature to work steadily at improving the existing structure of the sales tax, gradually removing exemptions for items that should be taxed and fighting to keep exemptions from being granted mainly to favor

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<sup>14</sup> The quotations are from personal communications from Governor MacKay.

<sup>15</sup> For drafting this section we are grateful to Babak Lotfinia, who bears no responsibility for its current form.

<sup>16</sup> See especially Goldman, and Randall G. Holcombe, “Taxing Services,” *Florida State University Law Review*, 30(3), 467-475.

narrow interest groups.<sup>17</sup>

The sales tax itself originated as a means to augment falling revenue during the Depression. Specifically, it was a tax on the *retail sale of tangible goods*. That is to say, it was a tax on consumer purchases of tangible goods alone, not on business purchases of goods meant for resale or for use in production. On this basis, services were altogether excluded from—i.e., never subject to—the tax. Over time, the Legislature *exempted* some classes of retail consumer goods (e.g., unprepared food and medicine and other goods deemed necessities) and included non-retail purchases by businesses. Some retail services were also made subject to the tax, but most remained *excluded* from the tax.<sup>18</sup>

As noted, services can represent a tempting source of untapped revenue when the state's budget is tight. As both the state's service economy and the difficulties of taxing goods purchased by mail-order and e-commerce have grown, that temptation has become even greater. Indeed, the legislature briefly ended the services exclusion in 1987, but restored it when the administrative and financial burden on businesses and the state government proved too onerous (Goldman, 2002), and the political reaction too fierce. A proposed constitutional amendment ending the exclusion, *inter alia*, failed to be adopted by the Constitution Revision Commission of 1997-98 (Nabors, 2003). A similar effort failed in the legislature during its 2002-03 session (Goldman, 2002).

A tax should be as equitable and as efficient as possible. An equitable tax treats in similar ways similarly situated things and people. An efficient tax minimizes its total cost to taxpayers. It also does not cause them to behave differently than they would in its absence. It does not distort behavior. Florida's retail sales tax, however, is certainly distortionary.<sup>19</sup> Consider a consumer

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<sup>17</sup> Michele E. Hendrix and George R. Zodrow discuss various methods of applying the sales tax to services. Kirk J. Stark, viewing the sales tax *per se* as a dying form of revenue collection, discusses its history and presents several radically different substitutions.

<sup>18</sup> Holcombe, *supra* note 14, p. 469, ff. 12, notes that the legislature has added language taxing "admissions, transient rentals, [and] service warranties.

<sup>19</sup> An argument can be made that the sales tax also fails in terms of equity: Hendrix and Zodrow (2003) note that the exemption of necessities (e.g., certain foods) are of dubious merit in accomplishing welfare objectives, "relatively small redistributive gains are obtained at a high revenue cost, implying that

deciding on whether to repair or replace his current automobile. Because of the difference in tax-treatment of goods and services, such a consumer would reasonably be expected to delay longer than he otherwise would the taxed purchase of a new car and instead procure untaxed repair services.

These two examples demonstrate the flaws in Florida's retail sales tax: it creates inequitable differences in the treatment of similar goods, but, more relevantly, it distorts the choices between goods and services. So ending the exclusion of the latter would seem to be good policy.

But now suppose that *all* services were now taxable; not just those consumed by individuals for their own benefit, but also those purchased by businesses as inputs to their operations. Consider any firm operating in Florida, a firm that prior to the new services tax hired legal advice and auditing services from other firms. In the presence of the tax on business services, the firm would then have the following options: pass the tax onto consumers in higher prices (also resulting in a higher tax bill to those consumers); develop its own legal and auditing divisions (passing increases in costs onto the consumer); move out of state to avoid the tax; reduce its operations (even to the point of closing altogether); or live with reduced profits. Additionally, notice that consumers and firms both face higher prices from in-state producers, increasing their inclination to purchase from out-of-state firms from whom the state cannot easily collect sales or use taxes on purchases to Floridians.

Smaller firms would be more likely to face reductions in their operations and profits, while larger, national and international firms would be more likely to bring taxed services in-house or simply move out of state and away from the taxes. The favoring of large over small, and out-of-state over in-state firms is a distortionary and inequitable result of requiring businesses to pay taxes on services.

Granting the political uncomfortable result that consumers but not firms should, ideally, pay taxes on the services they buy, what

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rates under the sales tax must be relatively high." Furthermore, they complicate the tax system, "especially since they typically involve difficult classification issues, and thus result in rather high administrative and compliance costs and create opportunities for tax avoidance and evasion" (p. 425).

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gain is there for the state to levy such taxes? Probably not much. There is likely some net fiscal gain in taxing services that are usually provided from firms or large institutions. But it is entirely possible that the efficiency gains are out-weighted by the inefficiency of requiring businesses previously not required to collect taxes to do so. Additionally, the administrative costs to the state of taxing, say, babysitting or lawn-mowing provided by young Floridians or in an informal capacity would likely exceed the revenue generated by such small transactions.

Besides extending the sales tax to services that are clearly retail sales (rather than sales to firms) and where collection would be relatively easy, the state should consider taxing food and other untaxed goods, as many state already do. To use food as an example, food stores, which already sell taxable items, are set up for collecting taxes. Taxing food would avoid confusion over what is or is not prepared food (which *is* taxed), as well as distorting choices between purchasing prepared or unprepared food. Most states have income taxes, and the income is taxed independently of whether it would or would not have been used to purchase food. Finally, it is likely that low-income households would benefit more from the additional public services provided from the extra revenue than they would pay.

### *Summary*

As much as anything, the food example in the previous paragraph illustrates the bind in which Florida finds itself. Though the state budget now has a healthy balance between revenues and expenditures, that is due to (1) a surge in growth that brings extra revenue immediately and imposes burdens on infrastructure and services over the long haul, and (2) temporary factors such as a housing boom, a low national household saving ratio financed by a federal deficit and a trade deficit, and above-trend federal revenue sharing. Revenue projections by the Consensus Estimating Conference for the long run, although thoughtfully and professionally prepared, may well turn out to be on the high side. The state cannot turn to an income tax, which now provides more to most states than does the sales tax, and extending the sales tax to services is impractical. Even extending the sales tax to practical

and reasonable items such as food is likely to prove politically impossible.

That leaves the question of whether the state can provide an acceptable level of public services given its revenue constraints. The major concerns are Medicaid, education, children, and transportation infrastructure, to which we turn in the chapters ahead.

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# Expenditure Projections: **2**

## Overview

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### *Introduction*

#### **David Denslow**

The federal government can fund public services directly or delegate them to the states. States, in their turn, can fund the services themselves or pass them on to local governments. Most services are funded at all three levels. In Florida, for example, the federal government provides a healthy share of the resources for Interstates, the state builds and maintains the intra-state highway system, and local roads and most connectors are largely locally funded. Local school districts are responsible for PK–12 education but receive significant revenue from the Florida Education Finance Program (FEFP) that equalizes spending per (weighted) FTE and smaller amounts from Washington. There are national, state and local parks. There are federal prisons, state prisons, and county jails. To make things even more complex, higher education receives crucial private help as well as federal, state, and (modest) local funding.

Because the various funding levels are to a large degree substitutable for each other, even though our focus is on the Florida budget, it would be reasonable to organize our analysis around total resources. For some comparisons with other states, post-secondary education for example, we do that. But often we follow the common practice of concentrating on Florida’s general revenue. That is the framework around which most people organize their thoughts, and not coincidentally it is also the framework used for most projections and for which the most current information is available.

Within this framework, the task we first intended to set for ourselves was to estimate the amounts of general revenue needed for FY 2009-10 and FY 2014-15. But that goal turned out to be misguided. The concept of “need” is fuzzy, inextricably intertwined with personal value judgments. To provide enough public services that there would be no public benefit whatsoever,

not even a nickel's worth, from spending another thousand dollars would be foolish, though anyone receiving services for free might always be happy to get more. The ideal would be to increase services to the point that the last thousand dollars spent yields benefits worth a thousand dollars of private goods and services, or actually more to allow for the economic cost of collecting revenue. For any public service, people disagree about how much spending is required to reach that optimal level. That is not an issue we can resolve to everyone's satisfaction. Instead we attempt to contribute to the public debate about what would be the optimal level of service and what it would cost to provide, questions which are two sides of the same coin.

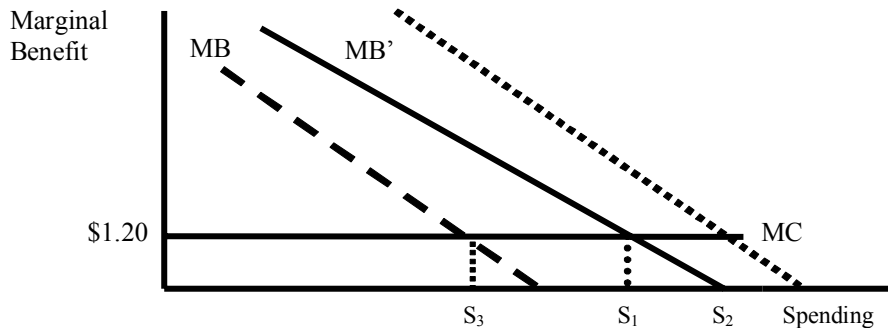
In the coming chapters we try to estimate the costs for obtaining "reasonable" levels of service, where reasonable takes account of comparisons to other states and of maintaining current levels of service, while meeting constraints set by law. More formally, for each of the major categories of spending, and sometimes for subcategories, we usually consider two criteria: (1) comparisons to other states and to the nation; and (2) the marginal benefit of extra spending versus the extra cost. With complete information and no cost of political transactions, the preferred method would be benefit-cost, but when information is incomplete and transactions costs are high, the usual case, it is the more difficult.

Comparing program expenditures in Florida to those in other states and to the nation serves several purposes. It indicates the average and the range of possible political outcomes for other people whose standards of living, institutions, and values are similar to ours. The comparisons also indicate how Florida will compete with other states for residents and for firms. They may indicate efficiency or inefficiency in the public sector. Inefficient state activities are immune from being driven out of business by more efficient competitors (except to the extent that people and businesses leave or avoid Florida), but people can check whether for a given expenditure Florida is obtaining better or worse outcomes. If worse, is it because of causes external to government—Florida has a death rate of 10.2 per thousand versus 8.5 nationally because of its age structure, not its health policies—or because either of inefficiency or inadequate funding?

In many instances the most important reason for comparisons with other states is that they indicate whether Florida is carrying more or less than its fair share of the nation’s responsibilities. If we are spending less than other states, we may not be shouldering our share of the mission. Proud though we are to be Floridians, we are Americans first. When the legislature mandated that every classroom in Florida display a flag, they required the Stars and Stripes, not the red saltire on white. Educating the next generation, for example, benefits the entire nation, though it is carried out as a state and local responsibility. If the federal government were to provide most of the funding for PK–12 education, we would be concerned about the centralized control that would entail over an institution with such power to shape the thoughts of our children. Consequently, we want most funding to be state and local. At the same time, any state that fails to do its part harms us all. If Florida fails to do its part, it harms the nation.

Calculation of benefit-cost ratios, the second major criterion, is simple in concept but complicated in application, most importantly because of the difficulty of estimating benefits. The approach can be easily illustrated with a diagram that shows the spending on an item on the horizontal axis and the marginal benefit and marginal cost on the vertical (Figure 1):

**Figure 1. Benefit-Cost Ratios**



Generally, obtaining a dollar of public resources requires giving up more than a dollar of private goods. Taxes take resources to collect and cause economic distortions as people change their behavior to avoid or evade them. Though in some instances, gasoline taxes might be an example, taxes reduce undesirable behavior (deciding to drive without taking account of the

congestion caused other drivers), in general that is not true. In the diagram we assume that a dollar of revenue requires \$1.20 of real resources, and have drawn the horizontal line labeled MC for marginal cost accordingly.<sup>1</sup> Those who strongly oppose raising taxes argue that the line should be higher. Those who strongly favor more public spending may contend it should be lower.

The full line labeled MB, for marginal benefit, shows the social gain from the last dollar spent. It has negative slope on the assumption that funds will be allocated rationally, the first dollars going for the most important purposes. For example, if the service is incarceration of criminals, the most dangerous would be the first to be imprisoned and the least dangerous last. Optimal spending on incarceration would be at  $S_1$ , where the marginal benefit of the last dollar spent equals \$1.20.

For any particular service, public debate will center around the location of the marginal benefit line. Those who benefit most from a particular public service but pay only a small fraction of its cost will want the service to be provided until the benefit of the last dollar spent is close to zero. If advertising Florida citrus were funded from general revenue, for example, citrus growers would want spending to be nearly  $S_2$ . Indeed, the shape of the marginal benefit line might be such that  $S_2$  is a very large number. Some parents might think every four-year-old should be looked after by a certified teacher at a location no more than a block away. As Randall Holcombe (2003) put it, “The government gives away much of its output or sells it below cost, and in this situation, people are always going to have insatiable demands for government service.”<sup>2</sup> One way around this is to fund services with concentrated benefits by taxing only those who benefit and placing the revenue in a trust fund. Citrus advertising, for example, is paid for from a trust fund financed by an excise tax on citrus. The legislature pretty much leaves it to a growers’ organization, Florida

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<sup>1</sup> “One recent survey suggested that in the United States, the average excess burden per dollar of tax revenue is 18 cents” (Rosen, 2002).

<sup>2</sup> There’s another side to this, however, which is under-funding programs that benefit less powerful residents, such as children or the poor.

Citrus Mutual, to determine the amount of the tax.<sup>3</sup>

More commonly, however, services are more diffusely targeted or the beneficiaries are not able to pay for them. In that case, if the current spending level is  $S_1$ , supporters of more spending will argue that the true marginal benefit curve is not MB but MB', to the right, and that spending should be increased accordingly. Advocates of reduced spending will claim that the true marginal benefit curve is to the left of MB. In general, the information necessary to know the location of MB with any degree of precision is unavailable, especially if it crosses the marginal cost line at an amount of spending quite different from the current level.

Precision is not usually necessary, however, for advocating policy changes. If we can demonstrate that MB, wherever it is located, crosses the marginal cost line to the right of the current level of spending, then spending should be increased. For example, if current spending is  $S_3$ , we do not need to demonstrate that the full MB curve is the correct one; just that the correct one is somewhere clearly to the right of the slashed line. Then, if spending is increased, we will gain more information about whether we are still short or have gone too far. The same thing is true in reverse. If current spending is  $S_1$ , all we need to show in order to claim that spending should be cut is that the true marginal benefit line lies to the left of the full line. Either direction, we do not need the precise location of the MB line, we just need to be able to bound it.

A particularly effective way to establish a lower bound for benefits is to demonstrate that more spending would result in larger savings in other governmental spending. In that case the extra spending would be worthwhile independently of views about the true cost of taxes. Proponents of programs to help pregnant women stop smoking, for example, calculate that by reducing public spending on low birthweight babies, such programs save three times their costs (Cutler, 2004, p. 24).<sup>4</sup> If they are correct,

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<sup>3</sup> Why a state tax to fund citrus advertising? Because Florida Citrus Mutual lacks the power to tax and individual growers would have an incentive to benefit from the advertising without helping to fund it.

<sup>4</sup> The percent of births under 2,500 grams is 11.9% for smoking mothers and 7.2% for non-smoking mothers (*Statistical Abstract of the United States*, 2003, Table 97).

arguments against such programs must stand on non-budgetary concerns.

Often people attach differing values to a program vary because they differ in how they value the outcomes. As a rough guess from an Institute of Medicine estimate for the nation, about a thousand non-elderly Florida adults die each year because they lack insurance (Cutler, 2004, p. 65).<sup>5</sup> Over a decade, that adds up to one in a thousand of the state's residents ages 25 to 64. How aggressively the state should motivate its residents to become insured depends on, besides the accuracy of the estimate, the value attached to saving those lives. Is the loss of life because of lack of insurance a fiction, a call for public action, or a regrettable consequence of individuals' choices that are not the state's business?

When applying any of the three criteria, we must take account of legal, political, and other constraints. Illustrations of legal constraints include maximum class sizes imposed by constitutional amendment and Medicaid services required by the federal government. A different kind of constraint is the structure of teachers' salaries. In the abstract, aside from legal constraints imposed by existing contracts, school districts could offer higher PK-12 educational quality by paying higher salaries to teachers in special education, math and some sciences, and high-needs schools. As a practical matter, teachers' unions and simply teachers' sense of what is right makes that difficult or impossible.

After comparing Florida to other states and weighing benefit-cost considerations, we then argue for what we think is a feasible and desirable level of spending for Florida. This involves—in addition to the comparisons to other states and benefit-cost considerations—an estimate of the cost of maintaining the current level of service taking account of legal constraints, demography, changing prices, changing technology, and other salient factors. The justification for doing so is that the political system has weighed the evidence and competing claims and come to that level of service as a result. The cost of maintaining the current level of

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<sup>5</sup> The rough guess is by us, not by Cutler. There are over 40 million people uninsured nationally. The Institute of Medicine estimates that annually 20,000 of those who are ages 25 to 64 die as consequence.

service serves as a benchmark, the minimum expenditure required to keep the level of service from deteriorating.

The major spending categories we consider are Medicaid, PK–12 education, post-secondary education, roads and transportation, and public safety. In the preceding chapter we emphasized the role of the housing boom in contributing to the surge in state revenue. The housing boom also plays a large role in Jim Dewey’s estimate of property tax revenues in his chapter on funding Florida’s education priorities. But we do not attempt to estimate in the following chapters how the housing boom will affect the cost of government. As one example, Dewey traces out what it would cost to raise Florida’s spending per student on education to the level of the rest of the Southeast, and to pay teachers the same.<sup>6</sup> But does Florida have to pay teachers as much as other southern states? Do not our attractive amenities and low cost of living enable us to hire teachers (and other school and government employees) for low salaries?

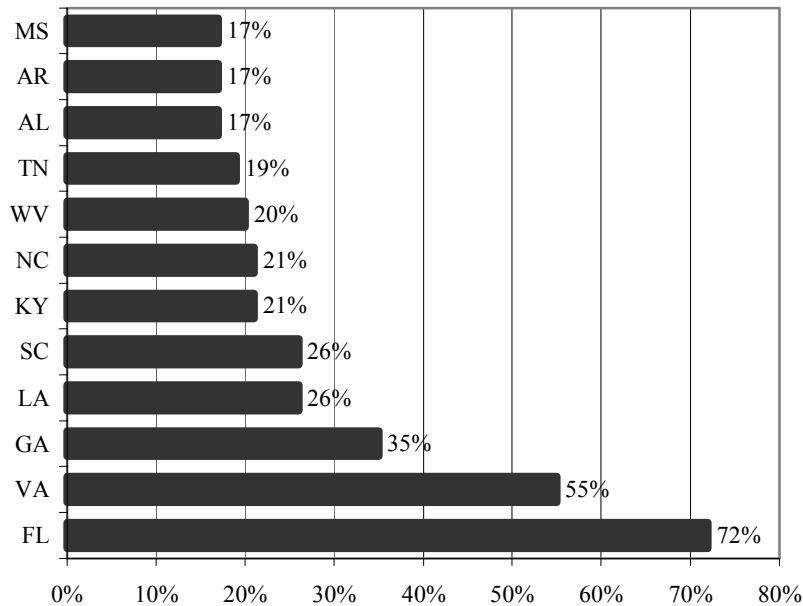
The answer is, “Not any more.” Florida has become a high cost-of-living state and, in the near future, will have to pay at least the average southeastern wage if it is to hire people whose skills match the average. Figure 2 shows that over the past decade, adjusted for inflation, house prices as measured by the repeat-sales index of the Office of Federal Housing Enterprise Oversight have risen by 72% in Florida. To emphasize, that increase is for existing houses and is adjusted for inflation. Houses now cost more in Orlando or Sarasota (let alone Miami, Ft. Lauderdale, or West Palm Beach) than in Atlanta. In other southeastern states, the next highest decadal price increases were 55% in Virginia and 35% in Georgia. No other southeastern state exceeded 26%. As wages in Florida’s private sector adjust slowly to the high price of housing, charges for private services will also rise, adding to the cost of living. If public employees are not paid more, especially potential new ones, they will be attracted away either to the private sector or to other states where housing costs less.

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<sup>6</sup> Though portions of Dewey’s chapter are technically challenging, the payoff is high. As much as anyone else, he combines a deep understanding of the Florida Education Finance Program, the ad valorem tax, and the market for school personnel with the econometric skills to analyze their interaction. His original research presented here has great significance for the state.



**Figure 2. Real Change in House Prices  
1995Q1 to 2005Q1**



This is yet another channel through which the housing boom, which has boosted revenue in the short run, will place pressure on the level of service offered by the public sector over the next decade. Combined with the rising cost of health care, the desire to give all our children educational resources that provide them the opportunity to reach their potentials, maintaining public safety, and building adequate infrastructure, it is one more reason we need to be realistic about the years to come.

Wherever possible, finding resources by providing the same level of service at lower cost is clearly preferable to raising taxes. With this in mind, economist Audrey Rice gathered excellent information about possibilities for cutting costs. In the process she (and we) had more strongly impressed upon us the fact that the most obvious ways of cutting costs turn out to either to have unfortunate side effects, to be politically difficult, or to resemble the Lou Holtz approach to improving productivity (“Work harder, harder!”). Otherwise, there is a good chance they would have been implemented already. In sum, making good use of her findings would have required more time than we had for this report. We

hope to report them later. Meanwhile, there are examples from many states where creative approaches have reduced costs, raised the quality of service, or both. Florida has provided its share of those examples. The information contained in this report highlights the importance of finding more.

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# Expenditure Projections: Medicaid

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# 3

**David Denslow  
with  
Chifeng Dai**

## *Introduction*

The share of GDP in the United States devoted to medical spending has doubled over the past half century, mainly driven by advancing technology. Making it possible to treat diseases that were once beyond reach, reducing the side effects and discomfort of treatments, and sustaining a reasonable quality of life in spite of chronic ailments, new technologies have improved our lives more than enough to compensate for their extra costs. But they have also placed large burdens on the public sector. We have come to think that everyone, independently of personal resources, has the right to high-quality medical care, meaning the best and latest technology available. The result is that public spending on medical care, whether as a share of GDP or of total public spending, has soared.

## *Comparison to Other States*

According to estimates of the National Association of State Budget Officers, Florida's total Medicaid spending per resident in FY 2004 was expected to be \$714, compared to \$895 for the nation and \$881 for other southeastern states.<sup>1</sup> Florida's spending per resident was expected to be 20% below the U.S. average and 19% below the rest of the Southeast. The total includes the federal match. Excluding the federal match, Florida's Medicaid spending per resident was expected to be \$292, compared to \$386 for the nation and \$307 for the rest of the Southeast. Florida own-source spending per resident was expected to be 24% below the nation's and 5% below the rest of the Southeast.

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<sup>1</sup> Calculated from National Association of State Budget Officers, *State Expenditure Report 2003*, Table 28. The averages are calculated by us using Census Bureau population estimates.

Florida's low spending is a puzzle. The state's disproportionate share of the elderly, who account for about three-fourths of Medicaid spending nationally because of the cost of nursing facilities and long-term home care, would lead one to expect higher spending. But in FY 2002, Florida spent (including federal matching funds) only 58% of the national average on long-term care per resident and only 85% of the average of the rest of the Southeast.<sup>2</sup> A possible explanation of the low spending on long-term care, as mentioned in our chapter on Medicaid, is that many of Florida's elderly residents return to their original states when they become frail. Or it may be that Florida's nursing homes are either more efficient (they have less excess capacity, which is costly, than those in many other states) or that the state controls their costs more tightly.

It is unlikely that differences in wages of medical personnel explain much of the lower spending in Florida. Though most medical salaries are lower in Florida (in 2003 registered nurses averaged \$47,940 in Florida versus \$51,230 nationally), some are higher (pediatricians \$159,970 in Florida versus \$143,300 nationally). Using the 2003 Occupational Employment Survey conducted by the U.S. Bureau of Labor Statistics, we calculated that the average wage for the 419,360 workers in medical occupations in Florida was \$38,360. Had those workers been earning national average wages for their occupations, their average pay would have been \$39,980. The 4% difference is too small to enable Florida to provide the same level of service for Medicaid with expenditures equal to 58% of the national average.<sup>3</sup>

The advantage Florida enjoys from lower wages is offset by its demography. Although the majority of enrollees are young, spending per enrollee is much higher for the elderly. Taking account of both enrollment rates and spending per enrollee, in 2000 Florida's Medicaid spending on an average resident 65 and older was 85% higher than the average overall. Spending on the

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<sup>2</sup> Calculated using census population weights from data in O'Brien and Elias (2004) p. 12.

<sup>3</sup> Medical occupations are 38 jobs for which the title indicates the work is related to medicine. Custodians working for hospitals, for example, are not included. The average is weighted by the number of workers in Florida in each of the 38 occupations.

average child under 15 was 5% higher than the overall average. Adults 15 to 44 were 29% lower and adults 45 to 64 were 19% lower. (The percentages, to be clear, refer to all residents, not just enrollees.) Using these relationships, solely on the basis of age structure, Florida would be the highest-spending state in the nation per resident, at 5% above the national average and also 5% above the rest of the Southeast. Lower wages and a larger elderly population roughly balance each other.

Our guess is that Florida spends so little on Medicaid principally for two reasons; its rapid population growth and the Republican control of the legislature. Both reasons may be related to a weak sense of either community or governmental responsibility. The rapid population growth means that many of the people residing in Florida have spent the major portion of their lives elsewhere, which makes them feel less closely related to their neighbors. Republican control gives the legislature a philosophical cast emphasizing self-reliance and personal responsibility. Charity, by that view, should be more a private than a public responsibility.

Though we have not proved our view that Florida's low Medicaid spending is related to rapid growth and a Republican legislature, it does fit the data. Regressing (the log of) budgeted FY 2004 Medicaid spending per resident (MEDPC) on ten-year percentage population growth (POPGROW), a dichotomous variable taking the value one if Republicans control the legislature (REPLEG), and Gore's share of the 2000 presidential vote (GORE), we obtain:

$$\text{MEDPC} = 6.46 - 2.25 \text{ POPGROW} - 0.14 \text{ REPLEG} + 1.08 \text{ GORE}$$

(0.19) (0.72) (0.07) (0.72)

Observations: U.S. States excluding Florida

$$R^2 = 0.46$$

Parentheses contain estimated standard errors. All variables are significant at the 5% level. The results suggest that a ten-percentage-point more rapid population growth over the decade reduces Medicaid spending by 22%, that Republican control of the legislature reduces it by 14%, and that a ten-percentage point larger vote share for Gore increases it by 11%. The predicted value for Florida is \$753, which is 5% above the actual \$714. We

emphasize, however, that this simple regression does not prove our guess about why Florida spends so little. It merely shows it to be compatible with the data.

In regressions we do not present here, a robust finding is that per capita spending on long-term care is lower in rapidly growing states. This confirms findings that more generous Medicaid spending on long-term care draws into nursing homes the infirm elderly who otherwise would be taken care of by their adult children (Gruber, 2003, p. 62). That is, the chief beneficiaries of more extensive long-term care are the children of the frail elderly. In rapidly growing states, those children are more likely to live elsewhere. If the elderly are unable to obtain high-quality care where they reside, they are likely to move to where a child lives. By spending less on long-term care, rapidly growing states can push more of the burden of caring for the frail elderly onto other states. This option is likely to weaken over time, however. Since the birth rate dropped sharply in the mid-1960s, the elderly will be less likely to have a child willing to provide care. The rise in the divorce rate in that decade, by weakening family ties, is likely to have the same effect. But this change will be gradual. Florida will continue to be able to encourage many of its frail elderly residents to move to other states for years to come.

As noted in our chapter on Medicaid and in our chapter on child welfare, Florida exceeds the nation in the share of its children who lack medical insurance. In FY 2002–03 the share of children was 15.6% in Florida compared to 11.9% nationally. In comparison to other states, Florida’s high share of uninsured children can be fully explained by two variables: the large share of adults without private insurance and rapid population growth.<sup>4</sup> Adults who are uninsured tend not to insure their own children, and in states with rapid population growth voters are less likely to

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<sup>4</sup> The regression is  $CHILDNO = 0.40 + 0.44 ADULTNO + 0.48 POPGROW$   
 $n = 51 \text{ states } R^2 = 0.76$       (0.04) (0.06)      (0.08)

where CHILDNO is the share of children uninsured, ADULTNO is the share of non-elderly adults uninsured, and POPGROW is a measure of the population growth rate. Observations are for 2002–03. The regression is population-weighted. Unweighted regression yields virtually identical coefficients. The Kaiser Commission on Medicaid and the Uninsured provides the insurance data online.

push the government to insure other peoples' children.

Florida's large share of adults who are uninsured is explained in part by the state's relatively high poverty rate, but even more by its labor market. As we discuss in our chapter on Florida's employment structure, jobs in Florida average 5% lower value added than do jobs nationally. Disproportionate shares of them are low-paying occupations related to tourism and retail trade, jobs that often do not include health benefits. Moreover, firms in Florida tend to be smaller than average, making it more costly for them to insure their employees. Lack of insurance is becoming more and more common chiefly because of rising premiums. For the same coverage, the cost of employer-provided health insurance rose by 59% between 2000 and 2004. One consequence is that firms that provide insurance for their own workers are starting to hire people from professional employment organizations that do not (National Bureau of Economic Research [NBER], 2005). The Census Bureau estimates that the share of the overall Florida population lacking health insurance rose from 17.9% in 2003 and 20.1% to 2004. This occurred even as the state's estimated poverty rate fell from 12.7% to 11.7% (U.S. Census Bureau, 2005).

### ***Benefits and Costs of Medicaid***

Medicaid is a national program, not a state program. Taking care of those who need but cannot afford medical care is a national purpose, similar to social security or Medicare. It is administered and partially funded by the states because of its complexity. Social security and Medicare are straightforward transfers, eligibility for which is determined by age, an easily certified criterion. Medicaid differs in that eligibility depends on need, which requires closer administration to assure that it goes only to those for whom it is intended and that quality care is efficiently provided. The national government sets minimum services that the states must provide and pays them to do it.

The pay is only partial. The states share part of the burden, with their share varying inversely with their per capita income. By making the state share income-dependent the federal government makes the funding of Medicaid more progressive than it would be otherwise. On average, richer states have richer people, though of



course all states have taxpayers with a wide range of incomes. The fundamental reason for the sharing of costs for a national purpose is not that, however. A tighter progressivity could be obtained with federal taxes alone. By requiring state sharing in proportion to the total amount spent, the federal government encourages efficiency.

This may be thought of as a principal-agent problem. The owner of a restaurant chain has the choice of hiring managers or sharing profits with franchisees. Sharing profits encourages innovation, efficiency, and quality. Which model a restaurant chain selects, hiring managers or sharing profits, depends on the degree to which the local manager has better information about local conditions and employees, the complexity of the operation, risk sharing, and the degree to which profits depend on the local manager or are beyond local control, and other factors. In many cases, the optimal contract involves the payment of a fixed fee by the franchisee plus a share of the profits.

States running Medicaid are agents for the national government, the principal. They have better information about local conditions and are better able to monitor recipients and local health providers. Moreover, it is often appropriate for the “menu” of Medicaid services to vary from one state to another. Besides serving the national interest, the states are also providing care for their own residents. The fact that they are serving their own residents encourages quality. The states’ sharing in the cost encourages innovation and efficiency. Because of the national interest, the nation shares in the cost and sets minimum requirements.

That arrangement may change soon. Trying to bring the federal deficit under control—and with national Medicaid costs well over \$300 billion a year—Congress and the President will consider, and perhaps pass, turning the program into a block grant. With block grants, the states will shoulder all of the cost beyond the fixed grant. Another dollar spent on Medicaid from Florida’s tax revenue would give its residents another dollar of care, not over two dollars, as now. Clearly the state’s incentive to care for its residents, who are also the nation’s residents, would be sharply reduced at the margin. As spending on Medicaid has soared, enlarging its share of both state and federal budgets, it is quite plausible that the ideal sharing between the national and state

governments at the margin has changed. But it is unlikely, in our view, that the optimum is now for the state share at the margin to be 100%.

If Congress does pass legislation (and the President signs it), Florida should look even harder than before at preventative measures that reduce the need for medical care. The governor's task force on obesity is a good example. Even if obesity has been somewhat oversold as a cause of illness, there can be little doubt that controlling it improves health. A minor example of prevention (minor in relation to the overall cost of Medicaid; major with respect to the individuals involved) is the required use of motorcycle helmets. In 1998 and 1999, Florida's motorcycle deaths per 10,000 motorcycles averaged 7.38 per year. After 2000 (when the helmet law was repealed) through 2003, deaths averaged 9.90 per 10,000 motorcycles, a 21% increase. Following repeal of helmet laws, the motorcycle death rate rose 5% in Arkansas, 55% in Kentucky, 83% in Louisiana, and 29% in Texas (Lundegaard, 2004). Proponents of required helmet laws cite the cost to the public of sustaining bikers who suffer brain injuries. Opponents claim the right to take personal risks as long as they endanger no one else. The balance between the competing claims would be worth revisiting if Florida's share of the cost of care becomes 100% at the margin.

Returning to Medicaid overall, Florida's spending less per resident than most other states could mean that Florida's system is more efficient than most. Other consequences could be greater age-specific mortality and morbidity for its residents, and the passing on of a larger share of the cost of providing medical care to medical providers and their customers. Though we would very much like to know just what that split among those implications and consequences is, the complexity of quantifying it places doing so beyond the scope of this report.

### ***Projecting Medicaid Spending***

In the context of the historical tradition of Medicaid, maintaining the current level of service means that the same share of our lower-income residents will have access to best-practice medical care. If the share of our residents who have low incomes

declines, the cost of maintaining the current level of service will go down. If best-practice medical technology becomes more expensive, the cost will rise.

We start by presenting a framework for projecting current level-of-service Medicaid care, which we will call real Medicaid expenditures per resident, for Florida for FY 2009–10. By real expenditures, we mean adjusted by the personal consumption expenditure component of the GDP deflator. We begin by projecting real expenditures per resident because we find it convenient conceptually to start by abstracting from both overall inflation and population growth. Over a five-year horizon, inflation and population growth increase both expenditures and revenue in roughly the same proportion, with not much net effect on the budget. Often one-year budget projections are best done in total current dollars. Consider two cases, A and B, for example, in which a state experiences a 5% decline in real revenue per resident, a serious blow to its budget. In case A, its population growth and inflation are both zero. In case B, its population growth is 2% and inflation is 3%. That implies that nominal revenue declines by 5% in case A and is flat in case B. A state legislature would find it easier to handle case B than case A. Case A requires salary reductions, layoffs, and cuts in major programs. Case B will result in reductions in service levels but the personnel and program adjustments will be less brutal.

For the five-year projections we undertake in this chapter, however, the conceptual advantages of normalizing expenditures for population and inflation are clear. If over the past five years an expenditure category rose by 10% while population rose by 5% and prices by 15%, that is quite a different story from an expenditure increase of 10% with no population growth or inflation. To understand what is happening, we need to factor out changes in population and prices.

One way to project Medicaid spending growth is simply to look at past growth rates and extrapolate them. Such projections, however, are highly sensitive to the base period chosen, since real Medicaid spending per resident has grown rapidly during some periods and less rapidly during others. The late 1990s, for example, were years of relatively slow growth. For that reason, we think it useful to factor the growth of real Medicaid spending per resident

into four components. That enables us to discuss what is likely to happen to each of the components separately, and to see how sensitive projections are to varying our assumptions about each one.

The four components are:

- 1) The *Real Medical Price Index*, which is the medical care consumption deflator from the national income accounts adjusted for the overall personal consumption expenditure deflator. We choose FY 2000 as the base year, meaning that the index is set at one for that year. If medical prices were always to rise at the same rate as the average of all prices, the medical price index would remain at one. That is, if medical prices rise by 2% and prices overall also rise by 2%, the medical price index would not change. In each of the past 25 years, however, medical prices rose more rapidly than other prices, with the result that the medical price index went up.
- 2) The *Enrollment Probability* is the probability that a given resident enrolls, becoming eligible for Medicaid. In the year 2000, out of every 1,000 Florida residents, 140 were enrolled in Medicaid. The enrollment probability was 140 per thousand, or 0.140. For other years, we want to think of the enrollment probability as being calculated independently of age structure. In the year 2000, for example, the enrollment probability for children under 15 was 335 per 1,000. We want to abstract from the fact that an increase in the share of the population under 15 would increase overall enrollment, leaving that for the Age Index.
- 3) *Medical Care Intensity* is the quantity of medical care per enrollee. It can be thought of as medical spending per enrollee adjusted for inflation, including any excess of medical over general inflation.
- 4) The *Age Index* shows the effect of changes in the age structure of the population on Medicaid spending. We will discuss it in detail later.

The relation of these components to real Medicaid spending per resident is as follows:

Real Medicaid Spending per Resident *equals*  
the Real Medical Price Index *times*

the Enrollment Probability *times*  
 Medical Care Intensity *times*  
 the Age Index.

As a good approximation we have the following relation:

The *percentage change* in Real Medicaid Spending per Resident *equals*

the *percentage change* in the Real Medical Price Index *plus*  
 the *percentage change* in the Enrollment Probability *plus*  
 the *percentage change* in Medical Care Intensity *plus*  
 the *percentage change* in the Age Index.

We will give the percentage change in the Real Medical Price Index the name Excess Medical Inflation.

Of the four components, the easiest to project—even though it is somewhat involved—is the percentage change in the Age Index. We start our calculation with Table 1 showing the age composition of the population in 2000 as the number in each age group per 1,000 residents, the number of enrollees per 1,000 in 2000 for each age group, Medicaid spending per enrollee and per resident in 2000 for each age group.

The first row shows that of 1,000 residents in Florida in 2000, 190 were ages 0 to 14. Of 1,000 resident ages that young, there were 335 Medicaid enrollees. The average spending per enrollee in that age group was \$1,445, and the average spending per resident in that age group was \$484 (equals \$1,445 times 0.335). Table 1 illustrates the fact that while children are three times as likely as seniors to be enrollees, spending per senior enrolled is so much

**Table 1. Florida Medicaid Age-Related Measures in 2000**

Age Group	Residents/ 1,000	Enrollees/ 1,000	Spending/ Enrollee	Spending/ Resident
0–14	190	335	\$1,445	\$484
15–44	407	112	\$2,923	\$327
45–64	227	52	\$7,162	\$372
65+	176	107	\$7,962	\$852
Total	1,000	140	\$3,285	\$460

**Table 2. Age Structure of Florida's Population  
Residents per Thousand**

Age Group	Year 2000	Year 2005	Year 2010
0-14	190	184	179
15-44	407	393	376
45-64	227	250	267
65+	176	173	177
Total	1,000	1,000	1,000
Age Index	1.000	0.997	1.001

The Age Index for 2005 is calculated as  $(184 \times \$484 + 393 \times \$327 + 250 \times \$372 + 173 \times \$852)$  divided by  $(190 \times \$484 + 407 \times \$327 + 227 \times \$372 + 176 \times \$852)$ .

higher than spending per child enrolled that that spending per senior resident is nearly double spending per child resident.

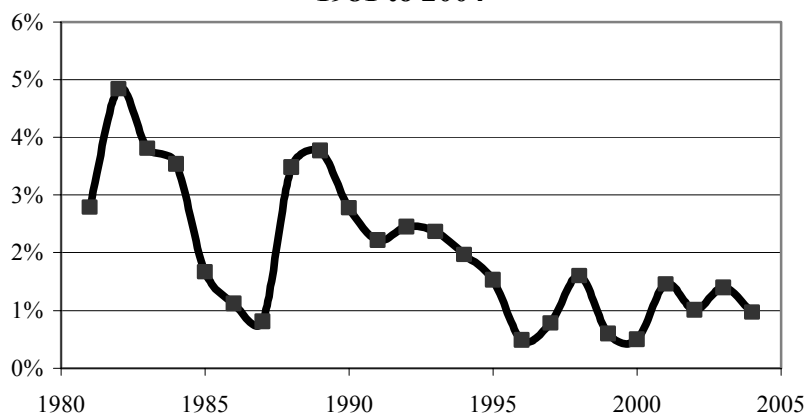
Because of that phenomenon, aging of the population into the senior years causes Medicaid spending to rise, other things the same, and the reverse causes it to fall. From 2000 to 2010 in Florida, however, changes in the age composition of residents will be too small to have much effect, as shown in Table 2.

The Age Index for each year shows the pure age effect on Medicaid spending, when people are placed into these broad age groups. The age effect is quite small. From 2000 to 2005 it is expected to reduce spending by three-tenths of 1%. From 2005 to 2010, it is expected to increase spending by four-tenths of 1%, an increase of about two dollars per resident. Not surprisingly, the age effect is stronger in the long run. In 2025, the estimated Age Index is 1.084, indicating an increase of almost 9% from 2005 due to changing age composition.<sup>5</sup> Even in the short run, it is possible that a finer partition of age groups would give a significantly stronger age effect, but that is unlikely.

Figure 1 shows that medical prices consistently rise more rapidly than other prices. From 1980 through 2004 the accumulated effect was a 62% increase in the inflation-adjusted

<sup>5</sup> We use population projections for 2025 from *The Florida Statistical Abstract 2003*, Bureau of Economic and Business Research, University of Florida, 2003, p. 41.

**Figure 1. Excess Medical Inflation  
1981 to 2004**



price of medical services. Partly, that reflects the general increase in the prices of services relative to goods, since medical care requires a lot of personal service. But it is also a puzzle, since changes in medical care over the past quarter-century have been driven largely by technology. One might expect that to result in falling prices, as is the case with information and communications technology. That should be especially true of pharmaceuticals, the use of which is less labor intensive than is the case with other aspects of medical care.

There are various reasons for the rise in medical prices. The industry is less competitive than, say, computing. With third-party payments prevalent, consumers have less incentive to select the most cost-effective providers. Consumers tend to be less well informed about the quality of services. Because a failed medical procedure is more serious than a computer crash, the cost of developing new equipment and drugs is quite high. There are more fixed costs to be spread over users and more cases of patent-protected monopoly. People are more reluctant to use an inexpensive second-best drug than an inexpensive second-best cell phone.

The good news is that after averaging 2.7% from 1981 through 1993, Excess Medical Inflation has averaged only 1.1% over the past decade, though it has picked up a bit in recent years after being particularly low in the late 1990s.

Which Excess Medical Inflation rate should we use for projecting real Medicaid spending in 2010? Among the possibilities are 0.8% from 1996 through 2000, 1.2% since 2000, 1.1% from 1994 on, and a return to the 2.5% that prevailed before 1993. A reasonable compromise is 1.0%. The very low rate in the 1990s was due to circumstances that are unlikely to be repeated, including the rapid diffusion of the use of managed care, a slowing of the adoption of expensive new technologies (aside from drugs), and a temporary downturn in the profits of health insurers (Glied, 2003). At the same time, medical spending has become a large share of GDP and thus a large share of both private and public budgets. Both the private sector and the public sector are going to be far more attentive to medical prices than they were in the 1980s, making a return to the rapidly rising prices of that decade improbable.

Drug companies in particular will come under severe pressure to hold down prices, with there being a good chance that the United States will allow pharmaceuticals to be imported from other countries, where their prices are controlled. That will result in lower prices in the United States and higher prices in other countries, as the drug companies become more reluctant to agree to lower prices abroad knowing that will erode their market power in the United States. Labor costs and the cost of new technologies will continue to rise, however. Medical inflation will continue to outpace overall inflation. Moreover, it will be hard for the public sector in the next five years to continue to control costs more severely than the private sector.<sup>6</sup> As noted earlier, between 2000 and 2004, the cost of employer-provided health insurance rose by 59% (NBER, 2005).

We turn next to the percentage change in Enrollment Probability, which rose at an annual rate of 2.5% from FY 1997 through FY 2004. Since Florida is likely to obtain a waiver that will restrict enrollment (see the Medicaid chapter in our report), we will assume that the Enrollment Probability will be the same in 2010 as in 2004.

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<sup>6</sup> “By undertaking a variety of cost containment actions, states have maintained a growth rate [of Medicaid spending during the past three years] below private insurance levels.” National Association of State Budget Offices, *State Expenditure Report 2003*, p. 46.



That leaves the task of projecting Medical Care Intensity, an assignment we delegate to the Congressional Budget Office's December 2003 Long-Term Budget Outlook.<sup>7</sup> The CBO explanation of why costs per enrollee grow is worth quoting at length:

*States negotiate the prices of services with providers, and the costs of those services grow with medical price inflation in general. But costs per beneficiary grow faster than prices because of increases in the number and complexity of services ... Because of the labor intensity of nursing home and custodial care services provided mainly to the aged and disabled populations, wage pressures have a particularly large effect on Medicaid costs. Increases in the utilization of prescription drugs ... have also contributed to cost growth. Finally, costs per beneficiary have increased with state policies that have expanded the scope of their benefit package, such as allowing more visits per patient per month.*

Instead of making a single projection of the growth of spending per enrollee, the CBO has three scenarios for the growth of spending per enrollee: (1) 2.5% faster than per capita GDP; (2) 1% faster than per capita GDP; and (3) at the same rate as per capita GDP. Since the growth of spending per enrollee includes both overall inflation and what we call Excess Medical Inflation, and we assume that Excess Medical Inflation will be 1.0%, the CBO projections correspond to growth rates in Medical Care Intensity of (1) 1.5 percentage points faster than real per capita GDP, (2) at the same rate as real per capita GDP, and (3) one percentage point slower than the rate of growth of real per capita GDP.<sup>8</sup>

Besides using CBO projections, we also build on the work of Florida's consensus estimating conference. We use the conference estimates of inflation, nominal income, and population to calculate a projected annual growth in real income per resident of 1.7% between 2004–05 and 2005–10. That gives high, medium, and low projected Medicaid Care Intensity growth rates of 3.2%, 1.7%, and 0.7%. Ignoring the small age effect, which is built into the intensity

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<sup>7</sup> Available at <http://www.cbo.gov/showdoc.cfm?index=4916&sequence=4> for chapter 3: "The Long-Term Outlook for Medicare and Medicaid."

<sup>8</sup> We are ignoring age effects, since they are so small over the relevant horizon.

**Table 3. Florida: Projected Changes in Medicaid Variables  
2004–05 to 2009–10**

Projection	Excess Medical Inflation	Enrollment Probability	Medical Care Intensity	Real Medicaid Spending per Resident	Five- Year RMPR
Low	1.0%	0.0%	0.7%	1.7%	8.8%
Medium	1.0%	0.0%	1.7%	2.7%	14.2%
High	1.0%	0.0%	3.2%	4.2%	22.8%

Note: The last column is a five-year change. The others are annual rates.

measure index except for what are surely tiny differences between Florida and the United States with respect to changes, that gives the projections shown in Table 3 related to Real Medicaid Spending per Resident for Florida.

The last three rows show our low, medium, and high projections. All of the projections assume 1% Excess Medical Inflation per year and no change in Enrollment Probability. The annual growth rates of Medical Care Intensity vary according to the differing Congressional Budget Office assumptions. The annual growth rates in Real Medicaid Spending per Resident in the next-to-last column result in the five-year changes shown in the last column. Our low, medium, and high projections are that from 2004–05 to 2009–10, Real Medicaid Spending per Resident will rise by 8.8%, by 14.2%, or by 22.8%.

Our preferred estimate is the medium one, which corresponds to the preferred estimate of the Congressional Budget Office, which it states is also the preferred estimate for the change in Medical Care Intensity of the Medicare Board of Trustees. That raises the question of how likely it is that the figure could be lower. First, we note that we are using very conservative projections of Excess Medical Inflation and Enrollment Probability. Second, we have shown that the age effect is likely to be close to zero. Third, for Intensity changes we rely on the preferred estimates of both the Congressional Budget Office and the Medicare Board of Trustees.<sup>9</sup>

<sup>9</sup> We are assuming that a good way to project five-year per-resident cost changes for Florida is to use the best available projection of national per-resident cost

We think the chances are about equal that our projected 14% increase in real Medicaid spending per resident will be too low or too high. Perhaps the most important risk that it will be too low is that the enrollment probability will increase at its 1997 to 2004 average annual rate of 2.5%, instead of remaining flat. If the 2.5% growth were to resume, the increase in the enrollment probability would be 13%, resulting in costs 14% higher than our medium projection. Another risk is that medical inflation returns to rates of the 1980s or early 1990s, or that medical care use per enrollee rises more rapidly than the CBO expects.

It is also possible that our medium projection is too high. As noted, the rising share of medical costs in total spending, both private and public, increases the incentive to bring them under control, to make the market for medical care more competitive. In the public sector this might be done through switching to federal Medicaid block grants to states, giving states stronger incentives to control costs; reducing mandatory benefits the federal government imposes on states; restricting the groups covered by Medicaid; increasing the cost-sharing by enrollees; and substituting the use of low-cost care, such as “community-based alternatives” to nursing home care.<sup>10</sup> As noted both here and in the next chapter of this report, for the coming fiscal year Governor Bush may seek a waiver, probably in the form of a block grant, the purpose of which is to reduce costs. Given the federal government’s own budget constraints, such a waiver request stands a good chance of being granted. The Medicaid program is “a likely target of spending cuts,” and the new secretary of Health and Human Services, Michael Leavitt, “has supported Bush-administration efforts to grant states more flexibility to design their Medicaid programs, as well as proposals to limit federal contributions” (Lueck, 2004a).

President Bush may have chosen Leavitt to be secretary of Health and Human Services because of major changes that as governor of Utah he initiated in that state’s Medicaid system. Utah, with a seventh the population of Florida, is in many ways Florida’s demographic opposite, with a population that is both

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changes. This assumption could be tested by seeing whether over five-year periods time effects are large compared to state effects.

<sup>10</sup> This sentence is paraphrased from the December 2003 CBO report, Chapter 3, pp. 9–10.

disproportionately young and culturally homogeneous. The homogeneity is eroding, however. Residents of Mexican origin, only 5% of the population in 1990, are now 10%. Among Hispanics, those of Mexican origin have less education than average and less likely to have private health insurance. More and more non-immigrants were becoming uninsured as well, as rising health care costs forced employers to drop health insurance benefits and as technology enhanced the ability of insurance companies to discriminate among individual applicants, avoiding the riskiest.

In 2002, then-Governor Leavitt obtained the first-ever Medicaid waiver to allow the exclusion of major categories of benefits for some enrollees (Lueck, 2004b). Among the exclusions are hospital care and specialty care. Some enrollees had to pay higher charges for visits to doctors and for drugs. Benefits related to mental health and to illicit drugs were restricted. The medically needy program was eliminated. In compensation, Medicaid coverage was extended to more residents. According to Leavitt, “During a difficult time it’s better to have everyone have basic health care than a few to have all the health care.”

Changes under consideration at the federal level for reforming Medicaid include letting states raise co-payments and restrict eligibility without having to obtain waivers and letting states provide benefits that differ by region within the state. There will also be efforts to control drug costs. The President “has vowed to cut the federal budget deficit by half in five years, and Republican leaders in Congress say that goal will be virtually impossible without touching Medicaid” (Pear, 2004). Ken Pruitt, expected to become Florida Senate President in November 2006, said that Medicaid “is the Pac-Man of the budget. There is absolutely no way that we can remain fiscally viable and meet the needs of this state while Medicaid is on an absolute rampage, eating us alive financially” (Dunkelberger, 2004). Severe federal Medicaid cost-control measures are almost inevitable. Their high likelihood makes their pro’s and con’s, particularly salient. What follows is a mixture of summary and quotation about specific proposals from the CBO Report:

1. Convert Federal Funding into Block Grants. Each year, the federal government could set a spending limit in advance.

States would still have to match those federal dollars, but federal funds would be cut off when the allotment was exhausted. The policy could be implemented for a category of services or population. For example, the federal government could cap funding for long-term care services, or it could cap the federal contribution for each beneficiary.

PRO: The federal government would have more control over spending and states would have stronger incentives to reduce spending. States would no longer employ funding strategies designed to maximize federal assistance.

CON: Some states would cut needy individuals from the rolls.

2. Increase Costs Shared by Beneficiaries. Allow or require states to impose higher deductibles and co-payments.

PRO: Reducing unnecessary utilization would reduce costs.

CON: Beneficiaries might forgo necessary treatment, which could lead to poorer health and possibly greater demand for more extensive treatment later.

3. Expand Community-Based Alternatives to Nursing Home Care.

PRO: Community-based care is much less expensive per person.

CON: The demand for community-based care is greater than the demand for institutional care and is more likely to substitute for informal care provided in the home.

With the cost of Medicaid becoming a larger and larger share of public spending, changes are inevitable. Controlling cost will and should be part of that change. The state is also likely to take a larger role in promoting health. An example is the Florida-Pfizer cooperation described in our next chapter, in which Florida's Agency for Health Care Administration, Pfizer, and hospitals "jointly created a new health network to help Medicaid patients with certain chronic diseases make better informed health-care decision" (McKinnell, 2004).<sup>11</sup> The result, according to Pfizer's chairman, was a benefit-cost ratio exceeding two. That is, each dollar invested in maintaining health saved the Medicaid program

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<sup>11</sup> McKinnell is CEO of Pfizer.

more than two dollars.<sup>12</sup> That Florida-Pfizer pioneering cooperation generalizes into other efforts to encourage residents to maintain their health.

Increasing emphasis on home-based long term care for the frail elderly and the disabled is sometimes suggested as a way to reduce the cost of long-term care, since home care may be only half as expensive as nursing home care (*Governing*, 2004).<sup>13</sup> Institutional and home care do not appear to be close substitutes, however. The elderly and disabled in institutions require much more intensive care than those receiving home care. When Michigan, for example, expanded home care rapidly, there was no offsetting reduction in nursing home enrollment. Then when home care enrollment was capped, there was no increase in nursing home enrollment. According to Michigan Medicaid director Paul Reinhart, home care and institutional care are “decoupled” (*Governing*, 2004).

To illustrate this decoupling, we calculated average spending per resident (not per enrollee) on long-term care in FY 2002 for two categories of states, those spending less than 30% of their long-term-care budget on home care and those spending more than 30% on home care. The average for the 26 states spending less than 30% was \$285 a year; for the 25 states (including D.C.) spending more, \$380 a year.<sup>14</sup> Long term home or community care is a good thing in and of itself, but should not be counted on as a means to reduce overall Medicaid spending.

More promising is increased use of primary care case management (PCCM). As noted in our program chapter on Medicaid, in Florida 29% of Medicaid enrollees are under PCCM, compared to only 10% nationally. In FY 2003, total Medicaid average spending per enrollee in states with less than 30% of all enrollees in PCCM was \$6,924. In states with more than 30% of all enrollees in PCCM, the average was \$6,250. Total Medicaid

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<sup>12</sup> Critics say the state could have saved even more money through harder bargaining with the drug companies instead of the “value-added” program. Barbara A. Ormond, “State responses to budget crisis in 2004: Florida,” Kaiser Family Foundation, January 2004, p. 8.

<sup>13</sup> Vermont estimated that the annual cost of home care was \$25,000 per enrollee, versus \$50,000 for institutional care.

<sup>14</sup> The averages are weighted by population. Unweighted averages are \$299 and \$352. We used spending data from *Governing*, February 2004.

spending per resident was also lower in the high-PCCM states, by \$96. We emphasize that this evidence is merely suggestive. For example, southern states tend to be high-PCCM states and may have lower costs because they are less generous rather than because they are more efficient. Concluding the PCCM does save costs would require an extensive study. Such studies are probably exist or are underway. Florida, incidentally, is stingy in its management fee, paying \$126 per enrollee compared to \$156 nationally and \$164 in other southern states in 2003.

To conclude our discussion of Medicaid, we want to emphasize that we think our middle projection of spending for 2009–20 is conservative. Compared to federal projections, all of our estimates are low. The National Association of State Budget Officers (2003, p. 46) notes that both CBO and OMB projections for the long run are that the annual growth of Medicaid spending will be between 8% and 9%, including inflation, which implies about 5% to 6% for real spending per resident.

We based our estimates we used on the December 2003 Congressional Budget Office projections because they were the latest available. The winter 2005 expenditure projections by Florida’s Office of Economic and Demographic Research may our estimates appear to be low.<sup>15</sup> The projected increases by fiscal year in general revenue funds required for Medicaid are:

Fiscal Year	\$millions
2005-06	\$945
2006-07	\$477
2007-08	\$575

These represent increases of approximately 12%, 7%, and 8% respectively, in nominal spending from general revenue. More than half of the 2005-06 increase, however, is an anomaly caused by the phasing out of a temporary 2.95 percentage point increase in the federal Medicaid matching formula enacted by Congress to offset some of the recession-induced stress on state budgets.<sup>16</sup>

<sup>15</sup> Florida Office of Economic and Demographic Research, *State of Florida: Three Year Revenue and Expenditure Outlook, Winter 2005*, p. 28. Jointly prepared by The Senate Ways and Means Committee and The Office of Economic and Demographic Research.

<sup>16</sup> The formula for the FMAP, or federal matching share, is  $FMAP = 1 - .45R^2$ , where R is the ratio of the state’s income per resident to income per resident in

Removing that effect requires two steps: (1) adding the 2.95 percentage points back into the 2004-05 general revenue share of the Medicaid budget; and (2) recalculating the increase in general revenue funding required to reach the 2005-06 total. Doing that reduces the percentage increases from general revenue to approximately 5%, 7%, and 8%. Adjusted for projected inflation and population growth, those increases average only slightly higher than our medium projection. Consequently, we will use our medium projection for the rate of growth of general revenue requirements, stepped up to the higher level made necessary by the end of the temporary supplemental FMAP.

In August 2005, Florida submitted a request to Washington for a Medicaid waiver to allow experimental programs in Duval and Broward counties. (AHCA, 2005). Two major changes sought in the request are to allow Medicaid enrollees to choose among managed care plans that would be funded on a risk-adjusted basis and to create enhanced-benefits accounts that cover additional medical expenses, such as over-the-counter medicines, for enrollees who take steps to improve their own health. After its initial period, the new program is expected to spread to rural counties surrounding Jacksonville, and then gradually to the rest of the state, with full coverage in 2010. Though the plan's use of incentives to improve individuals' involvement in their own health management has the promise of improving efficiency, perhaps substantially, we anticipate only limited cost savings by 2009-10 and consequently do not revise our projection to allow for them.

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the nation, averaged over the past three years. FMAP for Florida is .589. The decline in Florida's relative income per resident from 100.8% in 1988-90 to 95.7% in 2002-04 is gaining the state half a billion dollars a year in Federal Medicaid funds. Allowing the state's relative income to continue to fall at that rate could gain another \$200 million or so a year by 2009-10, but in making budget projections it would be unwise to count on a continued decline.



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# Medicaid: The 800-Pound Gorilla

# 4

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## *Overview of Medicaid: Florida and the Nation*

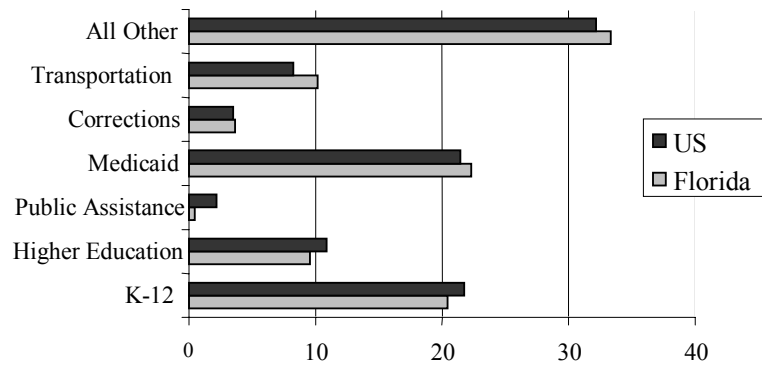
### **Carol Weissert**

Medicaid, in Florida as in other states, is a huge and growing financial and administrative commitment. Medicaid, the federal-state program for the poor, is inexorably complicated and time-consuming. Every legislative session, the Florida legislature enacts a myriad of laws further shaping, and often curtailing, programs and services in an effort to slow the seemingly unstoppable rising costs. While this chapter cannot possibly cover all aspects of Medicaid, it will focus on some of the largest and most tractable aspects of the program, highlighting the trends in the program, assessing its impact on Florida's citizens and budgets, and suggesting some possibilities for change.

Medicaid was designed to fund health care services for the most vulnerable members of society—primarily the poor, elderly, and the disabled. However, as it has evolved, Medicaid serves important groups of recipients who meet different eligibility standards and receive different packages of services. This complex array of programs, services, and recipients explains some of the difficulty in reforming, or even controlling spending in, Medicaid. Another confounding factor is the intergovernmental nature of the program. Because Medicaid is funded largely by the federal government, many of the requirements and standards are mandated on states. The federal funding also provides a somewhat perverse incentive for states to shift more programs and recipients to Medicaid and thus garner more federal dollars and thus more state dollars.

Medicaid occupies a large and growing spot in Florida's budget. In 2005–06, Medicaid is expected to cost over \$15 billion (federal and state dollars) or roughly one-fourth of the state

**Figure 1. State Spending by Function as Percentage of Total State Expenditures, Fiscal Year 2003**



Source: National Association of State Budget Officers, 2004.

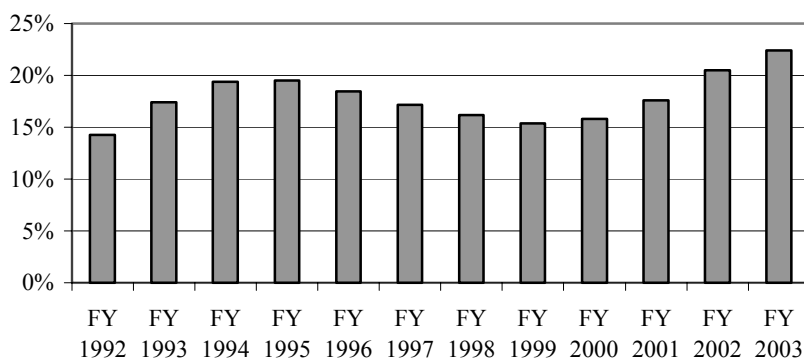
budget. Medicaid costs have nearly doubled in the past six years (Social Services Estimating Conference, 2005) and are expected to continue to grow over the next decade. The reach of the program is immense. According to the Agency for Health Care Administration (2004a), Medicaid serves 27% of all children in Florida. It also pays for health care for 44% of pregnant women, 66% of nursing home days, 52% of people with AIDS, and nearly 1 million adults (parents, aged and disabled).

Medicaid makes up a substantial and rising portion of budgets in other states as well. As Figure 1 illustrates, for both Florida and the U.S. as a whole, Medicaid made up one-fifth of total state spending in 2003. While K–12 education spending still maintains the top position for single program funding percentage, Medicaid is a close second and growing at much faster rates. By FY 2003, Florida’s percentage of Medicaid expenditures of total state expenditures exceeded the national average. It was 22% in Florida and 21% across all states (NASBO, 2003).

Figure 2 shows the increase in Medicaid’s percentage of Florida’s state budget since FY 1992. While it made up less than 15% in FY 1992, by FY 2003, it was nearing 25%. Between FY 2002 and FY 2003, Florida’s Medicaid spending increased by 14%, compared to 8% nationally (NASBO, 2004).

Across the country, Medicaid costs are growing at three times

**Figure 2. Florida Medicaid as a Percentage of the State Budget, FY 1992-2003**



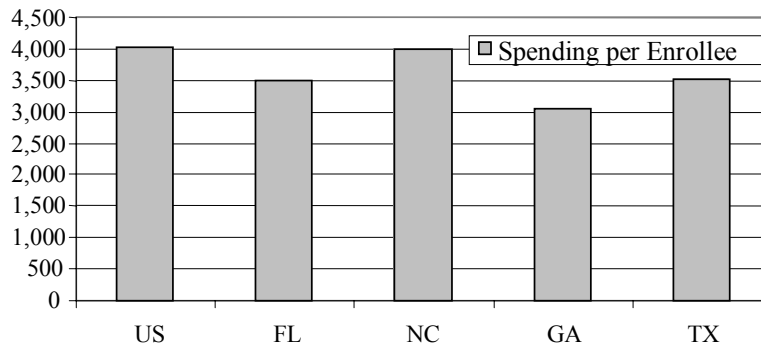
Source: Florida Agency for Health Care Administration, 2004a.

the rate of elementary and secondary education spending and four times the rate of corrections (Greenblatt, 2003). Overall across the country, Medicaid spending grew by 6% in state funds and 11% in federal funds in FY 2003. For FY 2004, states estimate Medicaid growth will be 4.6% for state funds and 11.7% of federal funds (NGA, 2004). These increases were especially onerous on states facing fiscal difficulties in 2000–03. In recognition of these difficulties, a new federal law, the Jobs and Growth Tax Relief Reconciliation Act of 2003, provided \$20 billion to states. Some \$10 billion was targeted to Medicaid in the form of temporary increases in the federal matching for Medicaid to last five quarters, through the first three quarters of FY 2004.

Compared to other states, Florida’s Medicaid program is rather stringent. For example, Florida ranked 40<sup>th</sup> in the nation in per capita Medicaid expenses in 2000 (Carasso & Bess, 2003). It was 38<sup>th</sup> in the nation in total Medicaid spending per enrollee in FY 2001. While Florida’s spending per enrollee in FY 2001 was \$3,488, the national average was \$4,011 (Kaiser Family Foundation, 2005).

Figure 3 shows Florida Medicaid spending per enrollee in FY 2001 compared to the U.S. average and to three large Southern states: North Carolina, Georgia, and Texas. As the figure illustrates, Florida is low relative to the country as a whole but fairly comparable to the other southern states. Florida is lower than

**Figure 3. Total Medicaid Spending per Enrollee FY 2001:  
U.S., Florida, and Three Other Large Southern States**



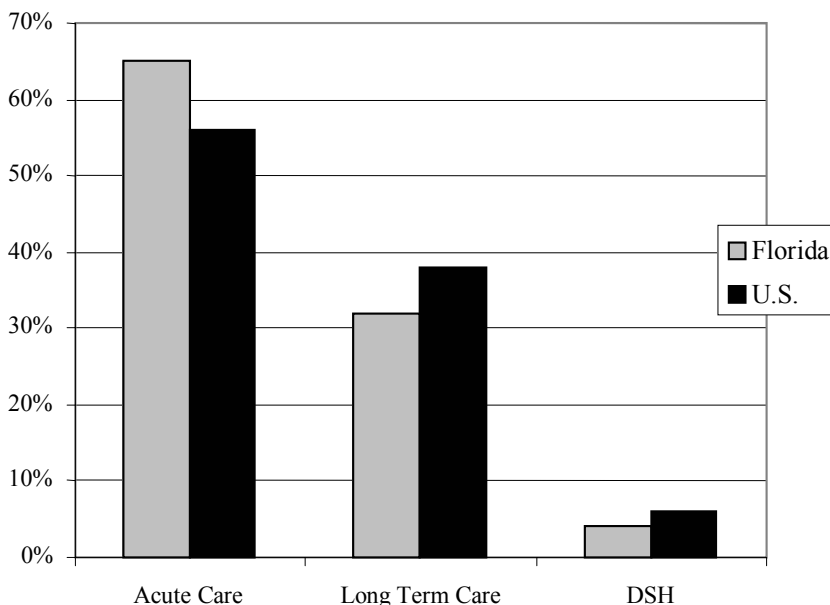
Source: The Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on data from Medicaid Statistical Information System (MSIS) reports from the Centers for Medicare and Medicaid Services (CMS), 2005.

North Carolina and Texas and higher than Georgia (Kaiser Family Foundation, 2005). To put Florida’s spending another way, the state ranked 38<sup>th</sup> in Medicaid spending per enrollee, lagging both large states such as New York (highest with \$7,817), Ohio (15<sup>th</sup> with \$4,826), Pennsylvania (\$4,634) and Illinois (\$4,531) and southern states of Virginia (\$3,877), Maryland (\$5,542), North Carolina (\$4,000), and Texas (\$3,534).

Perhaps surprisingly, given Florida’s demographic makeup, Florida’s Medicaid program spends a higher percentage on acute care and lower percentages on long-term care than the nation as a whole. As Figure 4 illustrates, the U.S. average Medicaid spending for acute care services (for hospitals, physicians, prescription drugs, other services, payments to Medicare, and managed care) is 56%, while Florida’s is 65%. Nationally long-term care (nursing homes, mental health facilities, intermediate care facilities for the mentally retarded and home health and personal care) makes up 38% of state Medicaid spending and only 32% in Florida.<sup>1</sup> Finally

<sup>1</sup> It is difficult to deconstruct these percentages, but it is likely that it is the lower spending on long term care that is most important here. As noted in the next paragraph, Florida policy has intentionally been rather stingy in this area, probably flowing from the fear that, given the state’s large percentage of elderly,

**Figure 4. Distribution of Medicaid Spending by Service:  
U.S. and Florida, FY 2002**



Source: Kaiser Family Foundation. 2004.

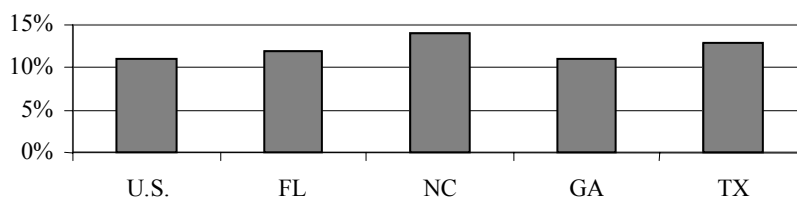
Disproportionate Share Hospital (DSH) spending, which will be further discussed later, makes up 6% nationally and only 4% in Florida (Kaiser Family Foundation, 2004).

Florida's Medicaid system has successfully held down the costs for long-term care, primarily nursing home care for the elderly. Per capita expenditures for long-term care in Florida are well below the national average (Yemane & Hill, 2002). Some attribute this constraint to careful policy selection to discourage such spending. The state has helped to hold down the supply of institutional long-term care providers and has been somewhat reluctant to participate in the home- and community-based program. Perhaps because of these constraints, or for personal reasons, elderly may leave the state to live in nursing homes closer

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more generous policies toward long term care would be extremely costly. The elderly use acute care as well, but hospital expenses are more complex and can be more difficult to curtail than nursing home rates.

**Figure 5. Average Annual Growth in Medicaid Spending  
FY 1991-2001: U.S, Florida, and  
Other Large Southern States**



Source: Kaiser Family Foundation, *State Health Facts, 2004*.

to children and other family members. Others note that Florida's elderly are healthier and more affluent than those in other parts of the nation. Finally, issues of quality in nursing homes have been a recurrent policy feature in Florida (Yemane & Hill, 2002) with well-publicized nursing home scandals perhaps discouraging potential residents.

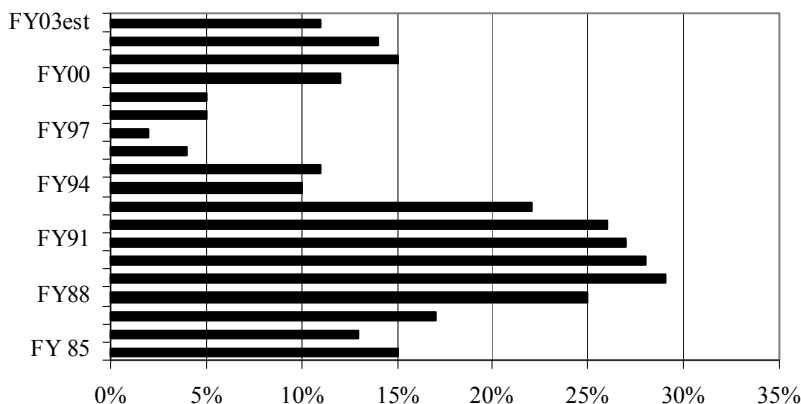
Issues remain with this population—particularly looking at demographic trends. Florida is expected to see its percentage of those 65 years and older rise from 17.6% to 18.4% by 2010 (AHCA, 2004f).

Medicaid-funded home- and community-based care spending is still not widespread in Florida—but is growing, particularly for the disabled. In 1997, Florida launched the Long-Term Care Community Diversion Pilot Waiver Program to provide home- and community-based care to dual-eligible persons at risk for nursing home admission.<sup>2</sup> However, the number of persons served in the program is small (Yemane & Hill, 2002). In contrast, Florida is an enthusiastic user of home health programs.

Finally, Figure 5 shows the average annual growth in total Medicaid spending between FY 1991–2001 for Florida, the U.S.

<sup>2</sup> The dually eligible are low-income elderly and persons with disability who are enrolled in both Medicare and Medicaid. Dual eligibles rely on Medicaid to pay for Medicare premiums and cost-sharing and to cover benefits Medicare does not cover. Nationwide the dually eligible are a small share of enrollment but make up much greater proportions of expenditures for medical services (O'Brien & Elias, 2004).

**Figure 6. Annual Medicaid Expenditure Growth Rate, FY 1985-2003**



Source: AHCA, A Snapshot of Florida Medicaid, 2004.

and three large southern states. The figure illustrates that Florida’s annual growth over that period was greater than the U.S. average (12% versus 10%). Given the immensity of the Medicaid budgets, this percentage increase is significant. However, compared to the other large southern states, the increase is lower than two states—North Carolina and Texas—and higher than Georgia. (Kaiser Family Foundation, 2004).

The average growth in Figure 5 is a bit deceiving, since it hides high rates of growth in the early years, a flattening out in the mid 1990s, and an increase in recent years. Figure 6 shows the growth rates in Florida Medicaid expenditures between FY 1985 and FY 2003. Since 1985, the annual growth rate has averaged a remarkable 15.3%. However, this statistic hides the intensity of the changes. In the FY 1988 through FY 1993 period, Florida’s Medicaid expenditures grew by around 25% a year. The expenditure growth fell in the mid-to-late 90s, but has risen, beginning in FY 2000. While the growth rate hovers closer to 15 than 25%, the trend is worrisome (AHCA, 2004b). The Medicaid revenue estimating conference concluded that the FY 2005 increase would be the smallest in the past five years but still substantial at 10% (Social Services Estimating Conference 2005).

While it is hard to pinpoint causes of spending, Florida’s recent increases are probably due to medical inflation (increases in



provider rates after a period in which they were held down), growing costs of long term care as the society ages, rapidly increasing costs of prescription drugs, and increased enrollment of low-income families with children, as the economy falters (Carasso & Bess, 2003).

Medicaid was designed as a counter-cyclical program that provides assistance to families of those who suffer job loss or a drop in income from economic downturns. Yet Medicaid spending is notoriously difficult to project, in part because of the complicated nature of the program with a myriad of groups and services, and in part, because it is affected by many forces external to the program, including other federal and state social services programs, the overall economy, demographic trends and provider actions.

Nevertheless, we know that Medicaid costs are increasing in Florida and other states, although the increases expected in FY 2003–05 are in the high single digits—not the double digits of 2002 (Heffler et al., 2004). Nevertheless, Medicaid is troublesome for Florida and other states because the growth is steady and has resulted in Medicaid’s dominance in the state’s budget.

### ***Florida’s Medicaid Program***

Under federal law, Florida Medicaid is required to provide services for: (1) individuals who receive cash assistance from the TANF program, the federal-state welfare program, and persons who would be eligible but do not meet certain technical requirements; (2) individuals who receive cash assistance from the Social Security Administration or who were eligible for and lost benefits—persons 65 or older or under 65 and permanently disabled; (3) certain categories of children; (4) pregnant women in families with incomes at or below 185% of poverty; and (5) certain elderly and disabled persons with incomes at or below 100% of poverty, who have their Medicare premiums, coinsurance and deductibles paid. Some 42% of Florida’s Medicaid dollars go to provide those mandatory services.

Florida Medicaid also covers: (1) the medically needy—those who meet the requirements of cash assistance except for income or assets; (2) individuals needing care in a nursing facility or state

mental hospital and whose incomes do not exceed 300% of the standard for receiving cash from the SSA; (3) aliens who meet all the other requirements for Medicaid eligibility except for citizenship and who have a medical emergency; and (4) health care services for elderly and disabled with incomes below 90% of federal poverty level (AHCA, 2004b).

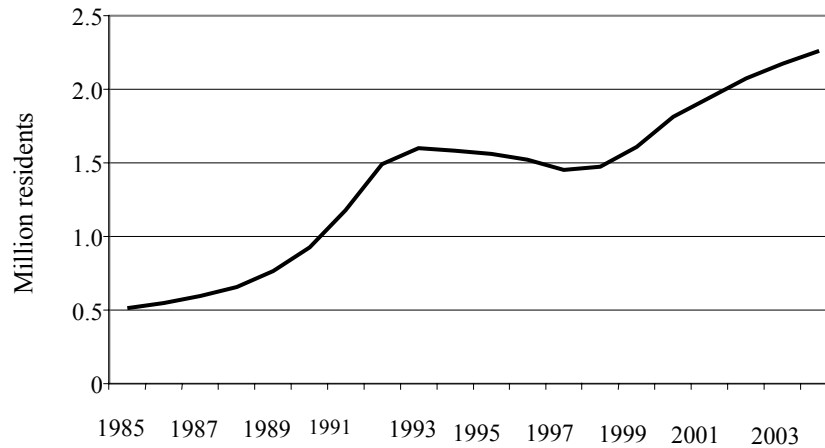
Some 2.1 million persons in Florida are Medicaid recipients. Over half of Medicaid beneficiaries are children, 10% are elderly and 19% are blind or disabled. Nearly a third of recipients are from the TANF program. The percentages on the spending side are far different. While children are the largest category of recipients, they only account for 16% of spending in the program. In contrast, blind and disabled recipients account for 58% of spending (AHCA, 2005; Alker & Portelli, 2005). The medically needy program, one the legislature has often targeted for reduction or elimination, makes up only around 2% of eligibles and spending (Social Services Estimating Conference, 2005; Kaiser Family Foundation, 2004).

For every dollar Florida contributes, the federal government contributes \$1.29 (Carasso & Bess, 2003). In 2003, Florida's federal match—called the federal medical assistance participation rate (FMAP)—was 57.8%. Florida's FMAP increased from FY 2000, when it was 56.5% (AHCA, 2002). The FMAP is determined by a formula that compares the state average per capita income with the national income. By law, the FMAP cannot be lower than 50% or greater than 83% (HCFA, 2000).

Medicaid costs have long been a major concern for Florida's executive and legislative branches. According to the AHCA, between FY 2000 and 2003, the legislature enacted more than \$1 billion in reductions.<sup>3</sup> By 2004, that hoped-for Medicaid "savings" had increased to \$1.6 billion (OPPAGA, 2004). The legislature particularly targeted prescription drugs, a major and growing component of Medicaid expenditures. More than 40% of the total budget reductions over that time applied to prescription drugs (AHCA, 2004b). Of course, these initiatives, like others, do not begin immediately and cannot show results overnight. However,

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<sup>3</sup> These are reductions over what would have been spent under previous policy. As noted earlier, total Medicaid spending is increasing over time.

**Figure 7. Medicaid Enrollment, FY 1985 through 2004**

Source: Social Science Estimating Conference, September 26, 2003.

Florida has had some difficulties implementing earlier programs to control spending and has been criticized in other areas for a failure of oversight (OPPAGA, 2001b). For example, Florida Medicaid's early experience with HMOs was marred by marketing problems and low quality of care, in part flowing from poor oversight (Yemane & Hill, 2002).

Other targets of legislative attempts to curtail Medicaid spending were changes in program financing (such as instituting competitive bidding of independent lab, durable medical equipment, and transportation services), improving efforts to detect and recover overpayments due to fraud and abuse, and disease management strategies. Nevertheless, in four of the five most recent fiscal years, total Medicaid expenditures have exceeded total appropriations (OPPAGA, 2004).

One reason—although not the major one—for Medicaid's spending trajectory is increasing enrollment. Figure 7 illustrates this growth since FY 1985. Between 1993 and 2004, enrollment grew by 23%, although the increase was dampened in 1996 and 1997, when enrollment actually fell. These were the initial years of the implementation of the new welfare reform law, which focused on finding jobs for welfare recipients, allowing them to also un-

enroll in Medicaid. (There is some evidence from other states that recipients often un-enrolled even though they were eligible for continued Medicaid coverage.) In recent years, the TANF enrollments have increased slightly, although they still are far below numbers prior to welfare reform. More importantly, between FY 2002 and 2004, estimated caseloads are up 9.1%—a substantial increase (Agency for Health Care Administration, 2005). Nationally, enrollment increases have been attributed to loss of employer-based coverage. This seems to be less of a problem in Florida than for other states.

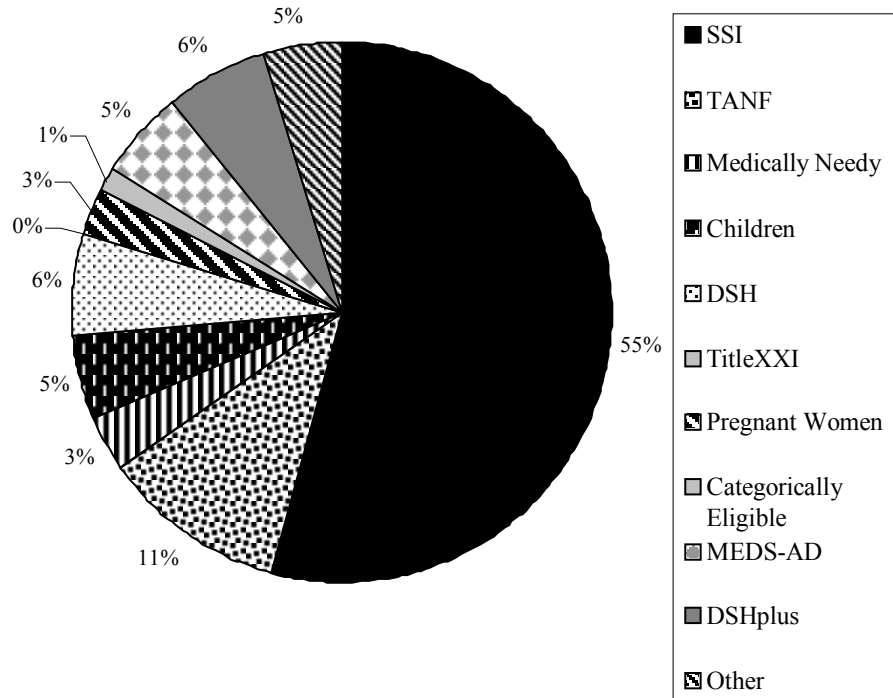
More persuasive explanations for the recent increased spending are the increase in funding for home and community-based services and the increased spending for prescription drugs (Yemane & Hill, 2002). Increased spending in FY 2003 was blamed primarily on prescription drugs, followed by the cost of nursing home care, according to Florida's responses to a national survey conducted in 2003 (Smith et al., 2003). In FY 2004, it was the increase in utilization and price of prescription drugs and hospital services and growth in the SSI population (Smith et al., 2004).

Apart from services and benefits, state Medicaid programs differ in their eligibility standards. In Florida, unemployed parents are eligible but only with very low incomes. Florida offers a medically needy program for those whose health care costs are so high that they push them down into very low income levels. But it is available only for those with income limit of 23.8% of the federal poverty level. (Grigas, 2003). As Figure 8 indicates, the poor elderly and disabled who qualify for the SSI program get the lion's share of the state's Medicaid dollars.

Under the 1996 federal welfare reform law, immigrants entering the United States after August 22, 2004, were ineligible for federal Medicaid dollars for five years. The law gave states the option to decide whether or not to cover "non-exempt" legal immigrants who arrived prior to that date, including legal permanent residents and refugees and asylees. Florida does provide aid to the second group, as do 48 other states (SPDP, 2004). Those who do not meet citizenship or permanent residency requirements are eligible only for emergency services through Medicaid.

Poor and near-poor children and pregnant women are covered

**Figure 8. Medicaid Spending by Category, FY 2004**

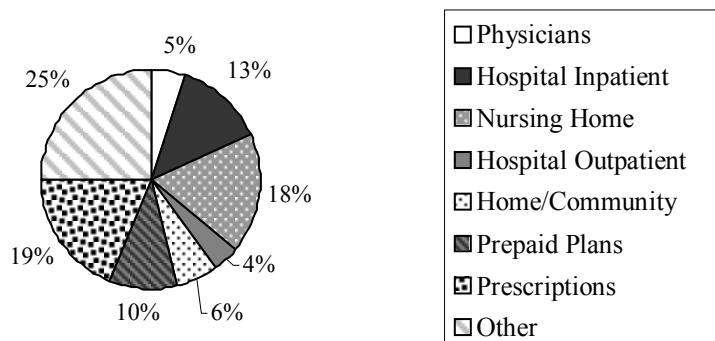


Source: Social Service Estimating Conference, September 26, 2003.

under Healthy Kids, which is discussed in Chapter 11. But in Florida, as in other states, spending for children makes up a relatively small portion of the total Medicaid budget—even though they make up a much greater percentage of enrollment. Children made up 50% of the Florida Medicaid enrollment in FY 2000 but accounted for only 15% of the spending that year (Kaiser Family Foundation, 2004)

In FY 2004, the largest category of spending in Florida’s Medicaid program was prescription drugs, which accounted for nearly 19% of the state’s spending (Figure 9). Nursing home costs were a close second, at 17.5% of state’s Medicaid spending. Hospital inpatient was 12.6% and prepaid health plans 10%. (Grigas, 2003) It is important to note that Florida’s spending patterns are similar to those of other states, particularly in the recent increase in prescription drug costs. However, as Yemane and Hill (2002) noted, Florida’s prescription drug expenditures

**Figure 9. Medicaid Spending By Service, FY 2004**



Source: Social Services Estimating Conference, February 27, 2004.

between 1995 and 1998 grew at a rate significantly higher than the rest of the country—18.7% for Florida compared to 11.2 persons for the nation. Between FY 1996 and 2000, the state failed to address the issue with aggressive cost-control measures (OPPAGA, 2001a). Florida and other states have recognized this pattern and have adopted policies to contain these costs with varying results (see for example, OPPAGA, 2001a).

There are a number of ways to analyze Medicaid policy, most notably services and groups of beneficiaries. The latter category can be through the funding source (Supplemental Security Income [SSI], TANF, etc. as portrayed in Figure 8) or broken down further by ages and disabilities. As noted in Figure 9, prescription drugs, nursing home, and hospital costs make up the largest percentages of Medicaid spending in Florida. The SSI category is particularly useful to dissect into two groups: people with disabilities and frail elderly. For both groups, spending options include institutional care and non-institutional care.

Persons with Disabilities. While SSI is often viewed as a program for the elderly, 72% of the SSI population is not elderly; in fact, many are children (Social Security Administration, 2004). Nationally, half of the one million children with severe disabilities age four and under receive Medicaid benefits and 30% of the 5.3 million children ages 5 to 17 with disabilities receive benefits. Medicaid’s role for those with severe disabilities is even greater.

States are required to cover people with disabilities and the

elderly who are eligible for SSI. States are allowed to extend Medicaid coverage to people with disabilities and the elderly with incomes above mandatory coverage limits and people residing in institutions. Nearly 80% of Medicaid beneficiaries with disabilities qualify on the basis of receiving SSI—but nearly 20% do not (Crowley & Elias, 2004, p. 12). To meet the SSI requirements, individuals must be so impaired that they are unable to work and their income and resources must be below SSI standards. However, there are some exceptions, especially for children. Disabled children must meet this standard: “a medically determinable physical or mental impairment which results in marked and severe functional limitations, and which can be expected to result in death, or which has lasted or can be expected to last for a continuous period of not less than 12 months.” If the child is in an institution for more than 30 days, the child may qualify for Medicaid, even if the parents’ income is higher than that allowed under SSI. Another option, called the Katie Beckett option, allows states to offer Medicaid coverage to children who meet the SSI disability standard and would be eligible if they were in an institution but who are living at home. Katie Beckett applies even for families with incomes above the SSI income standard.

Services provided for the disabled under Medicaid are more generous than those to non-disabled. In addition to standard medical benefits, Medicaid commonly covers rehabilitation services, personal care, case management, nursing home for adults, therapeutic services, transportation, medical equipment, and home health services. Nationally, some 43% of spending on persons with disabilities is for long-term care (personal care, home health, mental health, ICF/MR, and nursing facilities).

Since persons with disabilities often require more extensive services than other beneficiaries, their costs are substantial. Nationally, they made up only 16% of enrollees in 2002 but accounted for 43% of spending (Crowley & Elias, 2003).

The per-person costs for disabled are substantially greater, on average, than those of the non-disabled. Nationally in 2002, the average per-person cost of caring for persons with disabilities to Medicaid was \$11,500. For non-disabled children, the average per person cost that year was \$1,500; for non-disabled adults, it was \$2,000.

Nationwide spending for the disabled has increased sharply in recent years. While roughly one-third is due to new beneficiaries, most of the increase is attributed to rising costs of serving the existing caseload (Crowley & Elias, 2003).

Frail Elderly. Nationally on a per-person basis, the elderly on Medicaid are much more expensive than the non-elderly (even more expensive than the disabled). The average cost for elderly Medicaid beneficiaries in 2002 was \$12,800, compared to \$2,000 for non-disabled adults. (Crowley & Elias, 2003, p. 22). In Florida, costs per person are slightly greater for the disabled than for the elderly, averaging \$7,599 in FY 2000, compared to \$7,827 for the disabled. In contrast, in that year, Medicaid payments for non-disabled children averaged \$975.

While there is some overlap between the elderly and the disabled, it is not a major issue. For example, nationally, those 65 and over who are disabled made up only 13% of the total disabled enrollment in 2000.

Two other components of Medicaid have become increasingly important in recent years: managed care and efforts to maximize federal dollars through special payments from health facilities and local governments.

Managed Care. According to the Henry J. Kaiser Family Foundation, Florida surpasses the national average for managed-care enrollees as a percent of state Medicaid enrollees in 2002. Florida has 63% of its enrollees in some type of managed care arrangement, compared to a national average of 58%. (Kaiser Family Foundation, 2004). However, unlike the rest of the country, most of Florida's Medicaid managed care arrangements heavily rely on enrollment in primary care case management where providers are paid a fee to oversee a patient's care. While 82% of the U.S. Medicaid enrollees are in full-risk plans, only 54% of Florida enrollees are in these plans. Under a full risk, or HMO model, providers are paid a fee to provide services needed by the patient, including hospitalization. Some 46% of enrollees are in primary care case management, compared to 18% of enrollees across the nation. (Kaiser Family Foundation, 2004).

Florida's primary care management offerings include the Medicaid Provider Access System (MediPass) and the Provider Service Network. MediPass provides primary care case



management services to Medicaid clients, including the non-dual-eligible SSI population (Yemane & Hill, 2002). The MediPass program has contracted with disease management organizations to provide disease management services to MediPass-enrolled recipients with certain diseases (AHCA, 2004).

The Provider Service Network is an extension of the MediPass program that operates in south Florida. It is a partnership between the Medicaid program and high-volume Medicaid providers. Although it had difficulty attracting adequate numbers of Medicaid enrollees in the early years of the program (the demonstration project began in 1997), as it has matured, it has attracted more clients and appears a viable service choice (Yemane & Hill, 2002).

Florida was an early and enthusiastic user of Medicaid managed care, but the movement was curtailed in the mid-1990s when marketing and enrollment abuses came to light in a series of newspaper articles. In the 1996-97 legislative session, a series of proposals was enacted to enhance quality of care and provide consumer protections in Medicaid managed care plans (Crew, 2000).

Today Florida has 11 Medicaid HMOs, although three plans share 75% of the Medicaid members. As a way of helping boost the number of clients in the HMOs, the state changed Medicaid auto-enrollments (where the client fails to express a preference for a plan) so that all of these clients would be assigned to HMOs until the numbers in the HMOs and the two primary care case management programs were equal. The distribution scheme has apparently succeeded, since as of May 2004, HMO membership was greater than that of Medipass. Overall Medicaid payments to HMOs are low and, even so, were recently cut.

Disproportionate Share Hospitals and Upper Payment Limit Programs. Since the early 1990s, states have made efforts to “maximize” federal payments, first through Disproportionate Share Hospitals (DSH) and then, when the Congress limited DSH payments, through Upper Payment Limit (UPL) programs. Both allow states to garner additional federal match without additional state expense.

DSH was set up by Congress in the early 1980s to provide financial relief for hospitals serving the poor. States began to obtain money from the hospitals and local governments

(intergovernmental transfers) to use as the state “match,” which then led to more federal dollars. The hospitals would receive their money (often plus a small “fee”), and the state could keep the rest of the federal dollars. Throughout the 1990s, federal policymakers sought to reform the DSH program. More recently, states have used a provision in the Medicaid law that allows enhanced payment to certain providers that the states could use again for enhanced federal match (and a cut of the enhanced rate). Most of the UPL payments in 2001 went to nursing homes (Coughlin, Bruen, & King, 2004). In 2001, the federal government sought to restrict the UPL programs by changing the way states could calculate the payments, estimated to total more than \$11 billion across the states in 2001.

Florida’s DSH program began in 1988 and was funded by provider taxes and general funds. (Yemane & Hill, 2002) DSH hospitals receive higher Medicaid reimbursements than other hospitals because they treat a disproportionate share of Medicaid patients, many of whom are in poorer health and require expensive care. States were able to divert a portion of the federal match to other state services rather than providing it all to DSH hospitals. When federal law limited these payments to actual unreimbursed costs in 1993, the state created intergovernmental transfer programs to finance DSH (Carasso & Bess, 2003). Florida was not particularly aggressive in use of these DSH reimbursements, however. A FY 1997–98 survey found that DSH in Florida accounted for only 6% of Medicaid spending, compared to a national average of 10% (Yemane & Hill, 2002). Further, most of the DSH payments went to institutions for mental diseases. When a 1997 federal law limited the amount of DSH funding for these institutions to no more than a third of the state’s federal DSH payment, Florida had to revise its DSH program funding (Yemane & Hill, 2002). In FY 2003, there were \$280 million total DSH program funds involving \$44 million state funds, \$72 million county funds and \$165 million federal funds (AHCA, 2002).

Given constraints on DSH, states began to maximize federal dollars in the Medicaid program through the Supplemental Provider Payment Program, more commonly known as the Upper Payment Limit (UPL). Under this program, designated providers can receive additional funding from the state that exceeds the

regular Medicaid reimbursement up to 150% of the amount the Medicare program would pay for those services. The public Medicaid providers, such as hospitals and nursing homes, can raise the matching funds for the program and receive in return their match plus the federal match, less some “administrative” fee left in the state capital. In addition to garnering the state “fee,” the state has expended none of its own dollars. Florida began its UPL program in 2000. According to Yemane and Hill (2002), the legislature is requiring localities to raise roughly three times as much money through provider taxation as when the program started. Meanwhile, the federal government is beginning to limit UPL (Yemane & Hill, 2002). New guidelines limit the UPL maximum to 100% to 150%, making the program less appealing in many ways.

In 2002, the Florida legislature supported a state plan amendment to the federal government to allow supplemental payments for physicians employed in a public or private university medical school or teaching hospital who provide services to Medicaid clients.

In FY 2003, there was \$562 million in UPL: \$45 million in state match, \$187 million in local match through intergovernmental transfers, and \$330 million in federal match (AHCA, 2002).

While Florida has stepped up its efforts to maximize federal dollars, its DSH payments to hospitals still lag those of the nation. While DSH spending made up 6% of total Medicaid spending by group in FY 1998, the national average was 9% of state spending in that year. (Kaiser Family Foundation, 2004).<sup>4</sup>

In 2004, state strategies to maximize federal match using DSH and UPL were again a point of contention between the federal administration and states. The national Centers for Medicare and Medicaid Services published a draft rule notifying states that it would require states to provide detailed description of “each source of revenue” used to pay their share of Medicaid costs. Under the

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<sup>4</sup> While a number of states have sought to maximize the match through federal “loopholes” such as DSH and UPL, the federal government has sought to close these loopholes, sometimes leaving states with unexpected costs. Thus, a risk-averse state approach would be to avoid pressing the envelope of Medicaid DSH and related payments.

new rule, state Medicaid budgets would be subject to federal approval, and states could not draw federal money to cover additional costs until the expenditures were approved by the CMS (Pear, 2004).

Disease Management. Florida has been a leader in the country in its efforts to use disease management to control Medicaid costs. Beginning in 1997, Florida created programs to reduce costs and improve outcomes for the chronically ill. AHCA funds disease management organizations to coordinate services for disabled Medicaid recipients. If savings are achieved, the organizations share the savings with AHCA; if costs exceed the savings, the disease management organizations refund the advance payment (Yemane & Hill, 2002). The disease management efforts are only available to those who participate in MediPass. All MediPass recipients meeting the criteria for participation in the disease management program are automatically enrolled in the program but can un-enroll at any time (AHCA, 2004e). One early evaluation found the program was not living up to its expectations—with fewer participants and limited involvement of providers (OPPAGA, 2001c). The state now contracts with organizations to provide services that treat HIV/AIDS, hemophilia, diabetes, asthma, hypertension and congestive heart failure (AHCA, 2004f).

Local Contribution. Counties have been contributing to the Florida Medicaid program since 1972. Counties participate in funding Medicaid in Florida in amounts that are low percentages but can prove burdensome to some counties. The state requires each county to pay a portion of the Medicaid costs associated with certain items of care and services rendered to their county's eligible Medicaid beneficiaries. The county's participation must be 35% of the total cost or the applicable discounted cost paid by the state for Medicaid beneficiaries participating as either HMO members or fee-for-service beneficiaries, for inpatient hospitalization in excess of 10 days but not in excess of 45 days. Counties must also pay 35% of the total cost or discounted cost paid by the state for Medicaid beneficiaries for nursing home or intermediate facilities care in excess of \$170 per month, not to exceed \$55 per month per person (AHCA, 2003).

The percentage of county payments in total spending is down

in recent years to below 1.5%, down from 2.8% in FY 1992 (AHCA, 2002). However, given the rising costs of Medicaid, local contributions are up in actual dollars. For example, in FY 1993, counties and local governments provided \$108 million (in real 2003 dollars); in FY 2001 they paid \$196 million (again in real 2003 dollars) (Carasso & Bess, 2003). In FY 2004, the county total was \$424 million, split between hospital outpatient services, hospital inpatient services, nursing homes, and DSH programs (Social Services Estimating Conference, 2004).

### *Policy History*

In Florida, as in other states, a considerable amount of time is spent in the legislature and in the executive branch on Medicaid. Obviously, its size and complexity, along with the major state role in defining the program, make it a target for major legislative concern. One way to get a sense of the legislative role in defining Medicaid is to look at the 2003 Session, which adopted 15 major policy changes to the Medicaid program, as shown in Table 1. As the table notes, some items were designed to save dollars, including the restructuring of prescription drug programs and delays or cuts in payments to hospitals and HMOs; some were program expansions (increasing slots in a nursing home diversion program and emergency dental services); some were designed to maximize federal dollars (the two special payment policies); and some dealt with program design and indirectly with cost savings (the changes in automatic allocation to HMOs and co-payments for non-emergency hospital emergency room visits). This year is fairly typical for Medicaid policymaking in Florida.

Florida has increasingly used non-profit or private companies and vendors to serve the Medicaid population. The state has worked with prescription drug companies on drug programs and with a number of non-profit agencies on several disease management services. In 2004, the agency submitted a waiver to the Centers for Medicare and Medicaid Services to allow the state to use non-state workers for eligibility determination for Medicaid.

Medicaid waivers. State innovations in Medicaid are generally authorized through waivers, submitted to the Centers for Medicare and Medicaid Services for approval, often following intense

**Table 1. Major Policy Changes to Medicaid Adopted by the 2003 Florida Legislature Estimating Conference, February 27, 2004**

Policy Change	Action
Medically Needy Program for Adults	Restores optional program to that in place May 1, 2003.
LifeSaver RX Program	Establishes and funds a new drug discount program for seniors with incomes at or below 200 percent of poverty.
Silver Saver Program Expansion	Expands current Silver Saver drug program to an estimated 73,619 individuals.
Development Services Waiver	Increases funding for development services home and community-based Medicaid waiver.
Physician Upper Payment Limit	Sets up a new special Medicaid-funding program for physicians affiliated with certain state medical schools.
Special Medicaid Payments to Hospitals	Provides additional reimbursement to hospitals for special medical payments under hospital upper payment program.
Emergency Dental Services for Adults	Provides funding for emergency dental health services for adults.

**Table 1** (Continued)

Policy Change	Policy Change
Extension of the State MAC Pricing	Reduces the pharmacy program as a result of expansion of the state maximum allowable program for multi-source drugs.
Coinsurance on Prescribed Drugs	Reduces the pharmacy program as a result of implementation of a new co-insurance on drugs.
Restructure Value-Added Program	Reduces the pharmacy program as a result of requiring an additional \$16 million in guaranteed savings from manufacturers who participate in the Value Added Program.
Expand Nursing Home Diversion	Expands community-based diversion from nursing home programs by adding 1,800 slots.
Managed Care Enrollment	Increases funding to managed care as a result of the change in automatic enrollment to favor managed care plans.
Reduce HMO Rates	Reduces the capitated Medicaid rates to HMOs.
Co-Payments for Emergency Room Use	Establishes a \$15 co-payment for non-emergency use of an emergency room.
Adjust Institutional Rates	Delays the July 1, 2003 price level increase until October 1, 2003.

negotiations between the federal and state agencies. Under the 1115 authority approved in 2002, the Ron Silver Senior Drug Program was made eligible for federal matching funds. The program provides monthly drug benefits of \$160 and uses Medicaid drug benefit management programs to control costs. It is provided to serve individuals 65 and older with incomes between 88 to 120% of poverty (AHCA, 2002). The program was expanded in 2003. This program replaced a Medicaid for Aged and Disabled program, which reduced the income eligibility. Silver Saver covered most of the elderly from the program but not those who are disabled or under 65 (Finegold et al., 2003).

Comprehensive broad-based waivers include one in family planning approved in 1998 (through November 30, 2006) and a waiver pending on privatizing eligibility determination. A program on consumer-directed care was approved and is in operation through 2008. A waiver for a program for all-inclusive care for children is pending. The state also has approved waivers under 1915(b) for the MediPass program, comprehensive adult day health care, and a number of community-based waivers for elderly, AIDS patients and those with special illnesses or debilitation (CMS, 2004).

Governor Bush has proposed a comprehensive waiver to completely revamp Florida's Medicaid program. This will be discussed later in this chapter.

Prescription Drug Costs. In FY 2000, the legislature put in place two programs to reduce Medicaid spending in the prescription drug area: initiatives to prevent fraud and abuse in prescribed drugs and utilization review of pharmacies and practitioners. In FY 2001, nearly half of the program's budget reductions were targeted to prescription drugs, including mandating generic drug rebates, implementing drug benefit management and pharmacy network controls. The legislature called for limiting the number of brand name prescription drugs that Medicaid recipients could receive per month without prior authorization, reduced the reimbursement levels for pharmacies that dispensed drugs to Medicaid patients, and required generic drug manufacturers to offer a rebate to the state (Yemane & Hill, 2002). The legislature also established a new program for seniors who are dually eligible for Medicare and Medicaid. The Senior



Prescription Affordability Act provides these seniors with a \$80 monthly benefit for prescription drugs with a 10% co-payment. Those participating in the program must have incomes between 90 and 120% of poverty and not be enrolled in a Medicare HMO with a pharmacy benefit (Yemane & Hill, 2002).

Other efforts included expansions of programs undertaken earlier to control costs—case management, disease management, and nursing home diversion. In FY 2002, nearly a billion dollars in budget reductions were enacted, including expanding benefit management and supplemental rebates for prescription drugs, a reduction of hospital rates, and reduced HMO rates (AHCA, 2002). Included in the benefit management of drugs was the development of a preferred drug list that would restrict the types of drugs beneficiaries could use without prior authorization; the drug formulary allows the state to directly negotiate rebates with drug manufacturers for placing their drugs on the state's preferred list. The state's rebates are in addition to manufacturer rebates already provided to the state under federal law (Yemane & Hill, 2002). The FY 2003 budget reductions included reductions in the medically needy program, reduction in adult dental coverage, and expansion of fraud and abuse initiatives (AHCA, 2002). The medically needy program was partially restored until May 2003, when those enrolled would have to meet a \$450 per month spend-down requirement instead of the previous \$180 per month requirement (Finegold et al., 2003).

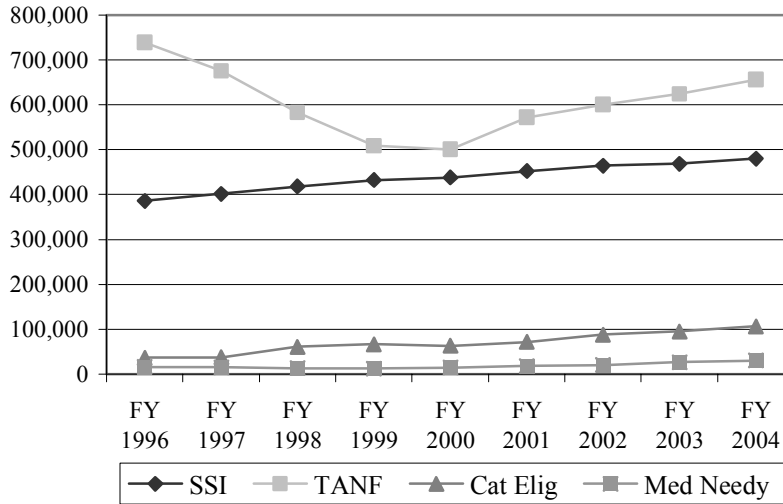
Florida's actions to establish a drug formulary and negotiate with drug companies were innovative and much studied (see for example, Bernasek et al., 2002). The state made a deal with Pfizer in 2001 to include drugs produced by Pfizer on the formulary (purchased at full price) in exchange for the company's financial and administrative help in a disease management program, which the AHCA believed would save money for the state. Under the agreement, Pfizer guaranteed a savings of \$33 million over two years, meaning that if the state failed to recoup this amount in savings from the disease management program, Pfizer would make up the difference (Yemane & Hill, 2002). AHCA negotiated a similar deal with three other drug companies, Bristol-Myers Squibb, GlaxoSmithKline, and AstraZeneca. The Pfizer deal was the first and most ambitious of the programs. Pfizer pays for 61

care managers who work in hospitals throughout the state to improve the health of Medicaid patients with chronic conditions like asthma and diabetes. Pfizer has increased its share of the Florida Medicaid prescription drug spending by 23%; the state hopes to save money in emergency room visits and more serious medical care expenses that can be short-circuited through an aggressive early drug strategy.

Although innovative, the plan was not without critics, the most formidable of which was the powerful Pharmaceutical Research and Manufacturers of America (PhRMA), the lobbying organization of the pharmaceutical industry. They challenged the Florida law in court, arguing that it violated a provision in federal law that requires states to ensure that drugs that are not included in the formulary have no significant, clinically meaningful and therapeutic advantage over other drugs in the formulary. In the first round, federal district court, the judge denied PhRMA's claim (Yemane & Hill, 2002). The Office of Program Policy Analysis and Government Accountability was also critical, arguing that the state could have saved \$64 million by ending the drug program and seeking greater discounts instead (Petersen, 2003). The state has prevailed, however, and in September 2003 extended the Pfizer contract, as well as similar case management contracts with Pfizer and the other drug companies.

Medically Needy. The medically needy have been the object of on-again, off-again policy in recent years. Under this program, those with income and assets too high to qualify for Medicaid can qualify if their medical bills leave them with less than \$180 per month for other expenses. While federal law provides that these persons must "spend down" to the \$180 per month, Florida had not required the spend-down, but rather paid all the bills of these individuals (Finegold et al., 2003). In 2000, Florida's medically needy were primarily adults—comprising 56% of the total enrollment. The disabled/blind made up 24% and children 20%. Nationally, the medically needy are expensive: making up 8% of the Medicaid beneficiaries, they account for 14% of Medicaid spending (Crowley, 2003). Florida has seen its medically needy caseloads nearly double between FY 1996 and 2004—but the numbers remain quite small compared to the other groups shown in Figure 10. Also noteworthy is the drop in TANF recipients in the

**Figure 10. Average Monthly Caseloads  
FY 1996 to FY 2004**



Source: Social Services Estimating Conference, February 2005.

late 1990s, followed by a steady increase in recent years (Social Services Estimating Conference, 2003).

In its regular session in 2002, the legislature eliminated the medically needy program to save an estimated \$285 million in FY 2003. The medically needy program was partially restored in a special session in 2002 until May 1, 2003, but with the spend-down limit raised to \$450 a month. In the 2004 legislative session the state eliminated hospital, laboratory, and physician visit coverage for some 35,000 medically needy.

2004 Actions. In 2004, the legislature enacted a 5% reduction in nursing home fees and an \$84 million reduction in hospital fees. The budget called for a study to determine whether managed care organizations could be used as case managers to decide what services elderly Medicaid recipients should receive (Dunkelberger, 2004). Also enacted was a measure aimed at combating Medicaid fraud, giving the AHCA the authority to require more information about diagnoses before authorizing Medicaid payments. Under a 2004 legislative action, Medicaid recipients using the emergency room for non-emergency visits saw the fee they are charged

increase.

Interestingly, the more than \$400 million the state received in 2003 as part of a federal stimulus package, was not used on current Medicaid payments. As a Bush spokesman put it, “If we use the dollars to try and plug a recurring hole, that hole will just get bigger next year” (*Aging and Elder Health Week*, 2004). In fact, several programs were funded with non-recurring funds in the 2004 session—a temporary band-aid on entitlement spending that will have to be addressed in the near future.

In 2005, the legislature again limited provider payments, delayed nursing home staff requirements, and continued coverage of medically needy, originally scheduled to be limited beginning in FY 2006.

Although most of the efforts Florida has put in place to control Medicaid costs have been incremental in nature, the call for major change in the program initially announced by Governor Bush in 2004 is most definitely not incremental. Governor Bush proposes what he calls a “radical” change in the state’s Medicaid program. He has suggested that Florida can be a “pilot program for reengineering Medicaid” (*St. Petersburg Times*, 2004). His plan would encourage what he calls personal responsibility by promoting preventive care and increasing out-of-pocket costs for Medicaid recipients (Ulferts, 2004). It would also help control costs. According to a 2003 press release from the Governor’s office, “(u)nder the current model, with its existing bureaucracy and inefficiencies, “ the state projects in the year 2015 the Florida Medicaid budget will equal our current total state budget of over \$50 billion (Office of the Governor, 2003).

The 2005 legislature enacted a law authorizing the Agency for Health Care Administration to seek demonstration project waivers to submit to the federal Centers for Medicare and Medicaid to give Florida more flexibility in the program. The program, to be implemented initially in two counties, calls for caps on Medicaid services, increasing use of managed care programs for the elderly and those with some mental disorders and HIV, and moving some Medicaid patients into bare bones private insurance plans. Under the plan, Medicaid consumers would be given vouchers in amounts adjusted for their expected use. Healthy children and young adults would be given vouchers in lower amounts than disabled and

elderly persons. Providers would be different as well. Managed care organizations could compete for the Medicaid vouchers as well as new entities such as provider service networks and community networks (not fully defined). The idea is that turning over the program to the private sector will save the state money and improve access (and quality) through competition. The legislature must approve the implementation of the waiver when approved by Washington.

An important component of the 2003 federal Medicare prescription drug reform affects Florida and other states. It calls for the coverage of prescription drugs for dual eligibles to shift from Medicaid to Medicare starting in 2006. However, the law also calls for states to fund part of the costs of this change, so it is unclear how much of a gain the state may actually see (O'Brien & Elias, 2004).

### *Medicaid Outcomes*

Given the complexity of the Medicaid program, outcomes are varied and difficult to measure. However, some research has been conducted on the impact of eligibility expansions on the health and functional status of children. Currie and Gruber (1996) found that increased eligibility for Medicaid in the 1980s was associated with a sizable and significant reduction in child mortality. Lykens and Jargowsky (2002) found increased eligibility led to statistically significant reductions in acute health conditions and functional limitations in White, but not necessarily in Black and Hispanic children. Medicaid is probably most effective in providing prenatal care to pregnant women. In this category, Florida falls somewhat short. Only 30% of Medicaid women giving birth received prenatal care for more than 180 days (OPPAGA, 2004).

Outcomes for adults on Medicaid are less clear. Although Lurie et al. (1984) document positive effects of any insurance on adult health, Newhouse (1993) found that the generosity of insurance had no important effect on health outcomes. We know more conclusively that Medicaid and private insurance have a positive effect on access to a physician and the likelihood of regular and timely routine and preventive care (Berk & Schur, 1998). Prenatal care provided to pregnant women through Medicaid can help to

prevent prematurity and low-birth-weight babies.

The Florida legislature has established a number of outcome measures for Medicaid, including targets in long-term care, Medicaid prepaid health plans and children's special health care. AHCA (2002 and 2003) also reports progress on measures concerning pregnant women and family planning. However, a recent OPPAGA (2004) report chides the agency for the tardiness of the reports and paucity of information. OPPAGA chastised AHCA for reporting trends without analysis needed to fully understand their impacts and causes.

### *Reforming Medicaid*

One analyst described Medicaid as being “back in the crosshairs” in state legislatures, and to a lesser extent in Congress (Weil, 2003). As states faced fiscal shortfalls in 2002 and 2003, most cut Medicaid in some form or fashion—often reducing provider rates or restricting eligibility. Medicaid is a likely target for cuts because it is so large and growing so fast. However, the federal match often serves as a deterrent for cuts. When states cut Medicaid, they also reduce the federal funding that helps pay for the program. One study estimated that in 2002, the federal Medicaid match in Florida alone supported 120,950 jobs, \$4.3 billion in income and \$8.7 billion in business activity (Sampath, 2003). Families USA (2004) estimated that every dollar Florida spends in Medicaid (federal and state) will benefit the state by more than \$3 in economic activity (Families USA, 2004).

Because of the close ties with the economy and the drawbacks of possibly losing federal dollars, revamping the program to enhance its coverage and effectiveness is more appealing in some ways than simply cutting it. And revamping is exactly what Florida officials hope to do. A federal waiver to accomplish this major change may await lawmakers in Tallahassee as early as the 2006 session.

While short-term issues of meeting each year's spending are important, Governor Bush and others are also concerned about long-term trends in the program. A major concern voiced by many is the nation's (and Florida's) demographics. In FY 2000, Florida Medicaid paid \$3 billion for long-term care (Kaiser Family

Foundation, 2004). With the aging of the nation's population and large number of American baby boomers nearing retirement, unchecked, these expenses could be formidable. Medicaid is currently the single largest payer of nursing home services, and the cost of covering elderly and disabled population is a leading cause of the rising costs—accounting for 57% of the increase in federal Medicaid costs between 2000 and 2001 (Mann, 2003). By 2040, the number of people over 85—those most likely to need long-term care—is expected to triple to 14 million (O'Brien & Elias, 2004).

Florida may have an opportunity to take leadership in this important area as every state confronts these problems. Traditionally, Florida and other states have implemented incremental approaches in three areas—reducing payments to providers of health services, limiting eligibility, and curtailing services provided to recipients. States have also attempted to improve the administration of the program through setting up drug formularies, disease management programs, managed care, and curtailing fraud and abuse. But there is scant evidence that these approaches make much difference in controlling long-term costs of the program.

Medicaid reforms are very difficult because: (1) the federal match encourages spending rather than efficiencies; (2) the interaction between private employers and government-sponsored programs such as Medicaid leads to inefficiencies—if the government steps up its efforts to cover families, employers have no incentive to do so and, in fact, might cancel existing programs; (3) the varied nature of the groups eligible for Medicaid makes sweeping policies problematic—the needs, spending patterns, and trends of Medicaid children differ from those of disabled children, adult disabled recipients are different from the frail elderly, even though they are “entitled” through the same federal program (SSI); and (4) Medicaid stakeholders are many and well-connected—they are not just the recipients themselves but include the providers, institutions, and families of those who receive Medicaid funding.

Nevertheless, some possibilities for comprehensive Medicaid reform exist. They include:

- Transforming it from an entitlement program, where everyone who qualifies gets assistance, to a block grant, much as the AFDC entitlement program became the TANF block grant.

Many state leaders fear the financial responsibilities of this approach, particularly over time. Under today's Medicaid, the state can always count on sharing increasing costs with the federal government. Under a block grant, any increases in program cost would fall solely on states. Nonetheless, a few officials, including Governor Jeb Bush, have argued that this approach would be an appropriate one for getting control over a program that now has too many masters.

- Commingling Medicaid with Medicare and local health programs so that the state would have more control over more dollars. A decade ago, Florida officials considered this possibility, as did officials from a few other states. Federal officials have been less than enthusiastic about giving states authority over Medicare—a program now with no state administrative or policy role. Local officials might also be loath to share their responsibilities with states. Nonetheless, a major shake-up of Medicaid might involve subsuming the program with other programs in an attempt to avoid redundancy, improve accountability, and target funding to areas of greatest need in the state.
- Competitive bidding for service contracts. Under a commingled funding system, groups of providers and/or insurers, such as Blue Cross Blue Shield, can compete to deliver services to Medicaid, Medicare and others within a geographical area. The state might agree to re-insure these providers for unexpected catastrophic costs. One advantage of such an approach for the state is greater certainty of spending trends in future years.
- Consideration of additional cost-sharing and Medicaid buy-in programs. Recent federal action, the Health Insurance Flexibility and Accountability (HIFA) initiative, provides an opportunity for states to obtain waivers to impose greater cost-sharing and reduced benefits for current beneficiaries to expand eligibility for the uninsured. HIFA represents a change in thinking about Medicaid, where cost-sharing has been discouraged. Nevertheless, particularly for some categories of disabled where cost-sharing might be appropriate, a more careful consideration of cost-sharing might be advantageous. Allowing the working poor, or their employers, to buy into the



Medicaid program would open up avenues for coverage for a population that is not terribly costly but that would benefit from regular health care services and from coverage during catastrophic or other unexpected health setbacks.

- A careful assessment of where Medicaid dollars go and why. This examination would also consider other state and federal programs that fund related programs. The crosshatch between these programs is a mystery to all except the very few who administer them. Yet a fuller understanding of current health care policy in Florida is a must for a serious reexamination of Medicaid.
- A prioritization of health care policy could follow from the chronicling of state spending. There is little doubt that the review of state health spending would reveal some large differences in priority even within the Medicaid program. Are the priorities in the current program the ones that most meet the needs of current Florida residents? A statewide discussion on these issues would be extremely helpful in reforming Medicaid.

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# Expenditure Projections: **5** Education

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## *PK–12 Education*

### **David Denslow**

The adequacy of funding for public education is currently the subject of litigation in 23 states, 20 of which spend more per FTE than Florida. An adequacy suit was brought against Florida in 1995. The Florida Supreme Court found that the plaintiffs “failed to demonstrate ... an appropriate standard for determining ‘adequacy’ that would not present a substantial risk of judicial intrusion into the powers and responsibilities of the legislature.” Partly in reaction, in 1998 Florida’s voters amended the state Constitution with “one of the most explicit [adequacy clauses] in the nation.”<sup>1</sup> It reads:

*The education of children is a fundamental value of the people of the State of Florida. It is, therefore, a paramount duty of the state to make adequate provision for the education of all children residing within its borders. Adequate provision shall be made by law for a uniform, efficient, safe, secure, and high quality system of free public schools that allows students to obtain a high quality education...*

As noted in the chapter on PK–12 education, voters have reinforced this sentiment by passing laws requiring the provision of free pre-kindergarten and the class size amendment. The pre-K amendment was favored by 60% of the voters and class size reduction by 53%. Since our long chapter on PK–12 education contains extensive comparisons to other states, discussions of benefits and costs, and spending projections, we limit ourselves here to a few paragraphs on each of the amendments, starting with pre-K, which was approved by 60% of the voters.

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<sup>1</sup> Campaign for Fiscal Equity, Inc., available at [http://www.schoolfunding.info/states/fl/lit\\_fl.php3](http://www.schoolfunding.info/states/fl/lit_fl.php3)



The effectiveness of pre-K programs varies directly with the amount spent on them. Most European early care and education programs, for example, employ highly qualified people and are well funded. Canada makes year-round, full-day high-quality care available to all children, ages two to five, with working parents. The Canadian program pays care providers roughly the equivalent of US\$36,000 a year and costs about US\$7,000 per child. Both the European and the Canadian systems have been found to improve school readiness, especially for disadvantaged children, though it is not clear that the effects last beyond the first two years of school (NBER, 2004a).

In the United States, typical pre-school programs cost from \$3,000 to \$5,000 per child. Magnuson, Ruhm, and Waldfogel (NBER, 2004b), using the Early Childhood Longitudinal Study, find that the U.S. programs “increase reading and mathematics skills at school entry, but they reduce self control and increase behavioral problems. The positive effects on skills dissipate by the end of the first grade, but the behavioral problems continue.” These results make intuitive sense, since state-provided early care and education usually substitutes an institutional setting for nurturing by relatives or friends. Unless the institutional setting is of high quality, the net effect is unlikely to be positive.<sup>2</sup> Florida is not, however, going to provide care at the European or Canadian level. For budgetary planning, the experience of neighboring states is more relevant.

States vary widely in their per-child funding of pre-K. Southeastern states for which funding information for the 2003–04 school year is available (NIEER, 2004) are Arkansas (\$2,907), Georgia (\$3,830), Louisiana (\$3,887), North Carolina (\$4,310), South Carolina (\$1,324), Tennessee (\$3,534), Virginia (\$3,102), and West Virginia (\$4,543). The weighted average for Southeastern states is \$3,500. Adding to the difficulty of predicting Florida’s pre-K spending is that the number of children who will be enrolled will vary directly with the quality of the program. The more funding per child, the more children. Issues include the

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<sup>2</sup> Most Florida pre-K teachers, for example, are unlikely to have four-year degrees. The advantage of college-trained pre-K teachers is documented in Florida TaxWatch, December 2004.

number of hours per day, the number of children per teacher, and the qualifications for teachers. Lieutenant Governor Toni Jennings predicts that the initial pre-K program in Florida will cost at least \$2,000 per child (Follick, 2004). Our projection is that from that low beginning, by FY 2010 Florida's pre-K spending will reach the current Southeast average of \$3,500 per pupil in today's dollars.<sup>3</sup> A TaxWatch study projects enrollment of 167,440 in 2010, based on projections of 239,200 four-year-olds residing in Florida and a 70% participation rate (Walsh & Graham, 2004). That is an increase of 98,868 over the estimated 68,772 four-year-olds currently in publicly funded programs. Given the approximate nature of all these numbers, we round the increase to 100,000 children. At a cost of \$3,500 per child, the total cost in 2010 (in today's dollars) would be \$350,000. To that should be added some adjustment to allow for the fact that most of the currently enrolled four-year-olds are not receiving \$3,500-per-pupil programs. Allowing for that makes the annual additional cost perhaps \$420,000.

Another approximation can be gained through comparison to Georgia. In Georgia some 70% of the eligible children attend, and the total cost of the program is \$225 million (Diamond, 2004).<sup>4</sup> Georgia's spending per child, \$3,830 in 2003–04, exceeds the Southeastern average by 9%. Florida is unlikely to pay teachers as much in 2010 as Georgia does today. By 2010, Florida will have at least twice as many four-year-olds as Georgia has today. Assuming Florida's cost per child five years from now is the same as Georgia's today, that would indicate a cost of \$450 million, but that amount would not all be extra spending. The amount being spent today on children currently enrolled would have to be netted out. That reasoning suggests an added cost of \$350 million. When the amendment was placed on the ballot in 2002, Florida's first Constitutional Amendment Initiative Impact Conference estimated the annual cost would be from \$425 million to \$625 million.<sup>5</sup> The

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<sup>3</sup> The national Head Start program costs about \$7,000 per student. Only one state, New Jersey, spends more than that on a pre-K program. Florida will not be the second to do so.

<sup>4</sup> Marsha Moore, acting director for Georgia's Office of School Readiness, charged with implementing the pre-K program, quoted by Laura Diamond.

<sup>5</sup> The conference met June 27, 2002.

lower end of that range is plausible; the high end is unlikely. We will use a range of \$350 million to \$425 million for the extra cost of pre-K in 2010, in today's dollars.

The same Constitutional Amendment Initiative Impact Conference that estimated the cost of the pre-K amendment had an even tougher job: estimating the cost of the class size amendment. The figure they reached was a ten-year cost of \$20 billion to \$27.5 billion, with annual costs of \$2.5 billion from then on. More precisely, three of the four conferees endorsed that estimate. The fourth held out for a lower number. The class size amendment imposes maximum class sizes by 2010 of 18 for PK–3, 22 for grades 4 to 8, and 25 for grades 9 to 12.

The amendment is creating a mixture of an enormous demand for new classrooms and creative scheduling. Henry Boekhoff, chief financial officer for Orange county schools, illustrated one effect, as paraphrased in the *Orlando Sentinel* (McClure, 2004): “Elementary classrooms originally built for 25 students, for example, now could house no more than 18; thus, a school designed for 900 students now could accommodate no more than 630, creating a loss of permanent space for 270 children.” Jeanine Blomberg, deputy commissioner of finance and operations for the Florida Department of Education, said that schools will have to use “all available instructional space—including portable classrooms, laboratories, music room and art rooms” to enable classes in core subjects to meet class size requirements.<sup>6</sup> Boekhoff said Orange County would need 250 to 300 classrooms to comply with the amendment, but that the state had given the district about \$50 million, enough for 176 classrooms.<sup>7</sup>

### ***Post-secondary Education***

Post-secondary education is one of the industries most closely associated with U.S. economic and technological achievements over the past half century and intricately involved in advances in health, manufacturing, information technology, and military power. Most of the world's leading universities are in the United

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<sup>6</sup> Cited by McClure, *Sentinel*.

<sup>7</sup> The implied cost is \$284,000 per classroom.

States. Scientists based at U.S. universities win a large share of all Nobel prizes. Scientific advances initiated in university settings have transformed our lives. As the wage premium for college graduates over high school graduates has risen to over 70%, student enrollment has surged and the competition for slots in flagship state universities, as well as the elite private colleges and universities, has become fierce.

In this sub-section we first compare Florida's post-secondary spending to other states, then describe a plan, developed by the Council of 100, for bringing Florida's total public funding per FTE up to the national average over the next five years. We do not include here a benefit-cost analysis of post-secondary education, referring the reader to that topic in our chapter on post-secondary education. Finally, we close with a few paragraphs on community colleges—too few, relative to their importance to the state.

Comparison to Other States. Post-secondary education is a large industry. As a rough estimate, total spending by American post-secondary institutions in FY 2005 will be \$250 billion—more than 2% of GDP and approximately \$855 per person—and even more in states famous for their technological prowess. For Massachusetts, home to Harvard and MIT, the figure is estimated to be \$1,270. For Florida, the number is lower, at \$470 per person, or 55% of the national average. We emphasize that the state numbers are crude estimates.<sup>8</sup> As it happens, the estimates place Florida's per capita total capita post-secondary education spending, private and public, dead last in the nation. When accurate data become available, they will almost surely prove that false. It is likely, however, that Florida will wind up somewhere among the bottom five.<sup>9</sup> In any event, it is certainly the case that the state, in its quest to develop high-tech industry gives its post-secondary

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<sup>8</sup> We use the current fiscal year, 2004-05, because the state university system received a large percentage increase for 2004-05 after a decline the previous year. We want to avoid biasing the comparison to other states by using a down year for Florida.

<sup>9</sup> We have estimated the 2004-05 figures assuming constancy of ratios of unknown to known numbers, which is risky business. The numbers for 1999-2000 are known, however, and in that year Florida was next to last, ahead of Nevada. The numbers are from the *Chronicle of Higher Education*, various issues, and from the Grapevine at Illinois State University, which tracks state spending on higher education.

education sector an enormous challenge: to lead the state into the high-tech 21<sup>st</sup> century—educating its youth for the age of technology and keeping its industries abreast of the scientific frontier—while spending less than 60% of the national average per capita. With such limited resources, efforts to improve efficiency take on added importance, but we must be realistic. One can squeeze a lemon only so dry.

We suggest that there are four major causes of Florida's low spending on post-secondary education. In order of importance, the first is rapid population growth. Rapidly growing states have fewer long-established private colleges and universities whose endowments have grown for many decades. Their public universities have generous alumni, but fewer of them relative to the current number of students.<sup>10</sup> Moreover, in rapidly growing states, residents are less likely to have children or grandchildren or nieces or nephews attending a university or college in that state. Even young families in such states are less likely to expect to still be residents when their children enter college. That may make them less supportive of public spending on higher education. A close second is demography. As a retiree state, Florida has fewer people in the college years. The third is having a Republican legislature. Other things the same, states with Republican legislatures spend 20% less on higher education than states with Democratic legislatures. Fourth, and last, is income. Spending on post-secondary education varies almost percent for percent with per capita income, and Florida's is 5% below the nation's.

A further word is in order regarding Republican legislatures. Our hypothesis is not that such legislatures bear animosity toward colleges and universities. In fact, our experience is that the opposite is true, that Republican legislators strongly value higher education. Rather, our hypothesis is that they dislike taxes, which they cut whenever they see a chance.<sup>11</sup> Then, the state must confront the inevitable surge in spending on Medicaid or K-12

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<sup>10</sup> By value, alumni account for a fourth of voluntary contributions to colleges and universities.

<sup>11</sup> In states with Republican legislatures, in FY 2003-04 total state spending (not just post-secondary education) per resident was 17% lower than in states with Democratic legislatures. Controlling for income and population growth, the Republican legislature effect was minus 15%.

education or prisons with more limited resources. Having to cut spending somewhere, the legislature slashes higher education funding not because it wants to but because it can. Relative to other expenditures, post-secondary education is vulnerable. Just as higher education tends to be cut during recessions because of its vulnerability, so it tends to be cut when there is a trend budget shortfall. An analogy at the national level is the Republican leaders of congress, recognizing the importance of the National Science Foundation (NSF) to the current and future scientific pre-eminence of the United States, saying they would double the NSF budget over the next five years. But they also cut taxes severely. Faced with pressure from other spending and a growing deficit, they wound up cutting NSF, not because they wanted to but because they could (Calmes, 2004). Other spending was protected politically; NSF was vulnerable. In the name of passing on a smaller debt to their grandchildren, they eat their seed corn.

We test these ideas against the data with the regression:

$$\begin{aligned} \text{PSEC} = & 10.72 - 0.37\text{GROW} + 0.14\text{SH1824} - 0.20\text{REP} + 0.91\text{INCOME} \\ & + 0.88\text{VISIT} \\ & (2.77) (0.07) \quad (0.03) \quad (0.05) \quad (0.25) \quad (0.28) \\ R^2 = & 0.68 \end{aligned}$$

observations = 49 states (Alabama missing data), population-weighted<sup>12</sup>  
 estimated standard errors in parentheses

In this equation PSEC is the logarithm of estimated post-secondary education spending (both private and public) per resident in 2004–05, GROW is a measure of the rate of population growth, SH1824 is the percentage of the population ages 18 through 24, REP takes the value one if the legislature has a Republican majority, INCOME is the logarithm of income per resident, and VISIT is the proportion of freshmen in the state's colleges and universities who are from out of state. VISIT is included to represent states that are able to attract out-of-state students because of the high quality of their colleges and universities, because of their climate, because of their athletics, or for other reasons.<sup>13</sup>

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<sup>12</sup> Results from an unweighted regression are very similar.

<sup>13</sup> We have estimated this regression for earlier years, for which the data are more reliable, with similar results.

Florida's population growth of twice the national annual rate results in 16% lower spending per resident. Its percentage point lower share of population from 18 to 24 is associated with 14% lower spending, which is intuitively reasonable. Florida has 8.0% of its population in this age group, which is 12% below the nation's 9.1%. Florida's having a Republican legislature reduces its higher education spending by 10% compared to the nation. The Republican effect is minus 20% and we allow for the fact that half of the states (whether by number or by population) also have Republican legislatures. The 10% represents reduced state funding and a multiplier effect from reduced national grants. With respect to income, the equation suggests that the percentage relation is statistically indistinguishable from one to one. As mentioned, Florida's average income is 5% below the nation's. Finally, 19% of Florida's freshmen come from out of state, which is exactly the national average, making that effect zero.

Florida's shortfall from the nation is 45%, which can be obtained approximately by adding the various effects (16% + 14% + 10% + 5%). Actually, that's not quite how it works, since some of the variables are logarithmic. Done right, the equation predicts that Florida's spending on post-secondary education would be \$524 per resident, or 61% of the national average. Analyses of this sort are only approximate. The regression equation can hardly be thought of as definitive. But it does suggest that the ideas that Florida's shortfall stems from have an older population, from rapid growth, from a Republican legislature, and from slightly low income per resident are compatible with the data. There is always the possibility that a more thorough study would reject one or more of these hypotheses and confirm others.

The major cause of Florida's projected \$385 per resident shortfall in higher education spending in 2004–05 is not lower legislative appropriations. Nationally, the average state appropriation is expected to be \$214 per resident, \$36 more than Florida's \$178. Larger causes include less income from endowments and gifts (perhaps \$120 lower) federal grants (perhaps \$40 lower), and a wide variety of other categories (perhaps \$89 lower, a number we choose partly to help make the tuition number we are leading up to an easily remembered round amount). That leaves a missing \$100, which we allocate to lower tuition

payments per resident in Florida. Per capita income from endowments and gifts, federal grants, and many of the other categories will rise as the number of Florida alumni rises relative to its population and other components. The major post-secondary funding policy issue is tuition.

### *A Funding Plan for Florida's Universities*

We project tuition per resident will be only \$83 in Florida, versus \$183 nationally (very approximate guesses, we emphasize; but the major points are valid) for several reasons: (1) because of Florida's age structure and low high-school graduation rates, Florida has fewer college students per resident; (2) only a small share of the post-secondary students in Florida go to private colleges and universities, which charge much higher tuition; (3) a large share of students in Florida's public institutions go to community colleges, which charge lower tuition; (4) public institutions in Florida charge low tuition by national standards; and (5) even that low tuition is rebated to large numbers of Florida students through the Bright Futures program. A large share of the state appropriation for higher education goes to students instead of to institutions.

Not only does the state return about \$200 million a year in merit-based tuition rebates, it has structured the rebates in such a way that it constrains the legislature from allowing the universities to raise tuition. The Bright Futures program, described in our program chapter on higher education, pays full tuition plus a book allowance for students who obtain a 3.5 high school GPA or better and score 1270 or better on the SAT. For those obtaining at least 3.0 and scoring at least 970, Bright Futures pays 75% of tuition. With any increase in tuition, the legislature has to come up with more funds for Bright Futures.

Yet another constraint on tuition is Florida's pre-paid tuition program. Parents and grandparents make either a lump-sum payment or monthly payments that guarantee full tuition for the child at any state university or community college in Florida. The guarantees have been priced on the assumption that tuition would rise at less than 7% a year. Parents and grandparents, seeing how rapidly tuition was soaring nationally and expecting Florida would



at some point have to reduce the gap in order to maintain the quality of its higher education, recognized a good deal. Hundreds of thousands of them purchased contracts. What was obvious to parents and grandparents escaped the Florida Pre-Paid actuaries, however. In 2003, Florida Pre-Paid priced its contracts at \$11,915, far below the \$16,317 estimated by Ernst & Young needed to allow Florida's universities to close the gap between their tuition and the national average over a five-year period. Florida Pre-Paid has given the legislature a choice among assuming an enormous debt as it allows tuition to rise, seriously increasing funding for higher education from sources other than tuition, or watching the quality of the state's institutions of higher education slowly erode.

The crunch has been especially severe for the state's research universities. As the wage premium for skill rose during the past quarter-century, universities had to pay higher and higher salaries for faculty. In addition, and even more importantly, they had to provide internal support for increasingly expensive scientific and technological research in order to be competitive in the quest for federal grants. Elite private universities and colleges were able to fund the race to be the best with resources from growing endowments and soaring tuition. State research universities, however, saw their resources held in check by growing competition for funds from Medicaid and other demands on legislatures. Their share of state budgets shrank. The ratio of faculty salaries at public research universities descended from 91% of the private level in 1981 to 79% today (Ehrenberg, 2000, p. 24).

Change occurs slowly, but over time the elite private research universities hired away the best faculty and held down class sizes. In the 2005 *U.S. News and World Report* (2004, August 30) rankings no public university makes the top twenty. Berkeley is 21, and Michigan and Virginia tie for 22. Besides Virginia, the Southeast boasts North Carolina at 29, William and Mary at 31, and Georgia Tech at 41. The highest Florida university is the University of Florida (UF), tied with Penn State for 50. The only other Florida universities in the top 115 are the (private) University of Miami tied for 58 and Florida State University (FSU) tied for 111.

For Florida institutions, the competition with private research universities is made even tougher by Bright Futures and Florida

Pre-Paid. Most other states give their research universities more leeway to raise tuition, which partly offsets their dwindling shares of state resources. By the 2002–03 academic year, Florida’s in-state tuition at four-year public institutions had fallen \$1,400 below the national average, \$2,710 versus \$4,116 (American Association of State Colleges and Universities, 2004).<sup>14</sup> Between 2002–03 and 2003–04, continuing a pattern, the national increase in tuition was \$572. In Florida, it was \$193, placing the state’s universities yet another \$379 behind. A ranking of 2004–05 tuition at 67 “flagship” public universities had UF and FSU last, at close to \$3,000 (Florida Board of Governors, 2004). Perhaps it is a stretch for UF and FSU to claim they should match UT Austin at \$6,588 or South Carolina at \$6,156. But Montana State at \$4,577 or South Dakota at \$4,452 may be within reach.

UF has managed to pay near-competitive faculty salaries by increasing class sizes. Among the top 50 *U.S. News and World Report* universities, the average student-to-faculty ratio is 11, with UT Austin the second highest at 19. The highest is UF at 22. The irony is that as it is becoming harder and harder for students to interact with faculty, every year sees brighter students enroll. In 1984, SAT scores for entering freshmen averaged 958 at FSU and 1071 at UF. By 2004 the averages were 1150 for FSU and 1240 for UF, a full standard deviation higher in each case. The single-generation gain in selectivity at Florida’s two hardest-to-enter universities would be incredible had not similar gains occurred at selective universities across the country.

UF is ever-so-slightly more selective than UT Austin, where economists Dan Hamermesh and Steve Donald<sup>15</sup> recently surveyed several thousand graduates. The average salary of the UT graduates, whose average age was the early thirties, was \$89,000. Figures for UF and FSU would probably be comparable. The lifetime earnings premium for attending a selective institution is

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<sup>14</sup> In 2004-05, the national increase was slightly lower, at \$493. Florida, however, was also lower at \$142, falling another \$351 behind (see [http://www.aascu.org/student\\_charges\\_05/default.htm](http://www.aascu.org/student_charges_05/default.htm) at p. 5). Year after year, Florida’s state universities strive for excellence in spite of a larger and larger tuition gap.

<sup>15</sup> Donald, a brilliant young econometrician, was hired away from UF by Boston College.

large. From a lifetime perspective, the \$30,000 entering UT freshmen will pay in tuition over four years is not an unbearable burden. Two or three years of their higher earnings from attending a selective institution will probably pay it. The irony is that the comparable four years of tuition at UF or FSU might cost as much as \$14,000 but many affluent UF and FSU students, subsidized by Bright Futures, *will not pay a cent*, while their less-competitive high-school friends, attending Florida's still good but less-selective institutions without the 100%-tuition variety of Bright Futures, will.

The state needs creative leadership to devise a plan for getting its university system out of the bind caused by limited state resources and the Bright Futures/Florida Pre-Paid constraint on tuition. Fortunately, a Florida Council of 100 task force has devised such a plan. It is not a free lunch, however, and requires both political compromise and a commitment of state resources. Set up a year ago to study the funding of the State University System, the task force received research support from McKinsey & Company and from the Council for Educational Policy Research and Improvement (CEPRI). Because of the stature of the Council of 100, McKinsey, and CEPRI, they had access to 11 university presidents, the chair of the Florida Board of Governors, the chairman of the Florida Board of Education, and other well-informed, insightful sources.

The resulting study, published in January 2004 (Florida Council of 100), has six specific recommendations, which we reproduce here:

- (1) *Raise the SAT requirements for the Bright Futures program to 1070 and 1330 for Medallion [75% of tuition] and Academic [full tuition plus book supplement] Scholars, respectively (from 970 and 1270) beginning in 2005–2006.*
- (2) *Increase tuition and fees at 13.9% per year for the next 5 years to reach national average tuition and fee levels.*
- (3) *Increase funding of need-based aid from \$80 million to \$243 million by 2008–09, \$202 million of which is to ensure that [higher] tuition and [tougher requirements for] Bright Futures do not harm students who need aid, with an additional \$41 million to increase accessibility for low income students even further.*

- (4) *Accrue \$101 million per year beginning in 2005–2006 to ensure that all current pre-paid contracts remain viable, and raise the price of new contracts to factor in higher rates of tuition increase.*
- (5) *Increase the financial aid available to students attending Florida private schools to \$120 million from \$80 million beginning in 2004-05.*
- (6) *Increase the Education and General budget (appropriations plus tuition) per State University System full-time-equivalent (FTE) student to \$17,008 by providing \$366 million in additional funds by 2008-89.*

We integrate these proposals into our estimates of the post-secondary component of state spending in our budget balance chapter.

### ***Community Colleges***

In FY 2000, public two-year institutions enrolled 37% of all post-secondary students nationally and 45% in Florida. The share in Florida may well now be 50%. In 2000, community college spending per student in Florida was 95% of the national average. At first that figure seems reasonable since the lion's share of educational spending pays personnel, and wages controlling for skill are around 5% lower in Florida. That assessment gives the wrong impression, however, for two reasons. The first is that community colleges are in tough budgetary conditions in most states. The second is that Florida's community colleges have experienced a brutal funding decline since FY 2001. From FY 2001 to FY 2004, adjusted for inflation Florida's community colleges had to slash their budgets by 13%. Funding is improving this year, but remains stringent.

Though we have not undertaken an analysis, the benefit-cost ratio for community college spending must be high. Labor market studies show that both private and public rates of return to community college education are large, especially for professional and technical training, such as nursing (Kane & Rouse, 1999). Not only that, very recent labor market studies are showing that states wind up with pay structures that match the skills of the people they

supply.<sup>16</sup> By raising incomes, community college training pays for itself over time through the higher taxes collected from better paid workers. Community colleges are one of those cases for which one need not even appeal to enhancing the quality of the lives of those who are educated. The simple argument that it improves state budgets suffices.

Historically, community colleges have provided a wide variety of services: academic education; remedial education; technical training; on-the-job training; distance learning; and community education among them. As the demand for their services grows and states grow stingy, they face trade-offs (Grubb & Lazerson, 2004). One trade-off is access versus quality. Can they still admit every applicant and still maintain the quality of their services? Studies show that enrollment in community colleges, unlike that in selective universities, is sensitive to tuition. Raising tuition would provide sorely needed money but would make it hard for those who most could use the training to obtain it. A second trade-off is among various services. Should two-year institutions continue to provide the full range of services, with each one becoming mediocre because of shrinking per-student resources, or should they restrict the range of what they do?

A final issue is the extent to which community colleges should extend their services up and down the educational scale. At the higher end, because of their low per-student costs and location, the legislature is turning more and more to the state's community colleges to train not only nurses but also teachers and others who historically have received four-year educations. At the lower end, they are also teaching more and more high school students, who receive college credit from them while still enrolled in secondary schools.

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<sup>16</sup> We cite two of these studies in our chapter on job structure.

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# Funding Florida's Educational Standards

# 6

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## *Introduction*

In recent years scores on the Florida Comprehensive Assessment Test (FCAT) have risen noticeably. Considered by many as a model for the nation of the importance of accountability standards, Florida is committed to continuing this growth in student performance. To make adequate yearly progress (AYP) in compliance with the No Child Left Behind Act of 2001 (NCLB), in academic year 2009–10 Florida's schools must have 68% of their students showing proficient performance in mathematics and 65% in reading. By 2013–14, those percentages rise to 100%.

However, per-student funding has fallen further behind the national average and, even more telling, has fallen 10% below the rest of the South. Similarly, while teacher salaries nationally have not kept pace with other occupations for decades, resulting in declining teacher quality, teacher salaries in Florida have kept pace neither with the national average nor with the rest of the South. At the same time, dedicated teachers are spending more and more hours outside of normal school hours on instruction related activities. Together, these factors tend to make it ever harder to attract and retain quality teachers, which a growing body of research is demonstrating to be the most important and efficient way to boost student performance.

What funding increases have occurred in Florida have been disproportionately driven by increases in property tax revenues, which have in turn been driven by rapid population growth and by house price appreciation that over the past four years has been far above Florida's 10- or 20-year average. Neither of these factors is likely to persist. It is therefore important to know how much state funds devoted to education must grow in order to provide adequate



funding to meet the state's stated proficiency goals.

In Florida, most school funding is allocated through the Florida Education Finance Program (FEFP). The FEFP draws on the state property tax base, on the state sales tax base, and on other state revenue sources to generate a pool of state controlled funds which are allocated to school districts for current expenditures according to enrollment, program cost, labor cost, and other factors. Because nondiscretionary property tax revenues from a district (the vast majority of property tax revenues used for schools) can not exceed 90% of the district's FEFP allocation, available local revenue depends upon total FEFP expenditure. Therefore, K-12 revenue cannot be estimated separately from K-12 expenditures, and the first step in constructing such an estimate must be to construct future expenditure targets.

Once the expenditure targets are in hand, we can develop projections of unweighted full time equivalent students (UWFTE) and school taxable value (STV) for each of the 67 school districts out to the 2014–15 academic year. From these projections, we can calculate available property tax revenues, and from there state revenues needed to meet the expenditure target. Working through the projections shows that to reach a funding level per student on a par with the rest of the South over the next five to ten years, and thus to maintain teacher salaries and the strong performance growth seen in recent years, state funds devoted to K-12 education will have to grow at an average annual rate of around 10%, which is triple the average annual increase over the past eight years (this rate is independent of class size compliance as discussed in chapters five and seven).

This is not to say that spending alone is sufficient, it is only necessary. Clearly money may be spent on many things that do not enhance achievement. Further, salary scales that reward everyone equally are not likely to attract and retain the best potential teachers, or to attract those with skills that can earn differentially higher rewards in other careers. Indeed, an effective system for raising the pay of good teachers with valuable skills and weeding out poor teachers would obviously produce better teachers for a given level of expenditure. On the other hand, accountability for results must be accompanied by adequate funding to achieve those results—accountability and adequate funding go hand in hand.

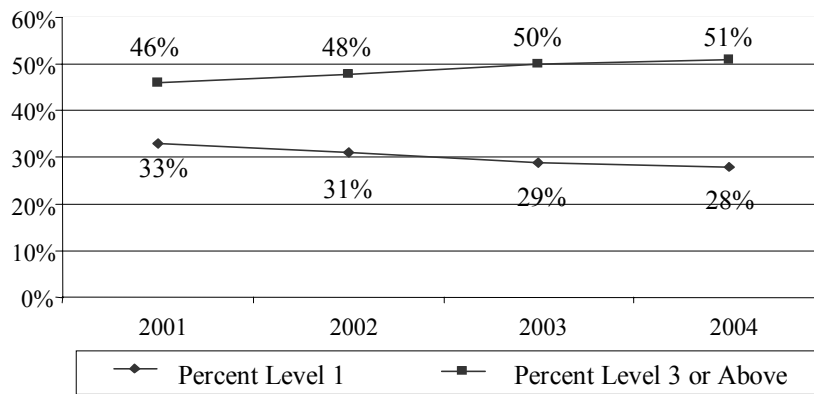
Whatever the standard by which the high quality of our teachers is to be judged, teacher salaries must be high enough to attract and retain enough teachers of that quality to staff our classrooms, and it is doubtful that that can be done much longer without significant increases in state funds.

***Expenditure Targets***

To project expenditures five and ten years in the future, we need to know what the state needs to achieve over that time, and, to accomplish that, we need to first know how the state's schools are performing today. From 2001 to 2004, Florida's students and schools showed substantial improvement in academic performance, as measured by scores on the FCAT. Figure 1, from the Florida Department of Education's (FDOE) media packet on the 2004 FCAT results, shows gains in the percentage of students reading at or above grade level in grades 3-10 (scoring at level 3 or above) and declines in those making the lowest score, level 1 (FDOE, 2004a). Similar results were obtained for math performance, and the improvement was considerably more marked in the lower grade levels. These gains are consistent with recent research showing that school accountability does tend to produce improved school performance (NBER, 2004).

Such top down accountability may be even more important in Florida than in most states, since bottom up accountability is likely to be weak for a number of reasons. First, Florida's education

**Figure 1. Reading FCAT Grades 3-10 Student Achievement**



budget is highly centralized at the state level. Even the vast majority of local property tax revenue collected for school purposes is a state revenue source in the sense that local gains in taxable value translate into more school funding for all districts of the state, not funding increases for the district in which the increase in property values occurred. Thus, if a district does a particularly good job with its schools, driving up property values, there is no financial reward to the school district in terms of higher revenues, and the incentives and local control that can be provided through the property tax base are accordingly missing, weakening direct financial accountability (Fischel, 2001).

Second, in Fall 2004 there were over 39,000 students per school district in Florida, more than twelve times the national average and second only to Hawaii, which has a single statewide school district.<sup>1</sup> In large districts, the influence of individual parents as voters is diminished relative to the power of organized interest groups, such as those that advocate for specific subgroups of students, or teachers unions. The interests of these groups may sometimes align with the interests of average students, parents, and taxpayers, but often will not. Thus, local political accountability is probably much weaker in Florida's schools than in most states.

Third, social accountability is likely lower in Florida's schools than in those of most other states due to both large school districts and large schools—Florida's elementary and high schools are, on average, the largest in the nation. (Morgan & Morgan, 2004) This means that parents are closely acquainted with only a small fraction of other parents and teachers, and that only a very small fraction of parents are closely acquainted with principals, school board members, and school superintendents. As such, the degree of information available to parents about teachers and administrators, the ability of parents to exert direct influence on teachers and administrators, and the ability of teachers and administrators to gather direct feedback from the community and to solicit parent involvement are all limited in large schools and large school districts. Similarly, principals and other administrators will have close relationships with relatively few teachers, limiting direct opportunities for information exchange and accountability

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<sup>1</sup> Calculation based on data reported in NEA (2005).

enforced through social norms within schools themselves. To regain a measure of local governance, Florida has School Advisory Councils (SACs) with participating parents for each school, though their influence varies from consequential (helping decide how to spend school recognition bonus funding) to nominal.

Lacking such local avenues for accountability, some other method to create incentives for performance becomes that much more important. In Florida, strict state level accountability standards, measured by performance on the FCAT, coupled with consequences for schools not meeting those standards, are intended to serve this role. Achievement standards set by the state for its schools for compliance with NCLB continue to rise. In academic year 2009–10, Florida's schools must have 68% of their students showing proficient performance in mathematics and 65% in reading. By 2013–14, those percentages rise to 100% (FLDOE, 2004c).

Thus, Florida's K-12 school budget over the next 10 years must be adequate to allow continued growth in student performance in all schools—strict accountability and adequate funding are two sides of the same coin.<sup>2</sup> This is especially true in schools that are chronically low performing or which serve particularly disadvantaged students. The most important step in enhancing performance is likely encouraging districts to place and keep strong teachers in the classrooms and to focus on the curriculum that parents and taxpayers find most important. Indeed, teachers are not only the largest single item in the K-12 budget, but teacher quality is recognized by a growing body of strong empirical evidence as the most important determinant of the effectiveness of schools.<sup>3</sup> Indeed, Florida's former K-12 Chancellor Jim Warford credited hard work on the part of Florida's teachers for our schools' improving performance on the FCAT (FLDOE, 2004a).

It stands to reason then that the most crucial factor in enabling our schools to sustain growth in student achievement and to meet Florida's rising achievement standards is recruiting and retaining highly qualified teachers. However, Florida faces a number of

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<sup>2</sup> See Figlio (2004) for more discussion on this point.

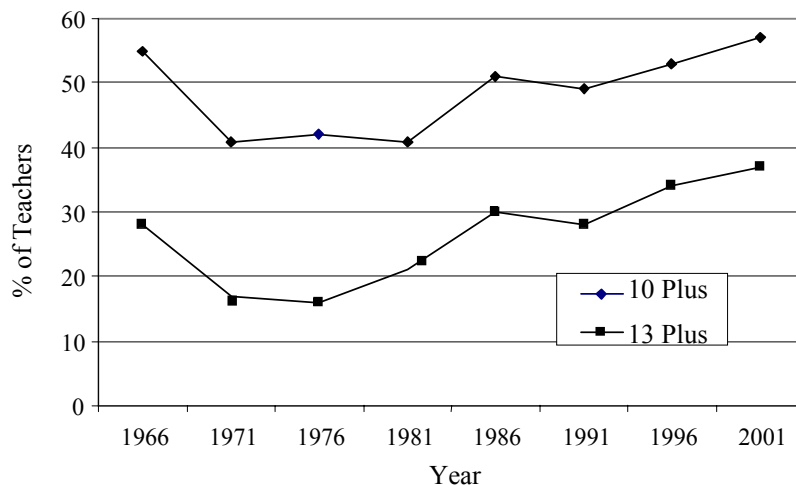
<sup>3</sup> See, for example, Figlio (1997) and Rivkin, Hanushek, & Kain (2005).

challenges in this regard. First, school districts operate under rigid uniform salary schedules, with minor exceptions. This rewards both outstanding teachers and poor teachers equally. It also rewards those with scarce talents that are highly rewarded in other occupations at the same level as those with skills that are not as highly rewarded in alternative occupations. This situation is much more attractive to poor teachers without skills that would be rewarded outside the schools than to highly qualified teachers with skills that are valued outside of the schools. Second, while principals are able to identify which teachers are high quality and which are low quality with reasonable accuracy, they historically have been either unwilling or unable to translate that into an effective separation and retention policy (Hanushek & Rivkin, 2003). Reforms that make it easier to reward exceptional teachers, to pay those with skills that are more valued outside the schools at a higher level in the schools, and that hold principals and superintendents more accountable for the results of their recruitment, retention, and separation decisions would of course make it easier to staff the schools with high quality teachers.

Working conditions are an important determinant of the desirability of a teaching career. The schools that have the lowest achievement levels, thus those most in need of qualified teachers, are the ones where it is hardest to draw and retain highly qualified teachers. Hanushek, Kain, and Rivkin (2003) suggest that very large salary premiums may be required to induce high quality teachers to teach in disadvantaged or currently low achieving schools.

The FCAT and accountability standards themselves may make teaching somewhat less desirable as a career to the best teachers, who value room for discretion and creativity in their curriculum. At least, one often hears such things when talking about state policy with teachers and parents, or perusing opinion pages of state newspapers after articles on the FCAT have been published. For example, four of eight letters to the editor published in the October 6, 2004 edition of the *St. Petersburg Times* Opinion section dealt with the FCAT, and all expressed the opinion that it was too highly emphasized, and brought about too much teaching to the test. Certainly teaching to the test is not necessarily a bad thing if the test is a reasonably comprehensive measure of the things parents

**Figure 2. National Percentage of Teachers with 10 or More Uncompensated Hours Weekly**



and taxpayers want students to learn. The point is that it may be perceived as an extra burden on teachers.

Based on data from a survey conducted by the National Education Association (NEA, 2003), the average teacher spends 50 hours per week on instruction related activities, while the average official work week is 37 hours. The remaining time is spent on activities such as grading, planning, or meeting with parents. Further, while the number of hours in the official school work week has remained relatively constant over time, the fraction of teachers spending large amounts of time outside the regular school day on instruction related activities has grown steadily since 1981. This is shown in Figure 2. The fraction of teachers spending at least ten extra hours per week on instruction related activities grew from 41% in 1981 to nearly 57% in 2001. The figure also shows that most of this was due to growth in the fraction spending 13 or more extra hours per week on instruction-related activities. This suggests that the average of 50.3 hours is largely driven by those dedicated teachers who put in long hours—the ones most responsible for any gains in achievement and thus most valuable to schools—while less dedicated teachers put in much less extra time. Yet, the dedicated teachers earn the same compensation per week and consequently less—in some cases much less—per hour.

Given rising achievement in Florida's schools relative to the nation, it is a good bet that hours spent on instruction related activities outside of class time have been rising at least as fast in Florida as for the national average and probably faster for those teachers doing the most for their students. While we lack comprehensive evidence on this point, a survey commissioned by the teachers union in Hernando County in fall 2004 found that nearly half of respondents were working more than five extra hours per day beyond normal school hours (Raghunathan, 2004). This would translate into work weeks of over 60 hours for the more dedicated teachers in Florida's schools.

This seems in line with what one might expect when teachers' responsibilities are considered. In a typical day, a teacher has a small amount of non-class time both before and after the school day, 30 to 45 minutes. Most of this time is spent on things like hall duty, bus duty, faculty meetings, department meetings, and parent meetings. A typical teacher also has a planning period of about an hour during the day. Consider a middle school reading teacher on a block schedule who teaches five classes a day, meeting with each individual class every other day. Within these 10 classes, it is likely that there are three different levels—remedial, advanced, and normal. Thus, there must be three separate lesson plans, three different sets of class work and homework, and three different sets of quizzes and exams. Doing a thorough job of this is likely to take at least an hour each day. At that point, the whole official work week is exhausted, but there has been no time for things like making copies or parent phone calls. Almost certainly some parent meetings and faculty meetings will spill outside the official school day. Further, uncompensated attendance at a number of after school events and activities is expected, if not required by contract.

Thus, a conscientious teacher will have put in over 40 hours per week without having graded a single assignment. Over a nine-week period, reading and math teachers are likely to collect at least three assignments per week for grading from each class. With ten classes of even 20 students each on average, that is 600 assignments each week to grade. It is crucial to grade much of this work with care, not only to offer good feedback to students and parents, but also to get a firm grasp of how each student is doing and where more time must be spent to get the curriculum across. If

it takes two minutes to grade and record each paper on average, that comes to 20 hours per week, totaling to more than a 60-hour work week.

Certainly, it is possible to get through a week as a teacher on less than 60 hours by not giving many assignments, handing off all grading that remains to student aides, skipping most meetings and all after school functions, and minimizing involvement with parents. But, the teachers who take this course are not the ones that have been driving up the achievement scores of Florida's students. Swaim and Swaim (1999) make a compelling and more detailed case that it takes a full 60-hour week to do a good job of teaching in today's schools.<sup>4</sup>

Surely one would think that, with the need to attract high quality teachers even into currently poor performing and disadvantaged schools, the imposition of new tough standards, 60 hour work weeks for dedicated high quality teachers, and continuously rising test scores, teacher compensation must be climbing in Florida relative to their other job opportunities. This would imply that K-12 funding per student must also have been growing relatively rapidly in Florida as well, since teacher salaries are far and away the largest single item in K-12 operating budgets, or, if we were compensating teachers for their extra work by cutting out waste in the budget, that our K-12 funding per student must at least be high relative to levels in other locations, except perhaps states dominated by large, high wage, high cost cities, such as New York or California. If that were true, we would need only to sustain the current level of funding growth per student in our K-12 budget to meet our achievement goals in the next five to ten years.

Amazingly however, none of that is true. Nationally, teacher wages have declined strongly relative to other occupations that require a college degree (Hanushek & Rivkin, 1996). At the same time, teacher salaries in Florida have declined relative to the

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<sup>4</sup> No link between accountability and teacher work hours has been found empirically, however. Using states as observations, Stoddard and Kuhn (IZA, 2004) "find no association between the introduction of accountability ... and the change in teacher hours." They "conjecture that the weak link between effort and compensation in most school reforms helps explain the lack of such an association."



national average. From 1992–93 to 2002–03 national average teacher salaries grew by 31%, while the average teacher salary in Florida grew by only 29%.<sup>5</sup> In 2003–04, the national average teacher salary was 15% above the Florida average. A better comparison, however, is to the other southern states. In the South, as defined by the census region and excluding Florida, teacher salaries grew at a student weighted average rate of 37% from 1992–93 to 2002–03, and in 2003–04 teacher salaries in Florida had fallen to 98% of the Southern average. The same pattern holds for per student current expenditures, which grew over 31% in the South and in the nation as a whole between 1997 and 2002, but only 16% in Florida.<sup>6</sup> These figures are presented in Table 1.

Given the increasing workload for teachers, the continuing increase in standards for AYP, the fact that it costs more to get good teachers where they are most needed to make AYP, and the fact that teacher salaries have not kept up with salaries in other occupations, significant increases in teacher salaries, and thus funding per student, seem necessary to continue to make AYP over the coming decade. Exactly how much will be required is less clear. Since 1990, nominal GDP per capita has grown at an average annual rate of 3.8%. It is reasonable to think that salaries in related occupations might grow at around that rate over the next decade. However, teacher salaries are starting from a level below other comparable occupations, and, national funding and funding in the South grew at average annual rates of 5.6% and 5.7% annually from 1997 to 2002 (based on the data in Table 1).

To avoid falling further behind what the South and the rest of the nation deem to be reasonable spending levels, and, especially, teacher pay, we assume that 5.6% average annual increases in state

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<sup>5</sup> Figures on teacher salaries and K-12 expenditures are based on data from NEA (2004a & 2004b) unless otherwise noted. The growth of nominal per student expenditures was calculated from the real growth estimate reported in Boyd (2004) using inflation as measured by the Consumer Price Index from the U.S. Bureau of Labor Statistics.

<sup>6</sup> Since the census region included Maryland, Delaware, and the District of Columbia, some might wonder if this definition of Southern overstates spending. This is not the case. Comparing Florida to the other 10 Confederate states produces almost identical results—salaries in those states grew 39% from 1992–93 to 2002–03, and teacher salaries in Florida stood at only 99% of the level in these states in 2004–05.

**Table 1. Per Student Expenditure and Teacher Salaries**

Item	Florida	Nation	South
Teacher Salary Growth 1992–93 to 2002–03	29%	31%	37%
Teacher Salary 2003–04	\$40,604	\$46,726	\$41,439
Difference from Florida		\$6,122	\$835
Difference as % of Florida Salary		15%	2%
Nominal Current Expenditure Growth Per Student 1997 to 2002	16%	31%	32%
2003–04 Current Expenditures Per Student	\$6,516	\$8,208	\$7,359
Difference from Florida		\$1,692	\$843
Difference as % of Florida Expenditure		26%	13%

and local funding per student are needed. This assumes that the national and Southern averages continue to rise at the same rate as in the past and that the federal share per student remains constant. Since the federal share is relatively small (8.1% national average in 2002–03), moderate differences in the rate of growth of federal funding will have negligible impacts on funding targets. At this rate of growth, however, Florida will not catch up to the nation or the South. Therefore, we also present budget estimates for catching up with both the Southern and national averages in five years and in ten years. Required per student state and local funding levels for each of these goals are reported in Table 2.

Though maintaining resources per student at a lower level than in the rest of the nation may not seem to be a reasonable or acceptable option, cost and wage conditions in Florida may not closely match those in the nation as a whole. Therefore, we think the more reasonable goal is to catch up with spending per student

**Table 2. Per Student Expenditure Targets**

Scenario	2009–10		2014–15	
	State and Local Funds per Student	Average Annual % Increase	State and Local Funds per Student	Average Annual % Increase
Maintain Current Relative Position	\$7,613	5.60%	\$9,998	5.60%
Catch the Southern Average	\$8,781	8.15%	\$11,533	6.98%
Catch the National Average	\$9,959	10.44%	\$13,080	8.21%

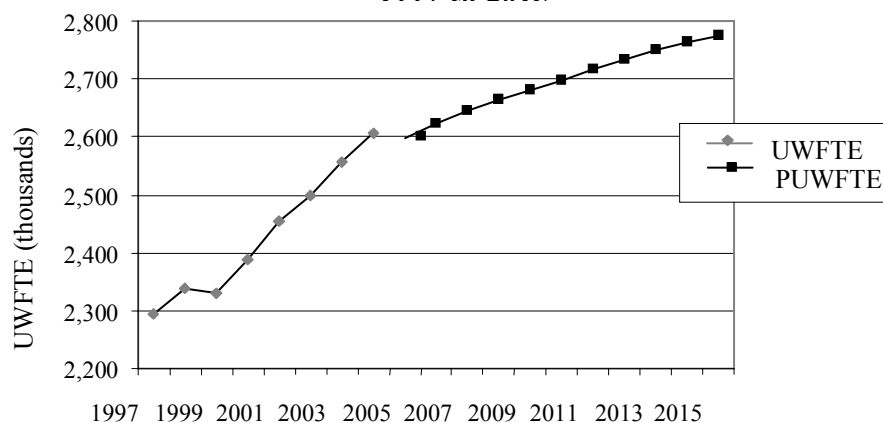
in the South. This would require average annual increases of over 8% per student to close the gap on the rest of the South by the 2009–10 academic year, or average annual increases of almost 7% per student to close the gap by the 2014–15 academic year.

To translate the information in Table 2 into total expenditures, a forecast of UWFTE is needed. In the next section, an UWFTE forecast at the district level will be needed for determining the split between local effort and funds from the state's general revenue.

Therefore, we project UWFTE district by district and sum to get the state total. For the purposes of this study, we simply regress the log of UWFTE on the log of school-age population and county dummy variables. We then use the results of this regression along with the school age population forecast from BEBR (2002) to project UWFTE. Figure 3 shows actual UWFTE for 1997 (the 1997–98 academic year) to 2004, and projected UWFTE (PUWFTE) from 2005 to 2014. Growth in UWFTE is projected to slow due to a slow down in the growth of the school age population.

Taking projected UWFTE of 2,680,672 for 2009–10 and 2,763,146 for 2014–15, Table 3 shows total state and local funding required under each of the six scenarios of Tables 2 and 3. Due to continuing growth in UWFTE, total funding will need to increase

**Figure 3. Actual and Projected UWFTE  
1997 to 2015**



faster than funding per student to catch the South—an average annual rate of 9% to close the gap by 2009–10, or 7.7% to close the gap by 2014–15. By contrast, total state and local funding in Florida grew at an average annual rate of only 4.6% from 1997–98 to 2004–05. This means the rate of growth of state and local funding has to double to close the gap on the South in the next five years. Maybe even more troubling, funding must increase nearly two percentage points more each year than it has for the past seven years just to avoid falling further behind.

Before moving to projecting state revenue requirements separately from the total revenue requirements of Table 3, we consider some potential counter arguments. First, from Table 1, it does appear that Florida has channeled more of what funding increases it has seen into teacher salaries than have other states, and we have argued that teacher salaries are the most important component of current spending. Might this significantly reduce the need to increase funding per student? We don't think so for two reasons. First, such a shift in relative spending (to teacher salaries from everything else) can not continue indefinitely—there are other things upon which money must be spent. Second, Florida's ability to channel more of its smaller amount of increased funding to teacher salaries in part reflects the fact that Florida has larger class sizes than most other states. This difference will decline as

**Table 3. State and Local Current Expenditure Targets**  
(billion \$)

Scenario	2009–10		2014–15	
	State and Local Funds	Average Annual % Increase	State and Local Funds	Average Annual % Increase
Maintain Current Relative Position	\$20.4	6.43%	\$27.6	6.35%
Catch the Southern Average	\$23.5	9.00%	\$31.9	7.74%
Catch the National Average	\$26.7	11.31%	\$36.1	8.98%

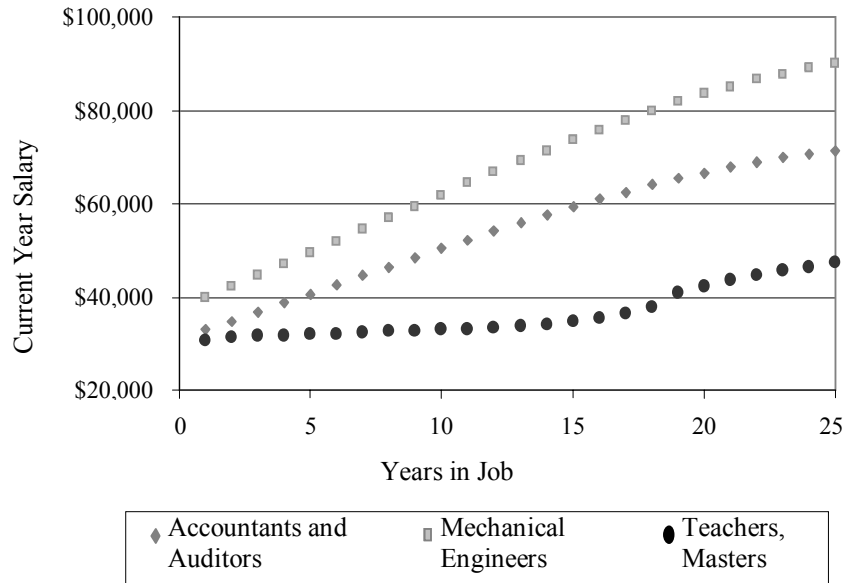
Florida's class size reduction amendment is implemented, making it more difficult to continue to funnel funding increases into higher teacher salaries.

Second, might not the reduction in class sizes due to the implementation of the Florida's Class Size amendment help offset the need to improve teacher salaries and teacher quality? Evidence indicates that spending a given amount of funding to increase teacher salaries improves student performance more than spending the same amount on class size reduction (NCREL, 2000). Thus, the class size amendment will likely reduce the gains that might be achieved with increased overall funding, not reduce the need for increased funding for teacher salaries.

Third, might not the growth of alternative teacher preparation programs increase the pool of qualified teachers enough to blunt the need for increases in teacher salaries? We do not think so. The stereotypical image of a teacher from alternative programs is of a mid- or late-career professional who decides to take on teaching as a calling. However, there are problems with this notion.<sup>7</sup> Earnings rise with experience and professionals such as lawyers,

<sup>7</sup> See University of Florida, Center on Personnel Studies in Special Education, Dai, Denslow, Dewey, Lenze, Rosenberg, and Sindelar (2004) for further discussion of these points.

**Figure 4. Hillsborough County Pay Schedules**



accountants, and engineers make much more by the middle of their careers than does a mid-career teacher. Moreover, to change, they would start at the beginning teacher salary. Therefore, a disproportionate fraction of those interested in making such a switch likely will be either temporarily displaced and looking to move back to their previous profession at some point, or else workers who were not skilled or reliable enough to maintain employment in their original careers. Neither of these are good potential job candidates.

To see why we think this might be a serious issue, Figure 4 shows salary schedules for teachers (with a Master's), accountants, and mechanical engineers in Tampa in 2004. The teacher salary schedule is just that for the Hillsborough district. The others are constructed using experience effects derived from Ransom (1993) and average wage data for the Tampa-St. Petersburg-Clearwater MSA from the U.S. Bureau of Labor Statistics Occupational Wage Survey. An accountant with a master's degree switching at the beginning of year 20 of a career would go from making \$66,651 to making \$30,502, a 54% pay cut.

With some reasonable assumptions, we can use the data

summarized in Figure 4 to quantify the total monetary sacrifice from switching careers. Assuming that the entire salary schedule shifts up at a real rate of 1% per year, that inflation is 1% per year, that the discount rate is 7%, that entry into the labor market occurs at age 23, and that retirement occurs at 65, the accountant switching at year 20 of a career would be giving up an equivalent of \$41,491 per year in 2004 to work 60 hours per week to teach Hillsborough county's children. The real sacrifice per year is higher for those who switch later. It seems unlikely to us that many talented individuals are likely to voluntarily make this choice—unless they have some other source of income that has already made them wealthy.

Fourth, how sure are we that additional funding will translate into recruitment and retention of better teachers? Aside from published studies showing the relationship, and the logical arguments as to why that should be the case, we have direct evidence that adjusting teacher salaries in Florida toward market levels for other occupations will reduce teacher turnover, making it easier to retain qualified teachers where they are needed. In March 2004, several of the authors of this report completed a report recommending, among other things, that the basis for the personnel cost adjustment included in the FEFP should be changed from a retail price level index (FPLI\_P) to an index intended to be more direct measure of relative labor costs for equally qualified personnel (FPLI\_A). Since completing the report, we analyzed the relationship between our recommended change to the labor cost adjustment and the average teacher turnover rate during the 2000–01, 2001–02, and 2002–03 academic years (for four districts, data was reported for only one or two years which were averaged for the years reported). The FPLI\_A is a more accurate index of relative labor costs. Consequently, where the FPLI\_P was higher relative to the FPLI\_A, so that there was more funding available to pay teachers relative to market wages for other occupations, we would expect lower turnover, all else equal. Table 4 shows that 36% (39%) of teachers were in districts where the log difference between the FPLI\_P and FPLI\_A was above (below) the teacher-weighted state average and the log 3-year average turnover rate was below (above) the teacher-weighted state average. This is strongly consistent with our expectations.

**Table 4. Funding and Teacher Turnover in Florida's School Districts**

		Average Turnover Rate	
		Above Average	Below Average
Index Difference	Above Average	6.61%	36.15%
	Below Average	39.10%	18.15%

To shed more light on the strength of the relationship, we regressed the log of 3-year average turnover (TurnoverRate) on the log difference of the two indexes (Difference). We included the log of unweighted full time equivalent enrollment (UWFTE) to control for possible district size effects in personnel management (in larger districts, it may be easier to transfer within districts when a move is necessary). Since each of the 67 observed average turnover rates is the average of an individual outcome for each teacher, and since some districts are observed less than three times, we use weighting appropriate to cell mean data. The results are as follows. Standard errors are in parentheses.

$$\text{TurnoverRate} = -.65 - 11.54 \cdot \text{Difference} - .23 \cdot \text{UWFTE}$$

(.82)
(-2.09)
(-0.07)

$R^2 = .5639$

N = 67 Counties (Averages of 410,614 Individual Retention Decisions)

The magnitude of the effect of funding on retention is stunning. In a 20,000-student district, holding the FPLI\_A constant, the increase in funding associated with increasing the FPLI\_P from 1.00 to 1.05 is estimated to cut the turnover rate by nearly 3 percentage points, from 6.3% to 3.6%. A 5-point increase in the FPLI\_P of course does not necessarily correspond to a 5% increase in funding. Regressing 2004–05 total state and local funding on the FPLI (a 3-year average) and UWFTE (all in logs) indicates the relationship is close to 1 to 1, implying for large districts with state average labor costs receiving state average funding, a 5% funding increase would cut turnover by about three percentage points.



Regressing total funding per student on the FPLI (again in logs) indicates that a five-point increase in the FPLI might lead to more like a 3- or 4-percentage point increase in funding, indicating it would only take a 3% or 4% increase in such a district to cut turnover by about three percentage points. Of course, the exact size of the effect may not be perfectly estimated. The point is that there appears to be a very strong inverse relationship between funding and turnover in Florida. We note that we also estimated models with other explanatory variables such as poverty and percent minority. These other variables did not add significantly to the model's explanatory power and did not affect the magnitude of the effect of funding on turnover.

Thus, we are convinced that significant growth in funding per student and accompanying increases in teacher salaries are needed if Florida's schools, especially the most disadvantaged ones, are to continue to make AYP over the next five to ten years. This is not to say that funding alone is the answer, or that simple salary increases will immediately translate into large numbers of high quality teachers. Salary increases alone are likely to immediately reduce turnover, but they will reduce turnover of both good and bad teachers. This will have the short-term benefit of reducing the need for emergency teachers, long term uncertified substitutes, and teachers with no experience in subject. This last one matters because first-year teachers are much less productive than more experienced teachers, although most of the gains to experience are likely exhausted by the third year (Hanushek, Kain, & Rivkin, 2005).

Salary increases will also increase the fraction of dedicated and talented teachers in the labor pool. The extent to which this occurs, and the extent to which it translates quickly into getting better teachers into the classrooms, depends crucially on the efficiency with which principals sort high and low quality applicants. Even if principals hire randomly, however, there will be some level of increase in teacher quality to go along with the benefits of reduced turnover. Since it is impossible to fully evaluate the potential fit of job candidates, hiring will never be a perfect process. Gaining the full benefit of increased salaries depends crucially on the ability and willingness of principals to quickly fire teachers who prove to be either undedicated, unskilled, or just a poor fit for the particular

**Table 5. Current Expenditures in Florida's Schools  
1997-1998 to 2004-2005**

Year		State	Local	Total
1997–	Funding (billions)	\$6.456	\$4.041	\$10.496
1998	Share of Total	61.5%	38.5%	100.0%
2004–	Funding (billions)	\$8.736	\$6.285	\$15.021
2005	Share of Total	58.2%	41.8%	100.0%
	Average Annual Growth	3.8%	5.7%	4.6%

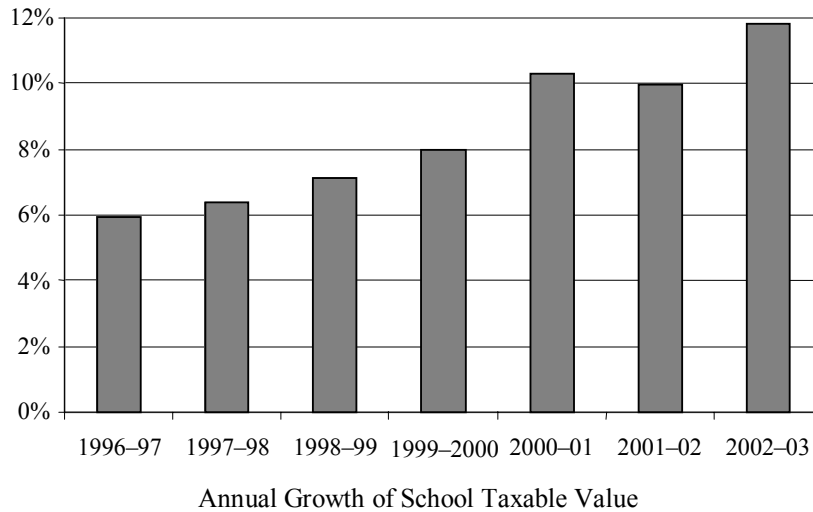
school and position for which they were hired.

### *Taxable Value Projection*

Florida's state and local school funding comes from both property tax revenue and state revenue. State revenue is predominantly from the general fund, although significant funding comes from the lottery as well. The property tax revenues are largely required local effort. This is collected at a millage rate set by the state, and offsets state dollars one for one in district funding. Thus, up to the required local millage set by the state, the property tax base is a state tax base in all but name. In 2002–03, federal funds accounted for 10.7% of Florida's K-12 funding, compared to 8.1% nationally. Similarly, local funds accounted for 45.6% of funding, compared to 42.9% nationally, although this is largely state-controlled property tax revenue. Thus, state funding from general revenue comprises a relatively small share of all school revenue in Florida, 43.7% compared to 49% nationally in 2002–03. Table 5 shows Florida's state and local current school expenditures for the 1997–98 and 2004–05 academic years.<sup>8</sup> For current expenditures, the state share is above the local share. However, local funds have grown at nearly half again the annual rate of growth of state funds over the past seven years, or nearly two full percentage points faster.

The sources of most state funds and what governs their growth are relatively easy to understand. As the number of consumers and their average incomes grow, both sales tax revenues and lottery

<sup>8</sup> Data are from FDOE.

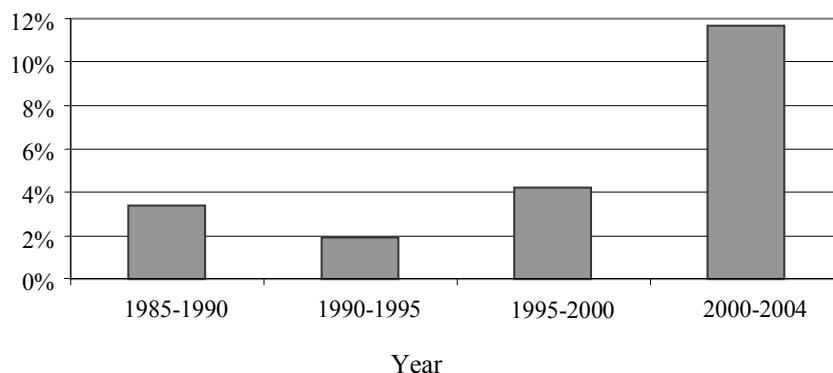
**Figure 5. Growth of the Property Tax Base**

revenues grow roughly proportionally. Funds are allocated from these sources to education and other spending priorities at the discretion of the legislature. The property tax base and its relationship to school funding is more complex, depending upon: (1) growth in the market value of existing property; (2) limits on the degree to which that growth in market value can translate into taxable value; (3) the amount and market value of new construction; (4) limits on local discretion; and (5) limits on the fraction of a district's funding that may come from required local effort. Due to these factors, the distribution of the property tax base across districts, as well as its overall size and rate of growth, has important implications for the state's K-12 budget.

Figure 5 shows annual percentage growth in school taxable value (STV) for each year from 1996 to 2003. Growth in the property tax base was extremely vigorous over that period, growing at an average annual rate of 8.5%. The property tax base grows due to both appreciation of real estate prices and new construction. The value of new construction depends upon the level of real estate prices and the amount of new construction, which is driven largely by population growth.

Figure 6 shows average annual house price appreciation over

**Figure 6. Average Annual House Price Appreciation**

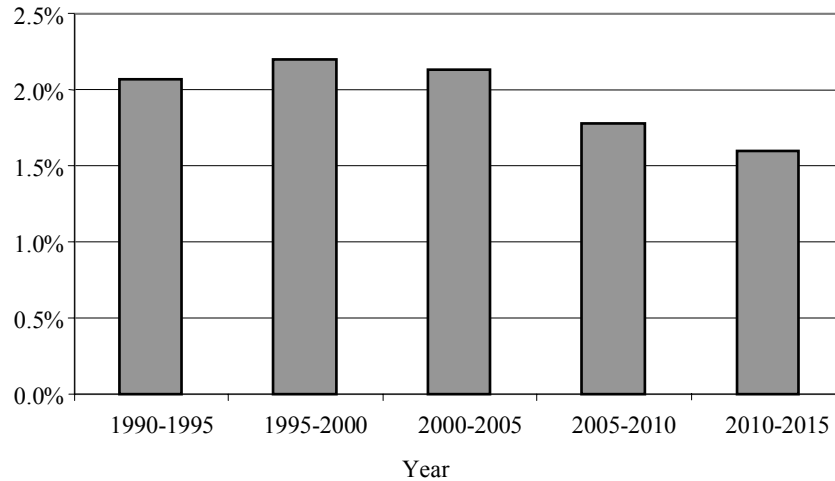


5-year periods from 1985-1990 to 1995-2000 and for the four years from 2000-2004.<sup>9</sup> As is apparent from the figure, the recent surge in the property tax base and the corresponding strong growth of property tax revenues for schools is in large part due to surging real estate values. In turn, much of this was likely driven by low interest rates, which have two important effects on Florida. First, low interest rates increase the demand for housing on the part of those in the state and those already planning to move to the state, driving up housing prices. Second, retirees in states with higher levels of housing prices find that their houses have appreciated in value as well due to low interest rates, driving up the absolute difference between what they can sell their current home for and what they can purchase one for in Florida. Some of those who would have slightly preferred to stay in their home state at lower house prices will choose to move to Florida, further driving up Florida's housing prices. Such surging values will not continue indefinitely. The average annual rate of increase from third quarter 1975 to third quarter 2004 was 5.6%, a much more reasonable estimate of likely future house price appreciation.

Figure 7 shows five year average annual population growth rates from 1990-1995 to 2010-2015, relying on BEBR's population projections for future population levels. Population growth is

<sup>9</sup> Based on the house price index produced by the Office of Federal Housing Enterprise Oversight. In contrast to Figures 1 and 2 in the first chapter of this report, Figure 6 shows nominal price changes, not real.

**Figure 7. Five-Year Average Annual Population Growth Rates**

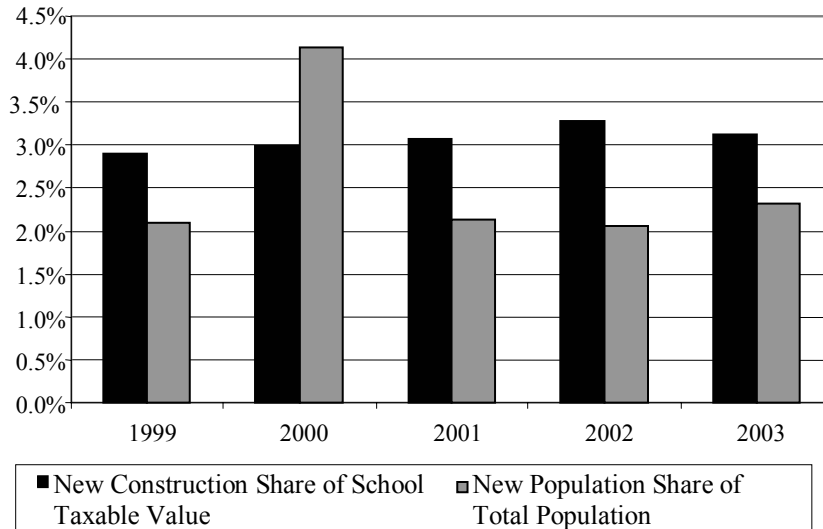


projected to be significantly lower over the next ten years. This will reduce growth of the property tax base in two ways. First, fewer new homes and buildings will be built. Second, a slow down in population growth will slow growth in the value of existing real estate.

Since the assessed value of homes can grow at only the minimum of actual market value appreciation or the rate of inflation until they are sold, new construction is disproportionately important for at least two reasons. First, new construction is often the result of an existing resident moving into a larger new home, which both increases the tax base by the value of the new home and frees up some of the capped value on the older home when it is sold. Second, new construction reflects the full value of current real estate prices. Figure 8 presents some evidence on this second point, showing the share of new construction in school taxable value and the share of new residents in total population for each year from 1999 to 2003. Except for 2000, the share of new construction in taxable value is significantly higher than the share of new residents in total population.

The foregoing discussion clearly suggests that STV will likely not expand as rapidly over the next ten years as it has in the recent past. To get a more exact estimate of the impact on Florida's K-12

**Figure 8. Shares of New Construction and New Residents, 1999 to 2003**



budget, we need projections of school taxable value at the district level. There are three reasons for this. First, .25 mills of discretionary local property taxes are equalized by the state by capping revenues at \$50 per UWFTE if more would be raised and by raising district revenues to \$50 per UWFTE from state general revenue if less would be raised. Second, lab schools receive a contribution from state general revenue equal to discretionary revenue in the district in which the school is located. Third, and much more importantly, required local effort can make up no more than 90% of a district's FEFP allocation. That means that the districts with the largest property tax base per UWFTE, while paying much more in taxes per UWFTE, also pay a much lower effective millage rate. How many districts are affected by the cap depends upon the distribution of taxable value, the required local effort millage rate, and the total FEFP allocation.

To project STV, we first project the value of new construction. To do so, we regress the new construction value (NCV) for 1999 to 2003 at the county level on current housing starts and one and two period lagged housing starts, HS, L1HS, and L2HS, the state average house price index, HPI, and county dummy variables. The role of the house price index is obvious. The housing starts

variables are included to proxy the quantity of new construction. Lags are included because there are delays in completing construction and getting it on the tax roll. County dummy variables are to allow for differences in the levels of real estate prices and the composition of new construction across counties. All variables are in logs, and we weight the regression using population – assuming variance of the regression error is inversely proportional to population, since there is much more random variation in small county data. Results with county effects suppressed, are as follows (standard errors in parentheses).

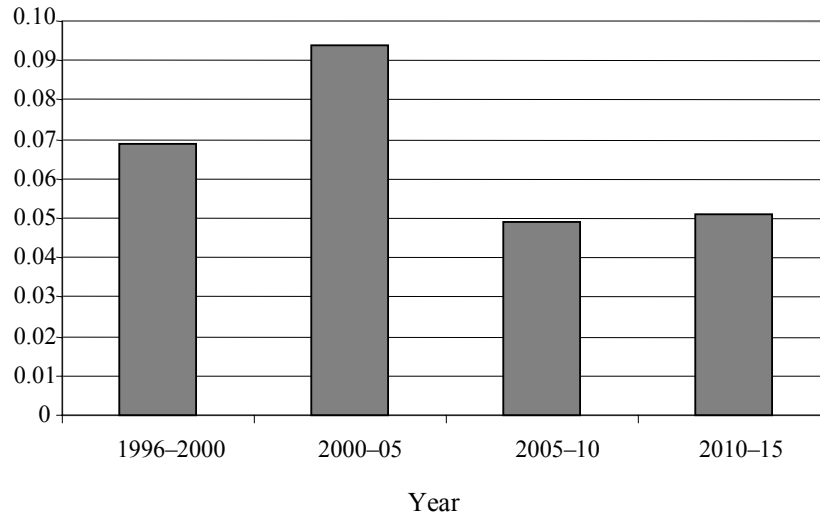
$$\begin{aligned} \text{NCV} = & .117 \cdot \text{HS} + .047 \cdot \text{L1HS} + .499 \text{L2HS} + .978 \text{HPI} \\ & (.084) + (.094) + (.090) + (.102) \\ R^2 = & .98 \quad N=335 \text{ (67 Counties for 5 Years)} \end{aligned}$$

To translate this into projections to 2015, we use the BEBR's 2002 *Long-term Economic Forecast* (Lenze, 2002) for future values of housing starts and assume housing prices resume the historic average annual growth rate of 5.6% from 2005 to 2015. To project STV, we need to know not just NCV, but we also need to project changes in STV not due to new construction. We form a variable equal to the ratio of STV less NCV to the previous year's STV. Let a subscript t denote the year, and R denote this new variable, that is:

$$R_t = \frac{STV_t - NCV_t}{STV_{t-1}}$$

We then regress R on the one-year difference in HPI, DHPI, since increasing real estate values raise the value of existing property as well as new property, and on county dummy variables. All variables are in logs. Where we expected the coefficient on HPI to be near 1 in the NCV regression, it is likely to be far less than one in this regression, since existing homes that do not change hands can not rise at market rates (although property not subject to homestead exemptions might), and since property appraisers are likely to be conservative when it comes to raising assessments toward market values anyway. Results are as follows (again the regression is population weighted):

**Figure 9. Average Annual School Taxable Value Growth**



$$R = .521 \cdot \text{DHPI} + \text{County Effects.}$$

(.042)

$$R^2 = .59 \quad N=335 \text{ (67 Counties for 5 Years)}$$

As expected, STV from existing development does not fully respond to rising real estate values, with response being about one-half. We project R into the future assuming HPI grows at the historical average. STV may then be projected as:

$$STV_t = NCV_t + R_t STV_{t-1}.$$

Figure 9 shows average annual growth rates for STV from 1996–2000, 2000–05, 2005–10, and 2010–15. It is readily apparent that STV will grow much more slowly over the next ten years if the expected slow down in population growth occurs, and real estate price appreciation returns to historical average levels for the state.

Before turning to the implications for the state K-12 education budget, we note some potential problems with our projections. First, some might argue that assuming that house price appreciation returns to historical levels all at once is too strong—that the fall should be gradual. This is possible. However, we have assumed house price growth stays stable at that level, whereas a real estate market crash is also possible. Second, our simple projections using county dummy variables to pick up different



level effects across districts may systematically overestimate STV growth. This is because we are estimating these level effects using five years of data when real estate markets were showing stronger than average growth (1999–2003). Altogether, our STV projections may be over optimistic due to this systematic effect.

### ***State Revenue Requirement Projection***

In order to turn our expenditure targets, UWFTE projections, and STV projections into projections of state revenue requirements, we must approximate the distribution of the expenditure targets across districts. To do this, we first assume that:

- 1) The distribution of total state and local funding between the FEFP and non-FEFP programs remains constant.
- 2) All districts levy the maximum allowable discretionary millage.
- 3) In counties with lab schools, the number of UWFTE diverted from counties to lab schools remains constant.
- 4) The number of UWFTE in the Florida Virtual School increases at the same rate as the state total UWFTE.
- 5) The ratio of FEFP funds not related to discretionary funding per UWFTE in each district to state average FEFP funds per UWFTE, denoted  $q$ , remains constant.
- 6) The ratio of all state and local funding per UWFTE not related to discretionary local effort for each district to the state total of those funds per UWFTE is equal to  $.206 + .794q$ .

Assumption 1 is straightforward, but significant shifts in the share of funds allocated through the FEFP might have noticeable implications for our later findings, since increasing the share allocated through the FEFP would allow more property tax revenue from districts at the 90% cap. Assumptions 2 through 4 are straightforward to understand, and, minor variations from them will have virtually no impact on the overall state budget.

Assumptions 5 and 6 are less straightforward and are important to the analysis in the same way as Assumption 1. Funds allocated through the FEFP are allocated by reasonably stable rules written into statute embodying things such as labor cost adjustments,

program cost adjustments, and adjustments for extra costs due to sparsity. Assumption 5 keeps us from having to duplicate the entire FEFP allocation process for 2009–10 and 2014–15 by simply assuming that the relative funding priorities per UWFTE remain constant across districts from 2004–05. This produces a budget neutral index,  $q$ , with an UWFTE-weighted average of 1 that can be multiplied by UWFTE and total FEFP funding to produce each district's FEFP allocation.

Both FEFP funding and funding related to discretionary local effort are driven by relatively clear and stable rules. Other state current funding may be somewhat less rule driven. Using an index determined from the 2004–05 allocation for such funding would be too prone to error. However, we might suspect that factors that drive deviations in those funds on a per UWFTE basis are related to the factors that drive FEFP funds, which we have named  $q$ .<sup>10</sup> Therefore, we regressed total state and local funding not related to discretionary local effort (SLFNRDLE) on  $q$ . The result is as follows:

$$\text{SLFNRDLE} = .204 + .797 \cdot q$$

(.021)                      (.021)

$R^2 = .95$      $N=74$  (67 Counties, 6 Lab Schools, FL Virtual School)

The formula of Assumption 6 is derived from these results by rescaling the sum of the constant and the coefficient on  $q$  to sum to 1, making the resulting index budget neutral.

With all of these pieces in place, it is straightforward to simulate the K-12 allocation for each expenditure target once required local effort millage is established. In 2004–05, the state average was 5.472. Millage rates for individual counties are adjusted using assessment ratios to make the effective millage the same in all counties (given different levels of under assessment). We actually carry out twelve simulations, one for each expenditure goal for both the 2009–10 and the 2014–15 academic years, at two separate required local millage rates, 6 and 7. With 2 mills for

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<sup>10</sup> Actually, in a regression not reported here, we find that these funds appear to systematically undo adjustments made by FEFP funds. That is, this index would be statistically significantly negatively correlated with  $q$ .

**Table 6. Projection of 2009-2010 State Revenue Requirement**

	Maintain Present Position		Match the South		Match the Nation	
Required Local Effort Millage	7	6	7	6	7	6
State Funds (billion \$)	11.2	12.2	14.1	15.2	17.1	18.3
Annual Growth of State Funds (%)	5.0	6.9	10.0	11.7	14.4	15.9
Local Share of State & Local Total (%)	45.3	40.3	40.2	35.4	35.8	31.6
Number of Counties at 90% Limit	12	9	9	6	6	5
Share of Property Tax Base at 90% Cap, Not Taxed at Margin (%)	33.9	24.8	24.8	19.6	19.6	19.3
Equivalent Average Millage Reduction in Counties at 90% Limit	2.5	3.1	2.5	3.2	2.7	2.7

capital and .76 discretionary mills, 7 mills is the highest that can be supported while keeping under the 10-mill limit. However, the projections using 6 mills are probably more realistic.

Table 6 shows the results for the 2009–10 projections. To meet the target requirement to stay at the same level relative to the South and the nation, state funding must rise to \$12.2 billion over the next five years if required local effort millage is set at 6 mills. This is an increase of \$3.5 billion, or, an average annual growth rate of 6.9%, while state funding has risen at an average annual rate of only 3.8% since 1997-1998. Thus, state funding must grow a full 3 percentage points faster each year for the next five years to prevent falling further behind the rest of the nation and the South in funding per UWFTE. To match the South by 2009–10, state funding must increase by \$6.5 billion to \$15.2 billion, an average annual growth rate of 11.7%, three times as fast as over the past seven years. To match the U.S. average would take average annual increases of nearly 16% every year, more than four times the rate

**Table 7. Projection of 2014-2015 State Revenue Requirement**

	Maintain Present Position		Match the South		Match the Nation	
Required Local Effort Millage	7	6	7	6	7	6
State Funds (billion \$)	16.0	17.3	20.0	21.4	24.2	25.6
Annual Growth of State Funds (%)	6.2	7.1	8.6	9.4	10.7	11.3
Local Share of State & Local Total (%)	42.1	37.5	37.3	32.9	33.3	29.3
Number of Counties at 90% Limit	12	7	8	6	6	6
Share of Property Tax Base at 90% Cap, Not Taxed at Margin (%)	26	17	18	15	15	15
Equivalent Average Millage Reduction in Counties at 90% Limit	2.6	3.8	3.0	3.5	3.0	3.0

of the past seven years.

The discussion in the preceding paragraph assumed a required local effort millage of 6. Increasing the required local effort millage to 7 would obviously ease the strain on the state budget somewhat. However, increases much larger than we have seen in the past seven years would still be required. Further, raising required local effort millage without increasing the total FEFP allocation shifts more of the property tax burden to districts with lower property values per FTE, by pushing more districts with high property wealth per student to the 90% cap. For example, simply to keep pace, at 7 mills 34% of the state's tax base, contained in 12 counties (Charlotte, Collier, Flagler, Franklin, Gulf, Indian River, Lee, Martin, Monroe, St. Lucie, Santa Rosa, and Walton) is subject to the cap. On average, the effective millage rate on this portion of the property tax base is reduced by 2.5 mills. However, at 6 mills, three of these counties do not hit the cap (Charlotte, Flagler, and

**Table 8. Situation if Current Growth Rate of  
State Funds Continues**

State and Local Expenditure per Student	\$7,363
Gap to South	\$952
Gap as a % of Florida State and Local Expenditure	12.9%
Number of Counties at 90% Cap	11
Share of Property Tax Base at 90% Cap	33.2%
Equivalent Average Millage Reduction in Counties at Cap	2.7

Lee). As is apparent from the table, the less state funding grows, the more of the tax base will be capped, and thus taxed at reduced rates. If state funding is increased enough to catch the South by 2010 at 6 required local effort mills, only 6 counties will be at the cap (Collier, Franklin, Gulf, Monroe, St. Lucie, and Walton).

What if we look 10 years out, rather than 5? Does the extra time mean the required growth in state funds could be significantly less? Table 7 shows our simulation for the year 2014–15. To maintain our current position, at either 6 or 7 mills, growth of state funds must actually occur at higher levels. This is due to continued flattening of growth in school taxable value. To catch the South or nation by 2014–15, however, growth of state funds can occur more slowly, 9.4% annually instead of 11.7% at 6 mills. This is because the higher level of funding helps keep up effective millage rates in districts with high levels of taxable value per student, allowing the gap to be closed more slowly over 10 years.

What if state funding grows only at the same rate per year as it has for the past seven years (3.8%)? Modifying our simulation to account for this scenario, assuming required local effort of 6 mills, produces the results shown in Table 8. Expenditure per student would fall further below the South. Further, instead of 6 counties at the 90% limit for required local effort, as occurred in 2004–05, 11 counties accounting for 33% of the state's tax base will be at the cap. One purpose of Florida's finance program is to make efficient use of the property tax base of the entire state, since the burden to ensure an adequate education for all the children of Florida is

**Table 9. Funding Targets if Benchmark Spending Growth Slows**

State Funds (billions)	\$13.2
Annual Growth of State Funds	8.6%
Local Share of State & Local Total	38.5%
Number of Counties at 90% Limit	7
Share of State Tax Base at 90% Cap	22%
Equivalent Average Millage Reduction in Counties at 90% Cap	3.3

placed on the state government by the constitution. Low levels of state funding subject more of the state's property tax base to the 90% cap, significantly reducing the effective millage rates in those counties. This, in turn, shifts more of the burden to counties with less property wealth per student.

The simulations reported above all assume that per-student funding in the South and the rest of the nation continues to grow at the same average annual rate as 1997–2002, or 5.6%. It is possible that national funding growth may be lower over the next five to ten years. Table 9 presents results of a simulation of catching the South by 2009–10, assuming that funding growth in the South continues at an average annual rate of only 4% and that required local effort is set at 6 mills. Under these assumptions, state funding in Florida would have to grow at an average annual rate of 8.6%, considerably lower than required if funding in the South continues to grow at the rate of 1997–2002, but more than double the growth rate of Florida's state funding for the past seven years.

Shifting all state funding to the FEEP would also slightly lessen the required rate of growth of state funding. This is because higher levels of FEEP funding mean that more required local effort can be extracted from counties with a high property tax base per student before they reach the 90% cap. This would reduce the required average annual rate of growth of state funds from 11.71% to 11.59%.

Getting rid of the cap altogether would have a bigger effect, of course. It makes little sense to levy an effective millage rate of 2.77 on the 20% of the state's property tax base in the 6 counties with the most property value per student, while levying 6.00 mills

on the rest of the state. The purpose of the cap is to make sure that every district “benefits” in terms of funding from the FEFP. However, Florida has a largely state run system, especially when it comes to finance. Local discretionary funding is so severely limited that it can hardly be called local discretion at all. It is levied at the maximum universally and still accounts for 4.5% of state and local current funding. For purposes of required local effort, the property tax base in each county is a state tax base in all but name. It would make more sense if required property tax revenues were simply levied by the state—required property tax revenues, not required “local” effort, and all properties in the state paid the same millage rate for schools.

State sales taxes, used for general revenue and for schools, are paid at the same rate by all state residents. Local option sales taxes do vary, but they represent true local discretion. Some counties have them, while others choose not to, and their levels vary among counties that levy them. If (1) education is the state’s constitutional responsibility, (2) the state establishes uniform proficiency standards about which local districts have no choice, and (3) the state totally controls all but 4.5% of state and local revenue from discretionary local effort (which it still controls if only by limiting it to such a small amount that every district levies the maximum), then why should different counties support the state responsibility at such radically different effective tax rates? Getting rid of the cap would reduce the needed average annual increase in state funds by nearly two percentage points from 11.75% to 9.85%. Even though that is still two and a half times the level of the recent past, it is a significant reduction nonetheless.

Before concluding, we also note that increasing local discretion to a meaningful level is another way to help districts that need more funding. For example, if Florida allowed unlimited, unequalized, local discretionary millage up to the point where total per student expenditures in that district rose to the national average, if approved by the school board, many districts would raise significantly more revenue, as evidenced by the fact that the maximum is levied across the board now. The problem, of course, is that the state’s districts are large, and the accountability to the local electorate is correspondingly low, so that school boards and superintendents may not be trusted to use the discretion wisely.

Constituents might suspect, with good reason, that teachers unions and other interest groups will have too much influence over the use of that discretion, and thus, the constituents might prefer to limit the discretion of their own school boards. The fallacy here, of course, is that if increasing the size of the jurisdiction increases the influence of teachers unions and other special interests, having one huge effective jurisdiction for finance purposes may just increase the power of those groups relative to that of the voters by that much more. On balance, even with large districts, placing more discretion with districts is likely to increase, not decrease, voter power.

### *Conclusion*

Florida has experienced rapid growth in student performance as measured by the FCAT for several years. Further, Florida's policy is that nearly 70% of students must be proficient in both math and reading by 2007–08, increasing to 100% by 2013–14. At the same time: (1) Florida's per student funding has fallen to approximately 80% of the national average and 90% of the average of the southern states; (2) teacher salaries in Florida have fallen below the southern average and further below the national average, which has in turn fallen further behind the salaries earned in other occupations that require a bachelor's degree; and (3) the percentage of teachers working 50 or more hours per week has grown steadily.

While it may be possible to squeeze increased work, and thus higher test scores, out of a given pool of teachers in the short run, in the long run teacher salaries must be sufficient to draw high quality personnel and to compensate them appropriately for their workload. Otherwise, those teachers conscientious enough to put in the extra hours in the short run will seek other employment and similarly dedicated candidates will not be attracted to fill their shoes, assuring that we will fail to attain our stated proficiency standards in the future. Adequate funding to achieve standards must go hand in hand with accountability for achieving those standards.

In the coming five to ten years, Florida's property tax base will continue to grow, but at a rate lower than the past five years.



Therefore, if state funds continue to grow at the same rate as in the recent past, funding will fall further behind the South and teacher salaries will inevitably fall further behind those of other occupations that are open to potential high quality teachers. In order to keep the gap between Florida and the rest of the country from growing, state funds must increase at nearly double their rate of increase in the recent past and, in order to catch the South in expenditures per student, state funding will have to grow at fully three times the level of the recent past.

Committing all state funds to the FEFP would reduce this burden slightly, since more local effort could be extracted from counties with higher property values per UWFTE before the cap of 90% of FEFP funds from required local effort is reached. However, even recognizing that the property tax base is a state resource, not a local resource, at least when it comes to raising required local effort for schools, eliminating the 90% cap entirely would not lower the need for increased state funding by much.

It is possible to argue that our results regarding funding needed to keep pace with the South are too pessimistic, in that the South may not continue to increase funding at 5.6% each year. However, even if that rate were reduced to 4% large increases in state funding will be needed. Further, teacher salaries are still well below salaries for other professional occupations, and significant increases will be needed to attract high quality candidates and compensate for rising workloads. On the other hand, our forecasts of the property tax base may be overly optimistic, meaning that even more state funding will be required. All considered, average annual increases in state funding of nearly 10% are likely needed to reach an adequate funding level by the 2009–10 academic year.

Of course, increased funding alone will not solve all of the problems of our schools—it is only a necessary condition. Reforms that improve accountability for recruitment and retention decisions, in particular making it more likely that poor teachers will be quickly and easily fired and that teachers who are unusually talented or who are in disciplines that require skills that are more highly valued by the labor market are compensated accordingly, would allow salary increases to go much farther toward boosting teacher quality and student performance. Without such reforms, while funding increases may improve matters somewhat,

taxpayers, parents, and students are unlikely to get their money's worth.

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## *Introduction*

The issues facing Florida's primary and secondary education system are varied and complex. Not least is class size, regarding which Florida has drawn and must continue to draw from the lessons of other states. The Tennessee STAR project, the most famously studied class size reduction experiment, inspired proposals nationwide to reduce class size, including a ballot initiative to amend Florida's constitution (Amendment 8, passed in 2002). The Tennessee project, however, was experimental and of limited scale. Better insight into likely consequences of a statewide program can be gained by looking at California's class size reduction. Enacted in 1996, the California law gave districts \$650 for each K–3 student in a school if all K–3 classes in the school had 20 or fewer students. By 2002, the cost of the program to the state was \$1.6 billion.

A study of the outcomes of the California class size reduction (CSR) was funded by both the California Department of Education and major foundations (Haas, Hewlett, Johnson, San Francisco, and Stuart). It was conducted by the American Institutes for Research, RAND, WestEd, Policy Analysis for California Education, and EDSOURCE (Bohrnstedt & Stecher, 2002).<sup>1</sup> The researchers found that the brunt of the impact of CSR was borne by inner-city schools serving students from low-income families. The share of K–3 teachers lacking credentials rose from 2% the year before the program to 12% in the second year. "Most of the uncredentialed teachers were hired by schools serving the most disadvantaged students," since the available supply of teachers with credentials had been employed by more affluent districts (p. 6). Another effect was to take space away from other programs: Some districts reduced spending on maintenance, and one in three

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<sup>1</sup> Available at [www.classize.org](http://www.classize.org)

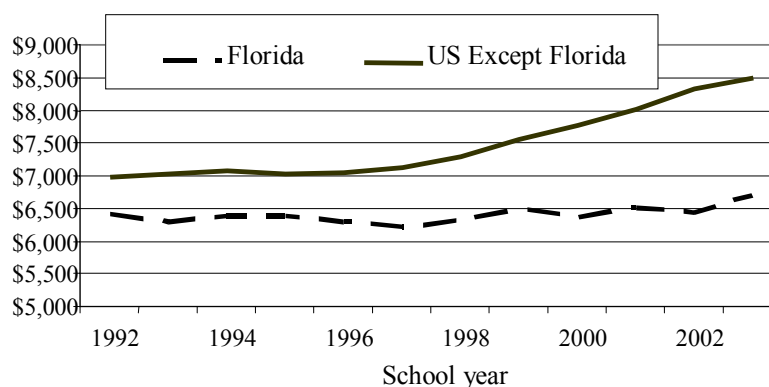
reduced funding for information technology and libraries. “CSR implementation also preempted space from such uses as music and arts, athletics, and childcare programs” (p. 8).

One important conclusion from the consortium’s analysis is actually a non-result: “Our analysis of the relationship of CSR to student achievement was inconclusive.” Statewide test scores did rise as CSR was implemented, but “the magnitude of the changes in test scores did not track [across schools] with the incremental changes in CSR. Thus attribution of gains in scores to CSR is not warranted” (Bohrnstedt & Stecher, 2002).

The California class size reduction serves as an example of how narrow constraints placed on a system often have unintended consequences. It is unlikely that supporters of CSR were hoping to see inner city schools with uncredentialed teachers or cutbacks in information technology, library, music and arts, athletics, and childcare programs. In a complex system such as PK–12 education not every constraint placed on it will have unintended consequences, but it is likely that most do. This is particularly relevant to Florida because of three serious constraints our schools must face. The three constraints we consider are: (1) limited relative budgets, (2) consequential accountability, and (3) the class size amendment. Understanding the effects of any one of these constraints in isolation would be a challenging task. With all three, projecting how their interactions will play out may well be impossible. One is tempted to just wait and see, but at the very least we need to track closely the direction they are pushing us, in case midcourse corrections are needed and possible.

The purpose of this chapter is to contribute to that effort. In the next section, the second, we describe the constraints, how they arose, and possible effects. The third section partitions the rise in Florida’s spending per student since 1980 among increases in staffing, rising pay, rising enrollment in special education, and a residual. The fourth section presents a different perspective on costs, adding insight that enriches the accounting approach taken in the third section. The fifth section describes sources of revenue and appropriations for PK–12 education and how they are changing. The sixth discusses enrollment trends, and the seventh projects spending out to fiscal year 2010–11. The eighth section concludes with a brief word on the quality of education.

**Figure 1a. PK-12 Spending per Pupil  
Florida and the U.S., 1992 to 2003**  
(Constant 2000\$)



***Constraints Facing PK-12 Education in Florida***

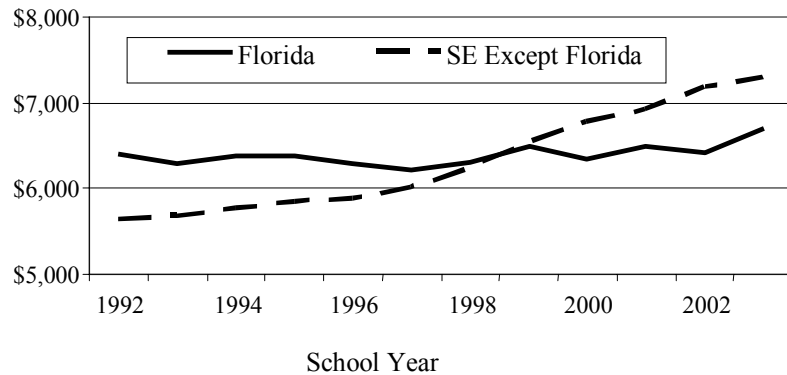
**Limited relative budgets.** It is important to keep in mind the term *relative*, since no educational system or indeed any other activity will have unlimited resources. The relative shortfall facing education in Florida has two aspects, one shared with other states and the other more particular to Florida. The one shared with other states is the difficulty of attracting teachers with low pay compared to the striking increases talented workers, especially women, have gained in other fields. The limit particular to Florida is that funding per student is far lower than in other states, placing Florida near the bottom (Figure 1a).<sup>2</sup>

From 1992 to 2003, the Legislature held funding per student roughly constant in Florida, after adjustment for inflation, as shown in Figure 1a. Over that decade, only Florida and Alaska did not increase inflation-adjusted current operating expenditures per student. In 2004-05, only 13% of the U.S. population live in states spending less per pupil than Florida. During the preceding decade, Florida had been passed by, among other states, our southern neighbors Alabama, Arkansas, Georgia, Kentucky, Louisiana, North Carolina, South Carolina, and Texas (Figure 1b).

<sup>2</sup> A more detailed demonstration that Florida's school funding ranks low among the states is given in Janet Herndon (2005, February). See, for example, p. 11.



**Figure 1b. PK-12 Spending per Pupil, Florida and the Southeast, 1992 to 2003**  
(Constant 2000\$)



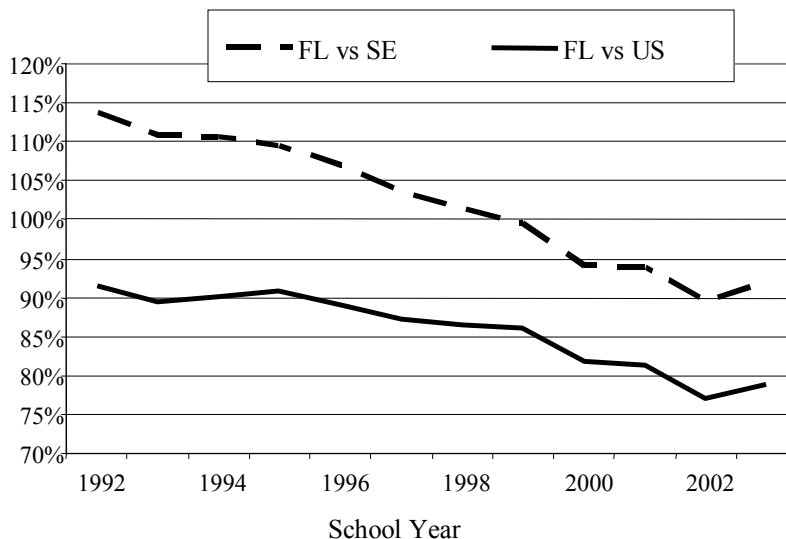
Florida’s relative decline has been documented before. According to the *New Cornerstone* (Florida Chamber Foundation, 2003, pp. 24–25) report, for example, Florida’s real K–12 spending per pupil fell by 6% during the 1990s, dropping the state from 21<sup>st</sup> in the nation to 42<sup>nd</sup>.<sup>3</sup> By 2001, the state would have had to spend an extra \$2.7 billion annually to match the national average.<sup>4</sup> By 2004-05, that amount had risen to \$4.0 billion, according to estimates by the National Education Association (2005, p. 96). It would cost \$1.5 billion a year to catch up with the average for the Southeast; \$4.1 billion to catch Georgia.

Florida’s stagnation of per-pupil spending since the early 1990s followed three decades of growth. Perhaps it reflected disillusionment with the fruits of that growth. Suppose a school district superintendent in 1960 had been told that his per-student budget would be doubled. Moreover, he would be blessed with new technologies such as complete indoor climate control, desktop

<sup>3</sup> Research by Cambridge Systematics and by MGT of America.

<sup>4</sup> The numbers are complicated by that fact that from 1997–98 on the state reduced school districts’ required contributions to the Florida Retirement System. Figure 22 on page 3–25 of *New Cornerstone* suggests that including “Annual FRS Savings” ameliorates the decline by perhaps a percentage point. If the correct method is to include “Cumulative FRS Savings,” then there is essentially no change in real spending per pupil during the 1990s. The basic story is unaffected by the modification.

**Figure 2. PK-12 Spending per Pupil: Florida Relative to Rest of US and Rest of Southeast, 1992 to 2003**



computers with the power of a mainframe IBM, and word processing and printing capabilities that would double the productivity of his secretarial and records staff. In exchange, he might have been asked to boost both graduation rates and students' attainment by the time of graduation by, say, 20%. That probably is a deal he would have accepted.

The point is, of course, that over the next thirty years, the nation's real per-student spending on K-12 education did in fact double. Florida's rose even more, increasing by 264% (Herrington & Nakib, 1995). Schools also enjoyed the benefits of remarkable technological changes and had available three more decades of knowledge about how students learn. Yet by 1990, objective measures of educational achievement were little if at all better than thirty years before. The extra money appeared to have been wasted.

Defenders of the educational system counter that schools were forced to take on expanded responsibilities, filling in for roles previously assumed by parents, churches, and the broader community. More children were being raised by either a single parent or by two working parents. In the lives of children, peers became more influential than adults. At the same time, costs were

rising, especially the salaries of good teachers. Bright, motivated young women had few career opportunities other than nursing and teaching in 1960, but by 1990 their daughters were aspiring accountants, attorneys, and physicians. Schools could no longer afford to compete for the best. Other expenses rose. The 1976 Education for All Handicapped Children Law mandated “that all school systems provide appropriate educational opportunities for all children, no matter how severely disabled” (Herrington & Nakib, 1995, p. 78). The number of students receiving special education soared.

Meanwhile, states and the federal government interfered more and more in the governance of schools, leaving less discretion to local authorities. As local authority diminished, parents and business groups saw less purpose to continued participation in local educational administration, often ceding the power that remained at the local level to teachers’ unions, which more and more frequently came to control school boards. Whatever one may think of allowing local business people to control schools, it is likely that they were more focused on obtaining good outcomes at low cost than are the unions. There are even some analysts who think that the nation’s educational system is so inefficient that increased resources result in no improvement in quality.

One way to test ten years from now whether extra resources mattered, will be to compare outcomes in Florida to those in our neighboring states. While Florida’s per-pupil spending (in constant dollars) was constant or declining from 1992 to 2002, Alabama and Georgia led the nation, with 39% increases. Also high were Mississippi (38%), Tennessee (36%), and South Carolina (33%). The other southeastern states funded increases between 19% and 29%. At minus 2% by National Center for Educational Statistics figures, Florida was the only southeastern state below 19%.

**Consequential Accountability.** With their large spending increases, Alabama and Georgia made measurable gains from 1992 to 2003 on the fourth grade National Assessment of Educational Progress (NAEP) reading and math tests. Alabama’s gains were 7% and 4%; Georgia’s, 6% and 4%. But Florida scored gains as well, 11% and 4%. Moreover, on eighth grade math tests Alabama had no gain, Georgia only 1%, and Florida 5%. On two of the three tests for which there are comparable 1992 and 2003 data, Florida’s

improvement was larger. More broadly, whether across the southeast or across all states, it is not obvious that a greater funding increase caused a larger gain in scores. Across states, the correlation between the percentage change in spending per student and the change in test scores from 1992 (or a close year) to 2003 is 0.16 for fourth grade math, 0.02 for eighth grade math, and minus 0.26 for fourth grade reading. The only correlation significant at the 10% level is the negative one.

With an analysis more rigorous than our correlations, Hanushek and Raymond (NBER, 2004) find no gains associated with extra state spending over this period.<sup>5</sup> In contrast they find that accountability with consequences, not just infamy, caused strong gains, controlling for changes in spending. They also controlled for exclusion rates, or the tendency of schools when held accountable for test results to use such actions as increased expulsion and classification into special education to exclude a higher portion of the student population from taking tests.

We emphasize that the absence of a relationship between test scores and improved funding does not prove that extra money will all be wasted. Addressing this issue is part of an ongoing research agenda shared by many scholars. Our purpose is simply to note that it is easy to read the evidence as saying that extra funds would be wasted by teacher-controlled school boards on more heavily backloaded salaries for teachers with seniority and easier work days, or whatever one's particular complaint about the educational system happens to be. Better ways to induce students to learn more would be to raise grading standards and to assign more homework.

A counter argument is that accountability works in the short run but not in the long run. In the short run, educators will teach to the test, feed children extra carbohydrates on test days, and do whatever else is necessary to boost scores, according to testing critics. But in the long run, the better and more creative teachers will leave, and the best potential teachers will never enter the profession. Proponents of accountability, however, consider the view that consequential standardized testing will cause damage in the long run simply a weak attempt to escape the evidence. They point to evidence beyond test scores. The Florida Department of

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<sup>5</sup> Hanushek & Raymond, Table 3.

Education, for example, reports that Florida's statewide high school graduation rate rose from 60.2% in 1998–99 to 71.6% in 2003–04, in just five years a remarkable eleven-percentage-point gain.

Another concern is that although the FCAT is improving public education in Florida now, it is doing so chiefly because of strong support by Governor Jeb Bush, who in two years will no longer be governor. Mark Howard (2004), editor of *Florida Trend*, points out a warning analogy, Tennessee Governor Lamar Alexander's reform of public education some twenty years ago. Alexander pushed for tests of basic skills and a large one-time raise for teachers followed by merit pay. Howard describes what happened:

*Alexander enjoyed broad popular support for his efforts to upgrade the schools. Local district managers, who are the heart of most problems with public education, liked things the way they were, however. And the teachers union fought every aspect of the plan tooth and nail.*

*Within a few years after Alexander left office, the system had bureaucratized some programs and ground others into oblivion. His successors either didn't place the same priority on education or were beholden to the teachers union. [Merit pay] collapsed, and ... the state's inability to create a stable tax platform has starved its education system and left students' performance lagging (p.100).*

**The Class Size Amendment.** Whatever the future of accountability, Florida's voters expressed their dissatisfaction with existing conditions in K–12 education in 2002 by passing the class size amendment, requiring phased-in reductions in class size until grade-specific maximums are reached<sup>6</sup>, even though estimates of the cost of implementing the amendment over the next ten years ranged up to as high as \$27 billion. Why do Floridians at once elect school boards and Legislatures but tell them, “We don't trust you to do one of your most important jobs, properly fund and run the schools, and we are going to impose huge constraints on how you do it”? Why would voters choose people to govern them to

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<sup>6</sup> Classes in K–3 are to be limited to 18 students. Grades four through eight may have no more than 22 students, and high school classes will be held to 25. Full compliance is required by 2010.

whom they are unwilling to entrust setting policy for the education of their children?

One possibility is that some combination of single-member districts, majority-minority districts, term limits, and gerrymandering has both polarized the Legislature and given it an ideological cast that is unrepresentative of Florida's voters overall. In 2000, for example, when both major parties had credible candidates for an open seat in the U.S. Senate, voters selected Democrat Bill Nelson with 52% of the vote over Republican Bill McCollum and chose the Republican presidential candidate by the narrowest of margins. In 2004, Democrat Betty Castor lost the race for a U.S. Senate seat to Republican Mel Martinez by only 82,663 votes. A constitutional amendment setting a minimum wage a dollar above the federal level and then indexing it for inflation passed with 70% of the vote. Yet, both chambers of the state Legislature are overwhelmingly Republican, 84 to 36 in the House and 26 to 14 in the Senate. Perhaps the configuration of districts has set up a persistent conflict between the electorate and their Legislature. In this instance, the conflict flared up as voters expressed their dissatisfaction with the Legislature's decade of keeping school spending per student flat in real terms.

Appealing to the apportionment of the Legislature leaves a puzzle, however. Why did 52% of the voters favor the class size amendment while 56% of them favored Bush, who strongly opposed it, in contrast to McBride's equally strong support? The vote for governor is largely independent of legislative apportionment. One answer is that there were other important issues in the race for governor. Bush brought to the campaign better name recognition, more experience running for office, and greater knowledge of state issues. Bush's fluency in Spanish and ties with Hispanic leaders gave him an advantage with Hispanic voters that may not have carried over into persuading them to defeat the class size amendment. A statistical analysis across counties suggests that Hispanics who voted for Bush were more likely than other Bush supporters to vote yes on the class size amendment. Their support was strong enough to overcome the

opposition of retirees.<sup>7</sup>

Regionally, the South Atlantic counties—Miami-Dade, Broward, and Palm Beach—passed the class size amendment by two to one, over the opposition of the rest of the state, which voted 53% to 47% against. In addition, about half the signatures for putting the amendment on the ballot came from the South Atlantic (Kleindienst, 2002). (To be sure, the South Atlantic had help with the vote, though by lesser margins, from Orange, Leon, and Alachua plus a smattering of rural counties.) It may be that voters in the South Atlantic were reacting to large class sizes compared to the rest of the state. Though South Atlantic districts were spending 8% more per student on K–12 education than the rest of the state, their school boards chose to use the extra money for higher pay, not smaller classes. They were paying their teachers 16% more, which meant they could afford only 58 teachers per thousand pupils, 11% below the rest of the state. Class sizes averaged 11% larger. The South Atlantic’s higher pay for teachers relative to the rest of Florida was unevenly distributed. Versus the rest of the state, pay for beginning teachers with a bachelor’s degree averaged 13% higher and 22% higher for senior teachers with master’s degrees. In the South Atlantic, 7.4% of the teachers had specialist or doctoral degrees and their accompanying higher salaries, compared to 2.5% elsewhere in Florida.<sup>8</sup> In Miami-Dade, according to the *Miami Herald*, mismanagement resulted in shortages of classrooms. The school district’s department in charge of construction “was in a shambles.” Since a 1988 bond issue, the district “had squandered tens of millions of dollars on botched

<sup>7</sup> Our evidence on this is merely suggestive, based on county instead of individual data. The regression is

$$\text{YES} = 0.94 - 0.68\text{JEB} + 0.38\text{HISP} - 0.14\text{SENIOR} - 0.46\text{POV}$$

(0.04) (0.05) (0.04) (0.07) (0.18)

where observations are the 67 counties, YES is the share voting for class size reduction, JEB is the share voting for Bush, HISP is the share of the population Hispanic, SENIOR is the share of the population age 65 and older, and POV is the poverty rate. The regression is vote-weighted and the  $R^2$  is 0.87. Parentheses contain estimated standard errors.

<sup>8</sup> Hanushek et al. (NBER, 2005), using a massive Texas dataset, find no evidence that teachers with advanced degrees are more effective than those without.

construction projects” (Pinzur, 2004).<sup>9</sup>

Passage of the class size amendment illustrates two points about the structure of budgeting in Florida. The first, already mentioned, is the divergence between the strongly Republican Legislature and the moderate median voter resulting from majority-minority districts, single-member districts, and gerrymandering. The second is that what happens in one region affects the rest of the state. Whether the voters in South Florida were unhappy with their school boards, the Legislature, or both, conditions in that region had an impact on the rest of the state. South Floridians dissatisfied with how their school districts were funded and managed imposed inefficient school budgeting on the entire state.

We have already noted the consortium that studied the class size reduction (CSR) California initiated in 1996 found it to be costly and ineffective. CSR made an already severe shortage of qualified teachers more pronounced. One of the program’s consequences identified by California’s non-partisan Joint Legislative Audit Committee was that an estimated 142,000 students in grades K–3 were taught by teachers lacking state certification. A 1999 study on the status of California’s teachers observed that efforts to upgrade public school teachers’ qualifications to meet state standards would cost between \$1.3 and \$1.8 billion (*Policy Report*, 2000). In 2000–01, one in five teachers in K–3 was not sufficiently credentialed in large urban schools serving the most at-risk students (Bohrnstedt & Stecher, 2002). A plausible scenario for Florida is that the state will spend billions of dollars implementing CSR, especially as schools struggle to meet the certification requirements of the federal No Child Left Behind Act of 2001. Inner-city schools will find it even more difficult than now to attract qualified teachers. Enrichment programs such as music and the arts will shrink. Teacher salaries will be even more constrained than now. And, finally, the amendment will prove so popular with parents that it will be impossible to undo. Adding to

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<sup>9</sup> It is possible that poor facilities planning by the Miami-Dade school board contributed to crowding. The *Miami Herald* has examples: February 9, 2003; February 10, 2003; July 13, 2003; and July 15, 2003. Pinzur was hopeful that the situation was about to change with the coming of Rose Diamond, the new facilities chief.



the support from parents is that from various groups of educators.<sup>10</sup> Even if they come to believe that the amendment will harm the children they teach, admitting to having been wrong would require courage (Kleindienst, 2002, p. B5).<sup>11</sup>

With the stakes so high, it is worth searching for a way out. It's not that smaller classes bring no benefits, just that they are small compared to the enormous cost of implementing the amendment. We hope that legislators, educators, and other leaders will be able to find a creative solution. One possibility is to try to persuade voters to limit the class size amendment to grades K–3, where research indicates the greatest potential gains lie, and to use the funds that would have gone to grades four through twelve for inner-city schools. The extra money could be used for incentive pay to attract outstanding teachers and principals to such schools, for extra counseling services, for technology, and for enrichment and after-school programs.

Such a proposal might gain support from city leaders around the state as part of a package for revitalizing urban centers, to create safe and productive “consumer cities.” It would benefit the entire state through the effect of increased real estate values operating through the Florida Education Finance Program. Urban school districts such as Palm Beach and Orange counties provide enormous support for schools in the rest of the state. Their property values per pupil are so high that the share they receive of the sales tax revenue that funds the FEFPP falls far short of what the state receives from them. Miami-Dade, in contrast, is the largest net recipient of state funds for its schools. This fact surprises many people because, intuitively, the rest of the state should gain from being home to such an incredible piece of real estate, the subtropical corner of a wealthy continent with a dynamic international culture, a place that attracts thousands of the affluent from three continents. Large sections of the county, however, are

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<sup>10</sup> As an example, even after “Jim Warford, who oversees public schools for the state Department of Education, called the class size provision a ‘sledgehammer’ that will destroy other [school] programs,” the Florida School Boards Association voted 66 to 14 to “vigorously support” enforcement of the amendment (*St. Petersburg Times*, December 6, 2003).

<sup>11</sup> The amendment was supported by the Florida Education Association and the Florida NAACP, among other organizations.

held back by the usual litany of urban problems, including poor schools. When the county realizes even more of its rich potential than it does today, the whole state will win. A state program focused on improving urban schools, financed by funds released by reducing the scope of the class size amendment, could go a long way toward that goal for Miami and for other Florida cities.<sup>12</sup>

**Class Size Reduction and No Child Left Behind: Interacting Constraints.** In Florida, the state's class size amendment (CSA) has focused education budget planners on the cost of hiring enough extra teachers to reduce class sizes to the smaller maximums allowed. Nationally, No Child Left Behind (NCLB), signed in January of 2002, has focused attention on the cost of hiring enough certified teachers to meet the requirement that all teachers must be highly qualified. In this sub-section we discuss how Florida's CSA and NCLB will interact, each adding to the budget effect of the other.

To set the stage, we begin by discussing their separate effects, taking the CSA and NCLB in turn, using a diagram that shows the trade-off between the number of teachers and teacher pay. Next we use the same diagram to show how each of the CSA and NCLB will add to the cost of the other. Since the diagrams sacrifice realism for simplicity, we close with a brief consideration of the dynamics of implementing CSA and NCLB and alternative political reactions that may occur, once more people grasp the implications of enforcing them as they now stand.

### *The Effect of the Class Size Amendment*

Suppose the superintendent of a school district with 6,000 students has a budget of \$10,000,000 for paying teachers. Assume for the sake of argument that she can set teacher pay at whatever

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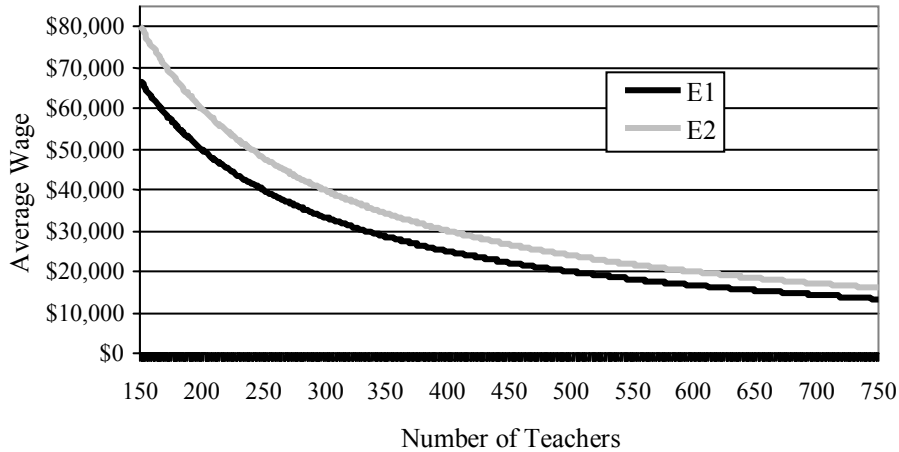
<sup>12</sup> One way to do this would be to combine a reform of the categorical funding component of the Florida Education Finance Program with very substantial pay hikes for teachers in high-needs schools. Recent research has outmoded the current categorical funding. One example is the cost to schools of student mobility. Hanushek, Kain, and Rivkin (2004) note that, "High student turnover can disrupt orderly teaching and curriculum development," with serious negative effects on other students. Empirically, they find the negative effects to be substantial.

level she desires or hire as many teachers as she wishes, subject to the budget. She faces a trade-off. She wants to pay teachers well, because high pay attracts and retains abler people and improves effort and morale. Also, with higher pay there will be fewer uncertified teachers in hard-to-fill fields and in high-needs schools. But she also would like to hire more teachers, thinking that smaller classes improve learning. Her budget constraint can be shown by the following table:

Teachers	Wage	Teachers	Wage
600	\$16,667	250	\$40,000
500	\$20,000	200	\$50,000
400	\$25,000	150	\$66,667
300	\$33,333		

Her budget constraint can also be illustrated graphically:

**Figure NCLB-1. The Superintendent's Budget Constraint**



Curve E1 of Figure NCLB-1, a rectangular hyperbola, represents a budget constraint of \$10 million for teachers' wages, illustrating the table above. Curve E2 depicts a constraint of \$12 million. For any combination of teacher pay satisfying E1, constraint E2 allows (among other possibilities) a combination with 20% more teachers or with 20% higher salaries.

**Figure NCLB-2. Education Quality Isocurves**

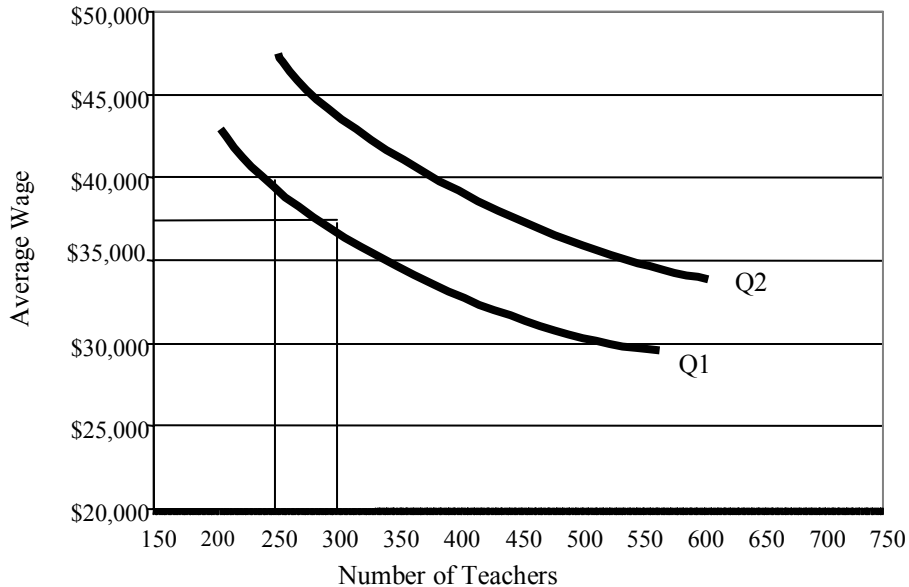


Figure NCLB-2, which also displays the number of teachers and average teacher wage on its axes, introduces a new concept, education quality isocurves. At any point along the same isocurve, the quality of education measured by student achievement is the same. Isocurves farther from the origin show higher quality, or more student achievement. Isocurve Q1 shows that the same quality can be obtained, holding the number of students as well as non-teacher resources constant, at point 1 with 250 teachers paid \$40,000 on average or at point 2 with 300 teachers paid \$37,000 on average. There are two reasons we think that with more teachers, pay can be lower and the school can still provide the same amount of teaching. First, with smaller classes, teachers can provide more individualized instruction and a typical class will have fewer disruptive students. Second, teachers may consider smaller classes an amenity. For example, teachers of a given average talent may be willing to teach classes of 24 for \$38,000 or classes of 20 for \$37,000. Isocurve Q2 represents a higher constant quality of education. With both higher-paid teachers and smaller classes, the district’s students would learn more.

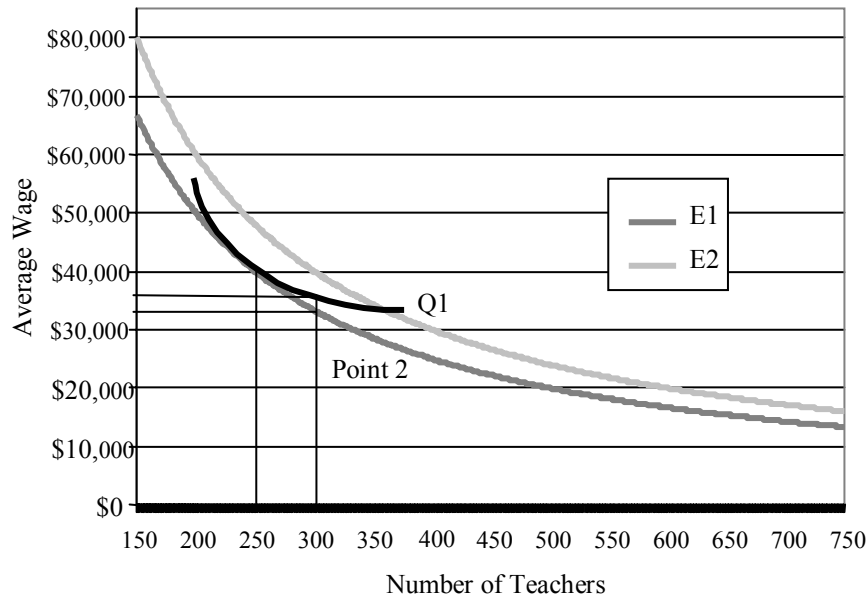
There is a substantial literature contending that the trade-offs

shown by isocurves such as Q1 and Q2 do not exist. The contention is that neither increasing salaries nor reducing class size would boost the amount of learning that occurs. We admit that the empirical relations are hard to tease out of the data. There is no simple correlation between teachers' pay and students' achievements, for example, because a high-needs urban school would have to offer teachers in middle-class suburban schools a substantial premium to persuade them to move. In addition, one district may pay more than another because it deals with a stronger union. But what we have in mind is a different thought experiment. A decade ago Georgia raised the average pay of its teachers from rough equality with Florida to about \$4,000 higher, in today's dollars. As a result, we think, Georgia is hiring better teachers and will come, gradually, to have higher-quality education than Florida.

Similarly, many analysts argue that reducing class size does not boost student learning. An implication of that belief is that districts are paying teachers, say, \$40,000 when the marginal benefit of hiring one more teacher is zero. Whatever the inefficiency of the public sector, that strikes us as improbable. If nothing else, the extra teacher could be charged with teaching the three or four most disruptive children in a class separately, thereby allowing the remaining students the opportunity to learn unmolested. Just how much paying teachers more or hiring more teachers increases students' achievement is open to question, but if the answer is zero we should be fomenting a revolution in the system rather than worrying about changes in the budget.

Figure NCLB-3 combines Figures NCLB-1 and NCLB-2. An optimizing superintendent chooses a point where an isoquality line is tangent to a budget constraint. Note that we assume that at the point of tangency, the isoquality line is more convex to the origin than is the budget constraint. Were that not the case, no optimum would exist. If for example, a 1% increase in the number of teachers always improved quality more than a 1% reduction in pay reduces it, then the optimal strategy would be to hire an infinite number of teachers at zero pay. Conversely, if a 1% increase in pay always raised quality more than a 1% reduction in the number of teachers depresses it, the optimum would be at infinite pay but for

**Figure NCLB-3. The Effect of the Class Size Amendment**

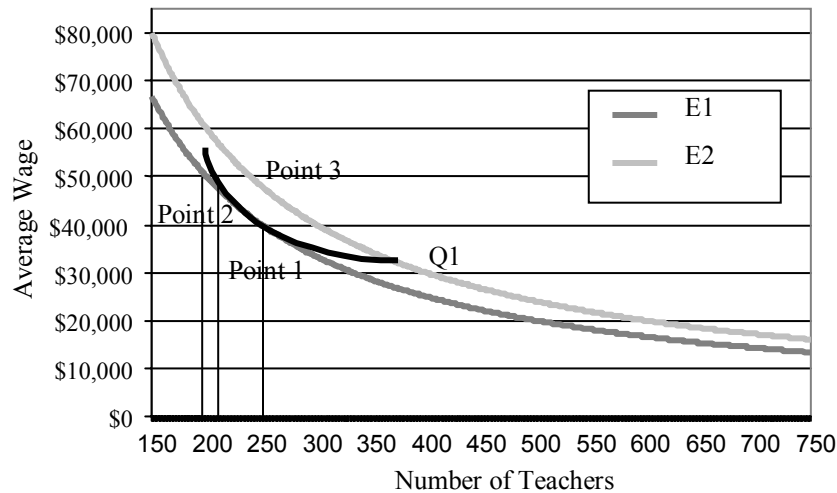


zero teachers. Obviously, neither case is plausible.<sup>13</sup> (Sometimes it is rational to come to the extreme of one teacher per student, as when parents hire individualized piano instruction or tutoring in academic subjects. But we seldom observe that outcome in public schools.)

In Figure NCLB-3, moving away from the point of tangency is inefficient. At any other point along E1, a higher quality could be achieved at the same cost by moving back to point 1. At any other point along Q1, the same quality of education could be achieved at lower cost by moving back to point 1. Suppose, however, that because of a class size amendment, the law requires our superintendent to increase the number of teachers from 250 to 300. With no increase in the budget for teachers' pay, she must move to point 2 on E1, cutting teachers' average pay to \$33,333. The reduced quality of teachers more than offsets the beneficial effect of smaller classes, and students learn less than they do along

<sup>13</sup> Another assumption implicit in drawing the isocurve more convex to the origin than the budget constraint is that teaching small classes is not such a strong amenity that a given teacher is willing to take a 10% pay cut in order to teach 10% smaller classes.

**Figure NCLB-4. The Effect of No Child Left Behind**



isocurve Q1. Alternatively, voters provide her with enough resources to maintain the quality of education, by moving to point 3 along Q1. At that point she hires 300 teachers as required by law and pays them \$36,000 on average. Her budget for teachers' salaries has risen from \$10,000,000 to \$10,800,000. Providing the original quality of education now costs 8% more for total teachers' compensation. (For simplicity we ignore the possibility of substituting away from spending on media centers or on enrichment programs, such as art or music.)

The effects of NCLB: Figure NCLB-4 illustrates the effect of NCLB's requirement that school districts hire only certified teachers. At the original optimum corresponding to a budget constraint of \$10 million, average pay for the 250 teachers is \$40,000. Our hypothetical district behaves like the majority of real districts in that salaries vary only in accordance with highest degree attained and seniority, and not by skill, specialty, or school. Consequently, many teachers in hard-to-fill fields, such as math or special education are uncertified, as are many in central city or high-needs schools where access is more difficult or more students disrupt classes.

We assume that the obvious way to meet the requirements of NCLB, paying teachers more in hard-to-staff fields or skills, is precluded either by a negative effect on morale or by a union

contract. As a result, the only way to meet the NCLB requirement is to pay all teachers more. In the hard-to-staff field of special education, Connecticut and Massachusetts, for example, have either no or very few uncertified teachers because their overall pay scales are very high relative to other states. In Figure NCLB-4 we assume that the NCLB requirements could be met with an average salary of \$50,000. The hypothetical 20% increase may seem large, but we note that it will be difficult to meet the requirement that all teachers be certified by recruiting teachers away from other states, since other states face the same requirement.

To meet the NCLB requirement with a budget of \$10 million, our superintendent must reduce the number of teachers to 200, shown at point 2, resulting in a lower quality of education than at point 1. Alternatively, she may manage to obtain the resources necessary to keep the quality of education from falling, and move to point 3 on isocurve Q1. At point 3 she meets the NCLB requirement by paying \$50,000 and hires 230 teachers. Quality is the same as at point 1 because the increase in class size is exactly offset by having more talented and more motivated teachers. Total pay is \$11,500,000, an increase of 15%. Because of NCLB, the district must pay 15% more in wages in order to maintain the same quality of education as before.

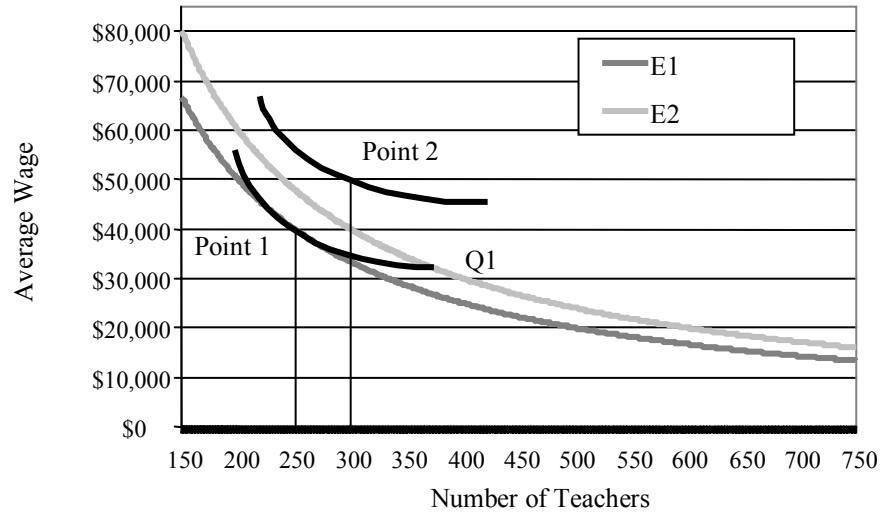
CSR and NCLB Combined: Figure NCLB-5 shows the combined effects of the CSA and NCLB. The original optimum corresponding to a \$10 million budget for teachers pay is at point 1, corresponding to 250 teachers and average pay of \$40,000. The CSA requires that the number of teachers be increased to 300 and meeting the NCLB mandates requires that their average pay be \$50,000. That is, the district must move from point 1 to point 2.

It must hire 300 teachers and it must pay them \$50,000, for a total wage bill of \$15 million or a 50% increase in teachers' compensation. The quality of education will be on isocurve 2, which will not be an optimizing point unless by accident the isocurve happens to be tangent to a budget line at that point.

In our examples, if the district returns to its original quality of education, the cost of the CSA is an 8% increase in total compensation and the cost of NCLB is a 15% increase. Even if the two laws were independent, so that their effects could be summed, their combined cost would be large at 23%. In our illustration, the



**Figure NCLB-5. The Effect of No Child Left Behind and CSA**



interaction between the two more than doubles their impact. The combination boosts the total pay bill by 50%. Since Florida’s total compensation for teachers is around \$6 billion a year, the extra cost for CSA would be \$480 million and the extra cost for NCLB would be \$900 million. The extra cost of the two combined, however, would be \$3 billion.

Of course these numbers are merely illustrative. The budget constraint is known to be a rectangular hyperbola from the simple fact that average pay times the number of teachers equals the wage bill, and the number of teachers required to meet the CSA can be approximated. One estimate is that, partly as a consequence of the CSA, Florida will need to hire 213,600 teachers over the next ten years for replacement and expansion. That number is larger than “the entire 2003 teacher workforce (147,955)” (Florida Department of Education [FDOE], 2004a). No one knows, however, what pay increase would be required to meet the NCLB mandates, especially as Florida competes with other states that will be responding to NCLB in ways yet to be revealed. Moreover, if we wish to make the case that either the CSA or NCLB should be revised or rescinded, we need to know the shape of the quality-of-education isocurves. That requires knowing three more parameters: (1) the effect of class size on educational quality; (2) the effect of higher teacher pay on educational quality; and (3) the strength of smaller

classes as an amenity for attracting teachers.

The empirical evidence is that the last effect is weak: a 10% reduction leads teachers to accept about a 1% reduction in pay. As an approximation, we can ignore that effect for now. More important empirically is the trade-off between class size and teacher quality. The best empirical evidence of which we are aware with information relevant to estimating this trade-off is a study by Steven Rivkin, Eric Hanushek, and John Kain (2005) using data from Texas.<sup>14</sup> The data, from the mid-1990s, represent over half a million students in over three thousand schools in grades three through seven. The students took math and reading achievement tests in each grade. Using sophisticated econometric techniques (appropriate for the journal *Econometrica*), the authors control for student, teacher, and school effects. For math, they find a strong positive effect from smaller classes in fourth grade, which diminishes with advancing grades. For reading the effects are weaker. Normalizing the fourth grade math gain at 100, the relative gains from smaller classes are:<sup>15</sup>

Grade	Math	Reading
4 <sup>th</sup>	100	86
5 <sup>th</sup>	76	30
6 <sup>th</sup>	38	none
7 <sup>th</sup>	none	none

The authors conclude that, “Class size appears to have modest but statistically significant effects on mathematics and reading achievement growth that decline as students progress through school.” We think that a reasonable conclusion is that, over the range of class sizes observed in public schools, after grade six class size effects are very small.

What about the gains from better teachers? To estimate the slope of the isoquality curves we need to compare the gains from better teachers to the gains from having more teachers. First, we note that for simplicity in drawing the curves above, we have

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<sup>14</sup> Rivkin is at Amherst, Hanushek is at Stanford, and Kain is recently deceased.

<sup>15</sup> We calculate these values from the third columns of their Table VII and Table VIII. We characterize statistically insignificant results, whether positive or negative, as “none.”

assumed that the only cost of extra teachers is their pay. That is unlikely. Hiring more teachers will require extra facilities and extra staff. Conceptually, the extra expense should be added to average teacher pay in calculating salary. Offsetting that, during the transition, many of the new teachers will start at the low end of the salary schedule. Also important during the transition, however, will be that the supply of teachers to a school district is unlikely to be perfectly elastic in the short run. To meet class size reduction requirements, the district is likely to have to turn to less qualified teachers at a given pay schedule.

Turning to teacher quality, Rivkin, Hanushek, and Kain (2005) present what they call lower bound estimates that an increase in quality of one standard deviation has the same effect on math and reading gains as reducing class size by ten students (from 25 to 15, say) in fourth grade and by 13 students (from 30 to 17, say) in fifth grade. Beyond fifth grade, class size effects are too weak for there to be meaningful comparisons. There is no basis for thinking that reducing class size from current levels would be cost-effective beyond the fifth grade. For the fourth and fifth grades, the question is whether raising pay by 67% (fourth grade) or by 76% (fifth grade) would improve teacher quality by one standard deviation on average.

In the Florida context, the results suggest that the class size amendment will be hopelessly inefficient beyond grades six and higher. The only chance for efficiency is in grades K–5, and even there it is improbable that smaller classes will be more cost effective than would be properly structured increases in teachers' pay.

We think various conclusions follow from the potentially enormous cost of the CSA and NCLB. First, substantial effort should be devoted to estimating the budgetary impacts of plausible scenarios for their implementation. What is the chance the CSA will be partially repealed, to apply only to grades K–5? Better yet, what if it is amended to allow some districts or schools to spend the extra funds on higher pay instead of more teachers? For that to produce higher quality education, there should be a proviso that districts choosing that option would have to raise pay for beginning teachers as much in dollars as they raise pay for senior teachers. Another requirement should be meaningful extra pay for teachers

in hard-to staff fields (math, some sciences, special education) and for teachers in hard-to-staff schools. What are the dynamics? As teachers with little or no seniority are hired during the phase of rapid expansion of the number of teachers, how much will average pay be reduced temporarily?

One likely response to the combination of the CSA and NCLB will be to reduce certification standards. Are current certification standards appropriate? One common view is that many backers of NCLB hope that the effect will be to make states revise their current certification requirements, which they see as a desirable goal. Are they correct? Some of the courses students in Florida's colleges of education must take to graduate are required only because of legislative mandate, not because education faculties think they are as useful as alternative courses. Would eliminating these course requirements encourage more students to major in education?

The state's policy-making and implementation would benefit from serious efforts to improve estimates of the slopes of the quality-of-education isocurves, in considerable detail: for various grades, for high-needs schools, for special education and other shortage fields, and for different types of students.

Many observers think that school districts are not now even close to optimizing their performance subject to funding. Some see the CSA and others NCLB as moving districts closer to optimizing locations. Most supports of CSA and NCLB, however, simply wanted more resources devoted to education. If Florida actually implements both, their combined effect certainly will achieve that goal, even with any plausible reallocation of other K-12 educational resources to more and more highly paid teachers. The question is how much more should the state spend. If districts were at optimal points on the trade-off between class size and teacher quality before, the K-12 educational system will now be less efficient than it was before. That greater inefficiency would suggest that as the K-12 system competes for resources with other state needs, its funding needs to be greater than it was, if it is to maintain current quality.

Suppose Florida should increase K-12 resources enough to enable Florida to reach national averages in educational attainment. The class size amendment complete with NCLB will

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add \$1.5 billion to the annual cost of doing so by the 2010–11 fiscal year.

**The Wage Context of the Constraints.** Using data from Alachua County, UF Professor David Figlio and Mel Lucas (2004) of the Alachua District School Board find that “increasing grading standards by one standard deviation is associated with as much as one-third of a year or more of mathematics test score gains, and by as much as two-thirds of a year or more of reading test score gains.” These gains, they note, are far larger than any that have been attributed to smaller classes. If Figlio and Lucas are right, Florida, by persuading teachers to apply letter grading standards that match FCAT scales, could boost student learning by a multiple of any increase likely to be gained from the class size amendment.

That teachers will impose such standards, however, is improbable. There appears to an ethos among PK–12 teachers that every child’s performance in every class is above average. While that may not be a fair assessment on our part, teachers nonetheless seem to disapprove of rewarding merit if that implies that some people are less meritorious. This sentiment by teachers makes pay differentials among teachers, other than those associated with degrees or seniority, difficult or even impossible to create. Though teachers do not fully control school policy, in many districts, school board members cannot be elected without teacher support. In others, boards are more independent but deal with strong teacher unions. If teachers oppose pay differentials, it is unlikely that there will be merit pay or higher pay for teachers with scarce skills or willing to teach in less desirable classroom environments.

An implication of no meaningful extra pay for merit is that college students who have strong reason to believe that their achievements will be above average, either because of talent or a strong work ethic, are all the less likely to choose a teaching career. Caroline Hoxby, of Harvard, and Andrew Leigh, of the National Bureau of Economic Research, divide teachers into three aptitude categories: low, medium and high (Hoxby & Leigh, 2004). Low-aptitude teachers in 1963 earned 28% less than the average pay, while high-aptitude teachers averaged 59% above the average. By 2000, however, teachers in all aptitude groups had the same average pay. As any business executive would predict, Hoxby and Leigh found that very few high-aptitude college

students now choose a teaching career. Also, there is seldom meaningful extra pay for teachers in shortage areas such as math, certain sciences, and special education. Particularly unfortunate is the rarity of meaningful extra pay for teachers willing to serve in high-risk schools. One study of Texas schools estimated that it would take about 50% extra pay to induce highly qualified teachers to serve in inner city schools. Confirming this finding is a statement by a superintendent of a large Florida district that \$10,000 bonuses were insufficient to draw good teachers to the worst schools.

One indicator of strong teacher control of a school district is heavy backloading in salary schedules. Backloading exists when salaries rise more strongly with seniority than gains in productivity warrant. For example, the evidence is strong that for elementary teachers productivity rises strongly during the first three years but changes little after that. Salaries, however, usually continue to rise with seniority for ten to twenty years. Teacher unions are usually controlled by the more senior teachers. The union often tries to obtain beginning teachers as cheaply as possible, because that leaves more funds available for higher pay for senior teachers.

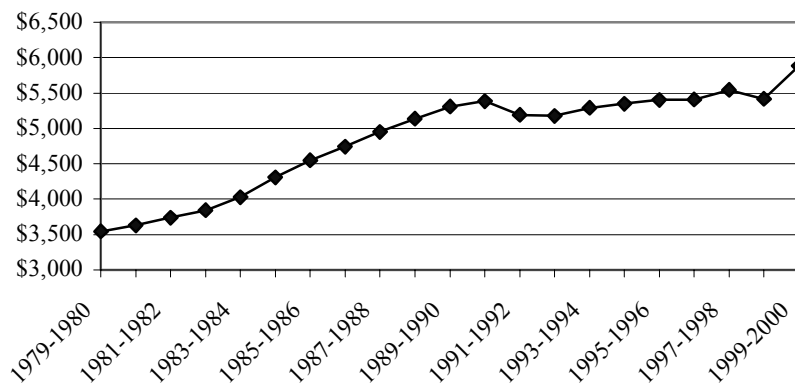
Few informed observers think that teachers should be treated as other than professionals if we are to obtain the best educational outcomes. Professionalism will come with higher pay, with significant pay differentials by specialty, and with substantial rewards for merit. That is how it is with most other professions, such as engineering, law, and medicine. With professionals, shared governance usually works better than simple top-down management. But most of our schools require an arrangement that differs from the current one, with strong and creative management, shared governance, and the freedom to use resources in ways that induce people to work toward excellence. That is unlikely without much more authority and much more pay for principals and without merit pay for teachers. Until that time arrives, an interim solution would be for teacher pay to be set statewide, through bargaining between the union and the Legislature.

***The Rise in Per-Pupil Spending in Florida***  
*(This Section by J. C. Zannis)*

Educational spending has risen at a remarkable pace over much of our nation’s history. From 1890 to 1990, real U.S. public expenditure on primary and secondary education increased at more than three times the rate of GNP. Much of the almost 100-fold increase can be explained by expanded enrollment; even so, real expenditure per student rose from \$164 in 1890 to \$4,622 in 1990.<sup>16</sup> There has long been concern about the use of these resources, recently intensified by the passage of legislation intended to increase educational quality (among others, the No Child Left Behind Act of 2001), coupled with the fiscal belt-tightening among the states.

The purpose of this section of the chapter is to address recent trends in Florida’s educational expenditures. To this end, we will use a simple technique to analyze the components of spending between 1979–80 and 1999–2000. This simple method provides a context for the effects of legislative changes to educational policy, discussed later in this chapter. The analysis presented here shall show that a large part of the increase in per student expenditures can be attributed to growth in several factors: salaries of teachers

**Figure 3. Real Current Expenditures per Student in Florida, 1970–80 to 1999–2000**



<sup>16</sup> Hanushek and Rivkin use constant 1990 dollars.

and other staff,<sup>17</sup> the number of teachers and staff per student, and enrollment in Exceptional Student Education (ESE) programs. Following this analysis we will examine each significant component of the increase in detail. Figure 3 depicts the rise in Florida’s real per student current expenditures from 1979–80 to 1999–2000. Most of the increase occurred during the 1980s, but real per student current expenditures rose more slowly after an initial decline in the early 1990s.

In order to identify the most important factors in the rising expenditures, we describe real current expenditures (cost) per student as a function of these factors, and write it as:

$$C = wT + sS + eE + R \tag{1}$$

Let the terms in (1) be defined as follows:

Term	Definition
C	Cost per student
w	Average teacher wage
T	Number of teachers per student
s	Average wage of other staff
S	Other staff per student
e	Per student cost of ESE
E	Fraction of students in ESE programs
R	Remaining per-student expenses

Then, with all dollar amounts in real terms and  $\Delta C$  indicating the change in real current expenditures over the target period (and likewise for the other variables), we can approximate the change in cost per student over the period as:

$$\Delta C = w\Delta T + T\Delta w + \Delta w\Delta t + s\Delta S + S\Delta s + \Delta s\Delta S + e\Delta E + E\Delta e + \Delta e\Delta E + \Delta R \tag{2}$$

Equation (2) approximates the change in per student current expenditure from 1979–1980 to 1999–2000 to the extent that the

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<sup>17</sup> “Other” staff includes district and school level administrative personnel, out-of-classroom instructional personnel such as guidance counselors and librarians, and support and technical personnel.



**Table 1. Impact on Cost per Student**  
(constant \$)

Item	1979– 80	1999– 2000	Change	Impact
Per student Current Expenditure	\$3,544	\$5,886	\$2,342	\$2,342
Average Teacher Wage	\$27,371	\$37,139	\$9,768	\$465
Teachers per 100 Students	4.76	5.46	0.70	\$192
Average Wage of Other Staff	\$18,245	\$23,566	\$5,321	\$242
Other Staff per 100 Students	4.54	5.69	1.16	\$212
Extra Cost per ESE Student	\$8,899	\$7,575	(\$1,324)	(\$146)
Percentage of Students in ESE	0.11	0.20	0.09	\$801
Interaction				(\$119)
Other Costs	\$434	\$1,002	\$568	\$568

Note: To illustrate the calculation, the impact of average teacher wage is  $4.76 \times \$9,768 \div 100 = \$465$ .

factors (as defined above) encompass current educational expenditure.

Unfortunately, not all of the data needed for equations (1) and (2) are available. Historical data on the per-student cost of materials could not be obtained, though Flyer and Rosen (1997) suggest that for the U.S. as a whole, the real per student cost of materials has increased very little.<sup>18</sup> Complete data describing staff salaries were not available, though the number of non-teaching staff per student was acquired from 1983–84 to the present. Using the data that were available, values for the number of non-teaching staff were estimated for 1979–80 to 1982–83. Since recent data are not available for the salaries of non-teaching staff, we assumed a

<sup>18</sup> See Table 2. We emphasize that our results are more illustrative than precise.

**Table 2. Distribution of Increased Per-Student Funding  
by Major Category**

Category	Year		Change	Percent of
	1979–80	1999–2000		Total
Teachers	\$1,303	\$2,028	\$725	31%
Staff	\$828	\$1,341	\$513	22%
ESE	\$979	\$1,515	\$536	23%
Remainder	\$434	\$1,002	\$568	24%
Total	\$3,544	\$5,886	\$2,342	100%

growth rate similar to that of teacher salaries to construct estimates of salary growth and average salary. Though these estimates are rough, they allow us to get an idea of the effects of non-teaching staff employment and salary growth (Table 1).

Table 2 shows the value of each factor at the beginning and end of the period in question, as well as the average value and total change over the period. It also shows the total impact that the change in each variable had on per student current expenditures. It is evident that the most significant change is the percentage of students in ESE programs, which almost doubled.<sup>19</sup>

In summary, we can say that 31% of the increase in per-student spending went to teachers, mainly in the form of higher pay. Another 22% went to other staff, about equally split between higher pay and more personnel. Twenty-three percent went for a near doubling of the proportion of students in ESE, while the other 24% went to other costs.

**Teacher's Salaries.** Over the period 1979–80 through 2001–02, real teacher salaries increased by over 37%. However, as Table 3 shows, most of those gains took place during the 1980's. From 1989–90 though 2001–02 teachers saw only a 4% increase in their real wage profiles.

Although recent teacher wage growth has been slow, it has accounted for a large portion of educational spending growth over

<sup>19</sup> Hanushek and Rivkin (1997) find similar results using U.S. data over the period 1890–1990. They report that spending growth resulted from a combination of “falling pupil-staff ratios, increasing real wages to teachers, and rising expenditures outside the classroom.” They also find that the expansion of special education has had a recent “disproportionate” effect on spending.

**Table 3. Average Teachers' Salaries for Southern States  
1969-70 through 2003-04**  
(constant 2003-04\$)

State	1969– 1970	1979– 1980	1989– 1990	1999– 2000	2003– 2004
Alabama	\$32,870	\$30,637	\$35,610	\$39,468	\$36,516
Arkansas	\$30,407	\$28,852	\$32,059	\$35,915	\$37,459
Florida	\$40,555	\$33,192	\$41,311	\$39,504	\$38,688
Georgia	\$35,078	\$32,497	\$40,168	\$44,131	\$43,817
Louisiana	\$33,883	\$32,279	\$34,853	\$35,617	\$36,128
Mississippi	\$27,953	\$27,799	\$34,841	\$34,270	\$34,000
North Carolina	\$36,129	\$33,117	\$39,992	\$42,389	\$41,172
South Carolina	\$33,396	\$30,644	\$39,037	\$38,814	\$39,219
Tennessee	\$33,989	\$32,776	\$38,800	\$39,080	\$38,415
Texas	\$34,977	\$33,152	\$39,437	\$40,413	\$38,566

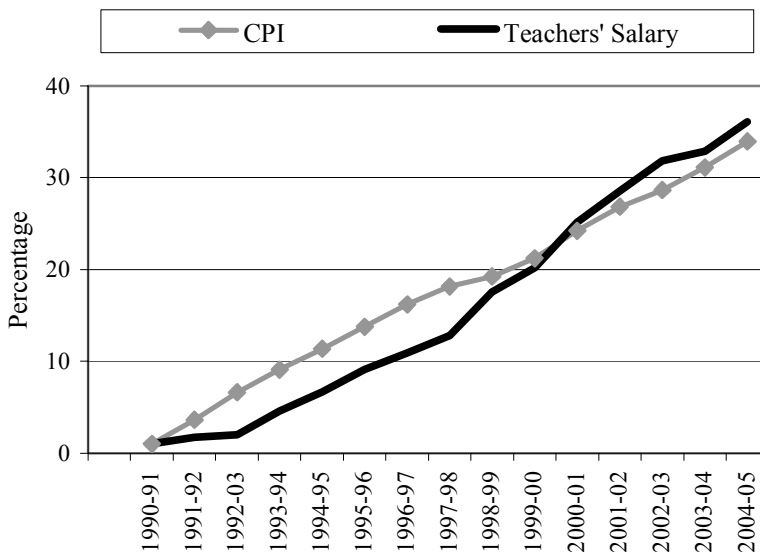
Note: Constant 2002-03 dollars are based on the Consumer Price Index prepared by the Bureau of Labor Statistics, U.S. Department of Labor. Some data have been revised from previously published figures.

Source: National Education Association, Estimates of School Statistics, 1969-70 through 2003-04.

the past two decades (Figure 4). During the 1980s in Florida teachers' wages grew at a rate similar to those in Georgia, and in fact, real wages remained slightly higher in Florida. Since the beginning of the 1990s, however, Georgia has increased wages by about 22%. Since Georgia is seen as Florida's closest competitor in the labor market for teachers, this has produced understandable concern. Many current teachers are relatively immobile; that is, they are settled in an area where their spouses have jobs and they are unwilling to uproot their lives for a 15% pay raise. However, entry-level teachers tend to have more mobility, and as the wage gap widens will be more likely to settle in an area with higher salaries. The full impact of the recently developing wage gap may not be felt for some time.

It may be, however, that simply looking at the 10% Florida-Georgia wage differential overestimates the relative appeal to teachers of working in Georgia. That is, teachers may be willing to accept lower wages in order to live in an area where the average

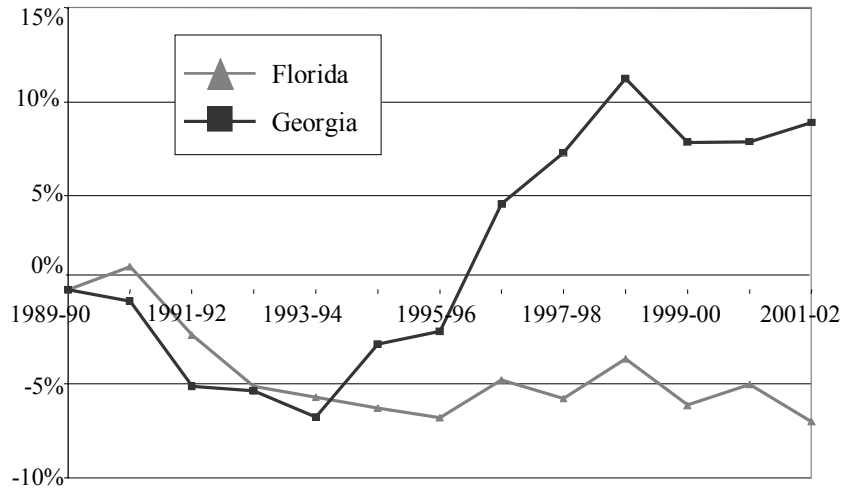
**Figure 4. Florida's Teacher Salary Growth vs. the CPI, 1990-91 to 2004-05**



high temperature during the winter is above seventy degrees or where beaches are readily available. Recent Bureau of Labor Statistics data indicate a 9% cross-industry wage gap between Florida and the rest of the nation. Part of this gap can be attributed to lower human capital and different occupational structure. However, when these factors are held constant there remains a 7% difference in wages. This suggests that if the national labor market was in equilibrium, workers were willing to sacrifice up to 7% of what they could earn elsewhere to have access to Florida's amenities. Because of the state's surging house prices, however, this difference will soon vanish.

The suggestion has also been made that teachers consider smaller classes to be an amenity, and would be willing to accept lower wages in return for smaller classes. If this is the case, the recent Class Size Amendment may help Florida compete for more talented teachers. Unfortunately, when compared to Georgia, Florida has some ground to make up. Throughout most of the 1980s, Florida student-teacher ratios were lower than those in Georgia and were declining. However, in the early 1990s the Florida student-teacher ratio began to rise as Georgia's decreased

**Figure 5. Real Wage Growth of Teachers in Florida and Georgia, 1989-90 to 2001-02**

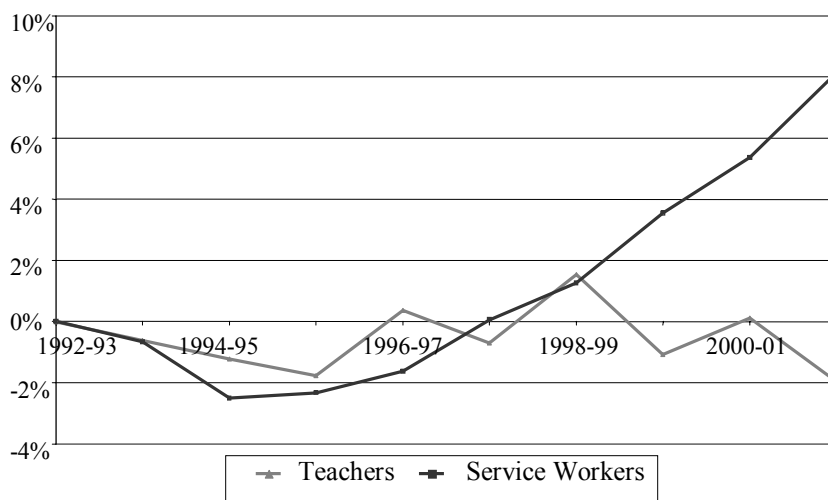


dramatically. As a result, by 2002-03 there were 15.6 students per teacher in Georgia compared to 18.4 in Florida. To the extent that teachers consider smaller classes an amenity this makes it more difficult for Florida to attract quality teachers.

Florida schools must also compete with private employers for educated workers. Though changing careers can be costly for experienced teachers, Florida needs to hire new teachers, not just keep the ones it has. Low levels and slow growth of wages can make it difficult to draw the brightest individuals to the teaching profession. Figure 6 shows the recent wage growth of Florida teachers and employees in Florida’s private service industries. While wage growth was similar during most of the 1990s, recently teachers’ wages have lagged behind. Again, because of the relative immobility of those already in the teaching profession, the effects of slow relative wage growth may not be felt for some time.

Offsetting part of the wage differential are certain non-pecuniary benefits available to teachers. Teachers often enjoy longer vacations and are more likely to be home during the summer when their own children are out of school. In addition, Flyer and Rosen (1997) find that teachers do not suffer re-entry wage-penalties for time spent out of the labor market, while other college graduates take wage hits of about 9% for each year spent

**Figure 6. Wage Growth of Florida Teachers and Florida Workers Employed in Private Service Industry  
FY 1992-93 to 2001-02**



out of the market. This flexibility may make teaching a more attractive option for women who plan to leave the labor market temporarily in order to raise a family.

Also of concern when trying to attract teachers is the structured nature of the pay scale. In Florida, each public school district, after collective bargaining activities, adopts a salary schedule for teachers in that district. Usually there is no reward for merit. As a result, the brightest and most talented individuals may search for occupations in the private sector where they feel that superior skills and ability are better rewarded. The inability to pay teachers based on individual productivity may be a limiting factor in recruiting ambitious individuals to the teaching profession.

As Table 4 indicates, few teachers who left their jobs cite inadequate salary as a reason. While this is encouraging, these numbers must be interpreted with some caution as they apply only to those already in the teaching field. Presumably those who are in the field had some idea of salary levels and growth before entering. As a result, we should expect lower salaries to affect entry much more than exit.

Though increases in teacher salary accounted for a large portion of the overall increase in educational expenditure, it is

**Table 4. Top Five Reasons for Teachers' Voluntary Separation, 2001–02 and 2003-04**

Reason	2001–02	2003-04
Retirement	21.1%	23.1%
Family/Personal Reasons	29.8%	28.9%
Relocation	28.6%	30.4 %
Other	15.9%	13.5%
Inadequate Salary	6.5%	3.6%

Note: Teachers could select more than one reason for leaving.

Source: Teacher Exit Interview Summary, Florida Department of Education, [www.firn.edu/doe/eias/eiaspubs/reports.htm](http://www.firn.edu/doe/eias/eiaspubs/reports.htm)

clear that there should be concern that salaries have not been growing enough, especially over the past decade. Increases in teacher salaries in Georgia have outpaced those in Florida, while class sizes in Florida are larger. This suggests that the more ambitious and mobile teachers entering the labor force have increasing incentive to seek employment outside Florida.

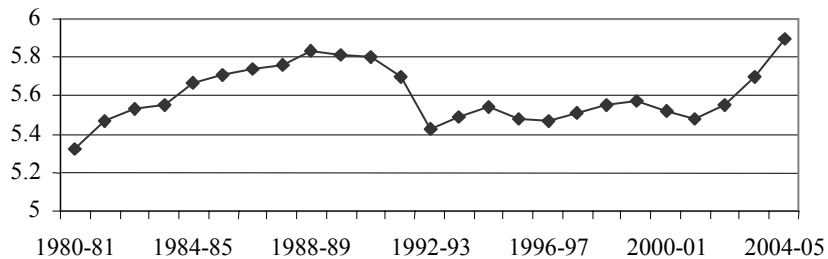
**Student-Teacher Ratio.** There has been much debate over the effectiveness of smaller classes on educational quality.<sup>20</sup> There is little question, however, that smaller classes have long been a goal of policy makers and education professionals alike. Hanushek and Rivkin (1997) report that the U.S. pupil-staff ratio has declined from 35 students per instructional staff in 1890 to 28 students in 1940 to 20.5 in 1970 and 15.4 in 1990.

The recent change in Florida has not been quite as pronounced, as the student-teacher ratio declined from 18.7 students per teacher in 1979–80 to a low of 17.1 in 1988–89. The ratio then rose to 18.4 in 2000–01. The Class Size Amendment reduced the number of students per teacher to 16.9 in 2004-05. The Amendment and the changes it entails are discussed in detail in the preceding section of this chapter and in the expenditure chapter of this report.

Perhaps the best way to consider the change in the student-teacher ratio is in light of teacher quality. That is, policy makers and administrators face a tradeoff between better teachers or more

<sup>20</sup> See, for example, Flyer and Rosen (1997), Hanushek (1986, 1989), and Hanushek, Rivkin and Taylor (1996).

**Figure 7. Classroom Teachers per 100 Students in Florida  
1980-81 to 2004-05**



teachers. We have seen in the previous discussion that there has been little real growth in Florida’s teachers’ salaries over the past fifteen years. Further, teachers’ real salaries actually declined during the 1990s. This suggests that—facing budget restrictions—administrators chose to invest resources in more teachers rather than increasing salaries. A conceptual treatment of this tradeoff can be found in the preceding section of this chapter.

Although the passing of the Class Size Amendment was an imprudent action, we must note that the scholarly literature in economics is divided over the relevance of the student-pupil ratio. Take two fairly recent reviews: Hanushek, Rivkin, and Taylor (1996, Table 1) examine 277 regressions testing the relationship between class size and student achievement determined that only 15% found statistically significant evidence that reducing class size actually improves student performance. Similarly, Dewey, Husted and Kenny (2000), find such a positive and significant relation in only 17.7% of the 127 regressions in their own review. However, when significance is not considered, these reviews find positive relationships in 42 and 74.2 percent of the studies they examine, respectively. There are, we think, clear advantages to smaller classes. We nevertheless think that these advantages must be weighed against the opportunity costs of smaller classes (teacher pay, for instance) and that imposing arbitrary maximum sizes is inefficient.

Given that the long-term trend toward smaller classes reflects an attempt to improve educational quality, there are several factors



that have may have motivated this desire. Education is undoubtedly what economists refer to as a *normal good*, meaning that increased incomes have led to increased demand. Further, as single-parent and dual-income households become more prevalent, we have seen a shift towards purchased inputs in the development of children. Since public education may often be seen as a substitute for parent-supplied education and even for other parental time, it is not surprising that parents desire more teachers per hundred students.

**Non-Teaching Staff.** Data on the number and salaries of non-teaching staff are scarce, as are attempts to analyze the growth of such staff and their salaries. Since this category includes administrative personnel, support personnel, and out-of-classroom instructional personnel, perhaps the growth is not surprising. As more teachers are hired, there is greater need for administrative staff to manage teachers. Some support staff, such as aides and clerical staff, may be directly related to the number of teachers employed, while others, such as service workers, would be expected to increase in proportion to the number of students or the size of the facilities. On the other hand, progress in information and communication technology should reduce the need for non-teaching staff.

Without more information on non-teaching staff salaries it is difficult to discuss their growth. If the labor market is at equilibrium and the quality of worker remains constant one would expect staff salaries to grow at a rate similar to wages in other comparable industries. Given that individuals in non-teaching positions make up more than half of educational employment in Florida, this is an area that may merit more attention in the future.

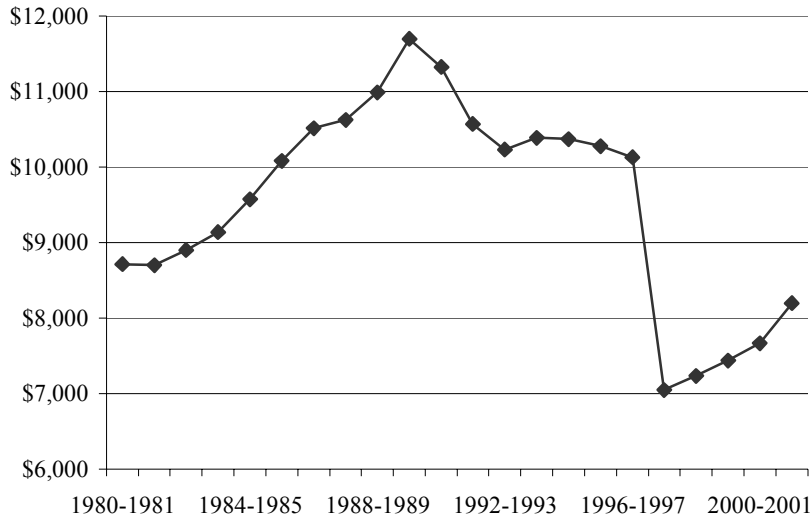
**Exceptional Student Education.** In recent years, the number of Florida children enrolled in Exceptional Student Education (ESE) programs has increased dramatically, far outpacing the growth of overall enrollment. Between 1979–80 and 2002–03, the percentage of all enrolled students participating in ESE nearly doubled, from 10.8 to 20%.<sup>21</sup>

As can be seen in Figure 8, real per-student cost of ESE

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<sup>21</sup> ESE membership data provided by Alice Thomas, Education Accountability & Information Services, Florida Department of Education.

**Figure 8. Real per FTE Exceptional Student Education Expenditures, 1980-81 to 2001-02**

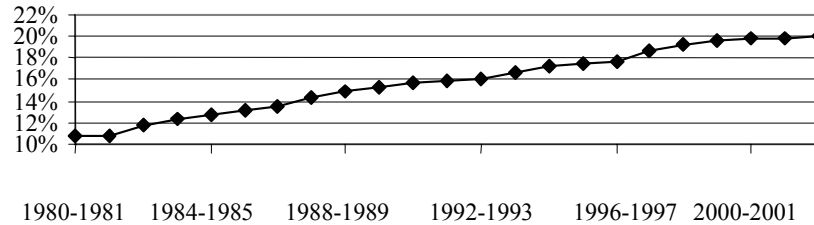


programs grew somewhat during the 1980s before declining slowly for the first half of the 1990s. The sharp, recent drop in real per-student cost coincides with the implementation of a funding matrix to calculate school needs. This abrupt decrease is responsible for costs being lower at the end of the period than the beginning, but the trend from this point once again has been towards increasing costs.

The funding matrix currently used to finance ESE classifies students’ needs on a scale of one to five with five being the highest service level (Office of Program Policy Analysis and Government Accountability [OPPAGA], 2003). Funds are then disbursed to districts based on the intensity of services they provide. Students in levels 1–3 of the ESE matrix represent 94.5% of the ESE population, and school districts receive a lump-sum allocation to meet their needs. Though students in levels four and five represent only 5.5% of the total ESE population, they account for 11.9% of ESE expenditure. In 2002–03, districts received \$14,000 and \$20,000 per student respectively for these categories.

The greatest impact on total per student expenditures, however, results from the remarkable growth of ESE enrollment (Figure 9). Some of Florida’s weighted FTE enrollment growth can be

**Figure 9. Percentage of Florida Students Enrolled in Exceptional Student Education 1980-81 to 2002-03**



attributed to the high and rising incidence of children with disabilities relative to other states. OPPAGA (2003a) reports that 9.6% of Florida school children had diagnosed disabilities in the 1999–00 school year compared to the national average of 8.3%. In addition, between 1987–88 and 1999–00 the percentage of disabled children increased by 40% in Florida but just 26% for the nation as a whole.

Some of the increase can be attributed to advances in medical technology. The declining infant mortality rate has led to increasing numbers of low birthweight births. Between 1980 and 1985, 52% of U.S. infants born weighing less than 3½ pounds survived to five years of age. By the late 1990s this survival rate

**Table 5. Membership in Seven Primary Exceptionalities Per 1,000 Total Students**

Exceptionality	1988–89	1995–96	2004-05
Specific Learning Disabled	47	58	69
Speech Language and Hearing	38	40	36
Gifted	32	40	44
Educable Mentally Handicapped	9	12	10
Emotionally Handicapped	11	12	11
Trainable Mentally Handicapped	4	4	3
Profoundly Handicapped	4	5	2

Source: Florida Department of Education, Statistical Brief, Membership in Programs for Exceptional Students, Fall 2004, retrieved from [www.firn.edu/doe/eais/eiaspubs/pdf/esemem.pdf](http://www.firn.edu/doe/eais/eiaspubs/pdf/esemem.pdf)

had increased to 90% (Berman, Davis, Koufman-Fredrick, & Urion, 2001). This increase contributed to ESE enrollment, as there is an established medical literature detailing the correlation between low birth weight and future educational difficulties.<sup>22</sup>

In addition, there have been significant advances in the identification and treatment of disabilities. With the expanding role of ESE programs, non-ESE instructional personnel have growing experience and training in recognizing children who need ESE. Anecdotal evidence suggests that parents are becoming increasingly aware of the benefits ESE can provide their children (OPPAGA, 2003, p. 7). Parents can then provide additional pressure to place children in ESE programs.

Changes in the Individuals with Disabilities Education Act (IDEA) have also helped to increase the number of children in ESE. The 1997 amendments to the federal IDEA stipulated that states must provide appropriate education to all students under age 22 who have not earned a standard high school diploma. This policy change resulted in a 50.7% increase in the number of children aged 19–22 enrolled in ESE between 1998–99 and 2002–03. Significantly, ESE children at this age are over six times more likely to be classified in the more costly levels four or five of the funding matrix.

The changes in federal law also made more children eligible for ESE programs. Under the new law children diagnosed with Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) now qualify for ESE programs. Other explanations for the increase in ESE enrollment include those related to incentives. It is generally recognized that social insurance program participation is related to generosity. ESE programs may face the same incentive problem. As long as school funding is tied to the number of students participating in ESE, schools will have an incentive to include more students in such programs than they would have otherwise. A recent study by Julie Berry Cullen (2003) found that, in Texas, nearly 40% of a six-year increase in student disability rates can be explained by an increase

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<sup>22</sup> See, for example, McCormick, Gortmaker, and Sobel (1990); Msall, Buck, and Rogers (1991); Saigal, Hoult, and Striner (2000); and Saigal, Szatmari, and Rosenbaum (1991).

in fiscal incentives. There is no reason to believe that Florida educators respond differently to incentives than those in Texas.

An alternative to the current system of funding is to use predicted ESE participation rates. That is, funding would be based on an expected level of ESE participation given enrollment and indicators such as the percentage of children in a district living below the poverty level. A possible danger, however, is that this system may have the opposite effect, providing an incentive for schools to place as few children as possible in ESE since the funding they receive is not based on the number of students actually participating in ESE. Some combination of these approaches may provide a better alternative.

A more troubling possibility is that high-stakes testing will lead administrators to classify more students as learning disabled. There is a growing literature that studies the way schools respond to incentives provided by high-stakes testing. One possibility is to put students who are unlikely to do well on FCAT tests into ESE since most ESE students do not participate in these tests. A recent study by David Figlio and Lawrence Getzler (NBER, 2002a) found that, "...following the introduction of the FCAT testing program low-performing students and students from low socioeconomic backgrounds were significantly and substantively more likely to be reclassified into disability categories exempted from the accountability system." Similar results were discovered by Brian Jacob (NBER, 2002b) using data from Chicago schools. These findings suggest that the advent of school accountability may have the unwelcome side effect of putting students in ESE who should not be there, perhaps also contributing to the recent rises in ESE enrollment.

### ***Other Perspectives on Rising Costs***

The partition of rising costs performed in the preceding section is rather skeletal. In this section, we seek to put flesh on our analysis by looking at the changing composition of the student body, the spatial distribution of funds, and other topics. We begin with the changing student body, over half of which is now comprised of minority students. Moreover, if the trends described below continue, students who enroll in Florida's public schools in

future years are expected to be somewhat poorer and more in need of special services than in the previous two decades. If those expectations are realized, it could direct more attention to calls for greater funding adequacy—the central issue of this report. Furthermore, it will place increasing pressure on Florida’s equalization formula—the Florida Education Finance Program (FEFP). Funding equalization, of course, relates to funding adequacy insofar as districts with the most to lose from FEFP redistributions might perceive that their authorized allocations are inadequate to meet the needs of their respective schools. State legislators are particularly concerned about FEFP allocations because every legislator has a public school or schools in his or her district. In addition to political considerations, trends in the number of students served by programs funded through the FEFP are reflected in increased aggregate costs to the state and local governments over time. Therefore, we turn to the FEFP, which commands the lion’s share of state and local operational allocations to Florida’s school districts. In FY 2003–04, the FEFP programs accounted for almost 79% of all appropriated operating funds for Florida’s public schools.

**Funding Equalization—The Florida Education Finance Program.** In 1973, the Florida Legislature enacted the FEFP to ensure a policy of equalized funding for the state’s K–12 public education system. The formula for distributing funds takes into account differences in local property tax bases, education program costs, costs of living, and sparsity costs in small, geographically dispersed school districts. Funding from the FEFP is based upon the individual student participating in a particular educational program, rather than upon the numbers of teachers and classrooms.<sup>23</sup> The funding mechanism is student-driven. For the most part, it has served the state well in terms of ensuring reasonable equity. Compared to funding mechanisms in most other states, Florida’s school finance formula results in greater statewide equalization.<sup>24</sup>

**Program Cost Factors for the FEFP.** In the FEFP funding

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<sup>23</sup> A user-friendly explanation of how the school finance formula is calculated is available at <http://www.firn.edu/doe/fefp/pdf/fefpdist.pdf>

<sup>24</sup> Florida’s success at equalization is evident in low variations across districts in funding per FTE.

**Table 6. Program Cost Factors for FEFP, FY 2004–2005**

Programs	Cost Factor
Basic Program	
Grades K–3	1.012
Grades 4–8	1.000
Grades 9–12	1.132
Programs for Exceptional Students	
Support Level 4	3.948
Support Level 5	5.591
English for Speakers of Other Languages (ESOL)	1.302
Vocational Education	
Grades 9–12	1.187

Source: Conference Report on HB 1835 – FY 2004–2005.

formula, the number of full-time equivalent (FTE) students in each of the funded educational programs is multiplied by various cost factors, determined annually by the Legislature, to derive weighted FTEs. Program cost factors attempt to ensure that programs receive their fair share of funds relative to the costs incurred. For example, the FEFP formula provides for higher cost factors for educating special education students, vocational education students, and students with limited English proficiency, because it costs more to educate children with special needs. It also costs more to educate children in high school than in elementary and middle school. The Legislature establishes the weights assigned to each program in annual appropriations bills. Table 6 presents the cost factors for several programs in FY 2004–2005.

**Trends in English for Speakers of Other Languages/Vocational Education.** The English for Speakers of Other Languages (ESOL) and high school vocational education programs carry slightly higher cost factors than do basic programs. Enrollments in these programs have been increasing slowly in recent years. ESOL students cost \$153 million in FY 2003–04 beyond what they would have if enrolled in basic programs. Program participation rises with the number of immigrants from other countries. This influx fell after September 11, but has risen during the past three years.

**Table 7. Enrollment in Florida's ESOL Program  
2001–02 through 2004–05**

School Year	Number of Students	Percentage change
2001–02	138,198	-
2002–03	139,588	1.0%
2003–04	139,976	0.3%
2004–05 <sup>a</sup>	142,925	2.1%

<sup>a</sup> Based on 3<sup>rd</sup> Calculation, Florida Department of Education.

Source: Florida Office of Economic and Demographic Research.  
Percentage change computed by BEBR.

In terms of estimated costs, programs for vocational high school students are weighted only slightly higher (1.187) in the FEFP funding formula than basic education programs (1.132). Moreover, the estimated number is fairly small (76,632), as opposed to over 1.8 million high-school students enrolled in basic programs.

**Trends in ESE Program Enrollment and Costs.** Policymakers are particularly concerned about trends in enrollments of students with disabilities because costs of programs to serve them are significant. In FY 2000–01, state, local, and federal expenditures in Florida totaled \$1.65 billion for education and school-based services for children with disabilities. Of that total, the lion's share—\$1.5 billion—was from state and local funds (mostly from FEFP funding) (OPPAGA, 2004a).<sup>25</sup>

As noted in the previous section, ESE student enrollment in the past 20 years has far outpaced the enrollment of the overall public school student population. Table 8 shows the increase of students with disabilities (gifted are excluded from the table). Over the 20-year period 1985–1986 to 2003–2004, ESE enrollment in Florida rose 157%, compared to an increase of 66% in total enrollment. Moreover, a disproportionate number of African-American students have been designated as eligible for special education. Spurred by the U.S. Commission on Civil Rights, the Florida Department of Education and the U.S. Department of Education

<sup>25</sup> OPPAGA (2004) claims that school districts are not making maximum use of federal reimbursements from the Medicaid Certified School Match Program.



**Table 8. Number of Florida ESE Students with Disabilities  
1985–1986 through 2003–2004**

School Year	ESE Students with Disabilities	School Year	ESE Students with Disabilities
1985–86	155,501	2001–02	376,074
1990–91	219,112	2002–03	387,617
1995–96	285,379	2003–04	399,864 <sup>a</sup>
2000–01	362,536		

<sup>a</sup> Bureau of Exceptional Education and Student Services, [www.firn.edu/doe/commhome/servhome.htm](http://www.firn.edu/doe/commhome/servhome.htm)

Source: OPPAGA (2003a).

have agreed to a five-year plan to reduce the number of African-American students assigned to special education programs.

To determine funding for ESE students, the Florida Department of Education uses a matrix to assign students to one of five levels of need for services (levels 4 and 5 on the matrix being the most expensive to serve). For students with milder disabilities (levels 1–3), school districts receive a lump-sum allocation of funding from the state called the ESE Guaranteed Allocation. This allocation, which has increased to over \$1 billion in FY 2004–05, is added to the base funding amount received for students in basic programs. Policymakers will face even greater pressure in future years to increase guaranteed allocations to school districts to pay for ESE programs because the number of students with disabilities such as Attention Deficit Disorder and Attention Deficit Hyperactivity Disorder has soared.<sup>26</sup>

It is especially expensive to provide ESE services to students with severe disabilities who require services full-time (levels 4 and 5)—over five times more costly than providing basic education. In FY 2002–03, school districts received approximately \$14,000 for each level 4 student and \$20,000 for each level-5 student.<sup>27</sup> By

<sup>26</sup> Ibid.

<sup>27</sup> Based on FTE enrollment numbers for ESE students reported by the Florida Office of Economic and Demographic Research (EDR) in their Estimating Conference report, “2004-2005 Projected Enrollments for Florida School Districts Compared with FTEs for 2001-2002–2003-2004,” December 19, 2003.

**Table 9. Trends in Guaranteed Allocation  
Appropriations/Funding for ESE Levels 4–5  
FY 2000–01 through FY 2003–04**

Fiscal Year	Guaranteed Allocation (million \$)	Funding Levels 4–5 State and Local (million \$)
2000–01	\$938.7	\$356.5
2001–02	\$923.7	\$373.2
2002–03	\$949.1	\$424.3
2003–04	\$976.5	\$446.0
Change 2000–2004	4.02%	25.1%

Source: General Laws of Florida for Guaranteed Allocations. Funding Levels 4–5 percentage change computed by BEBR.

contrast, the base funding rate was \$3,537 per student. OPPAGA (2003a, p. 3) estimated that while students in levels 4 and 5 make up 5.5% of the ESE population, they account for 11.9% of the cost. As Table 9 reflects, funding increased by 25% in the past four years for students with the severest disabilities. In efforts to contain the costs associated with level 4 and 5 designations on the funding matrix, the Legislature has capped enrollment in those categories in recent years.<sup>28</sup> And, legislative scrutiny of ESE programs persists as reflected by OPPAGA’s release of two reports concerning funding for ESE (OPPAGA 2003 & 2004a). Nonetheless, the jury is still out as to whether ongoing legislative oversight will effectively curb costs in these programs.

**Trends in Transportation Services.** Another “big ticket” item in Florida school districts’ operating budgets is transportation. The Legislature appropriated over \$440 million in FY 2004–05 to assist districts in transporting students. Florida law authorizes transportation funds for students living 2 miles or more from school and students with disabilities, PK students, and students enrolled in teenage parent programs, regardless of distance. School

<sup>28</sup> However, for FY 2004–05, supplemental funding for ESE students with severe disabilities was authorized under certain conditions in rural school districts.

**Table 10. Transportation Appropriations for Eligible Florida Students  
FY 1999–00 through FY 2004–05**

Fiscal Year	State Transportation Appropriations (million \$)	Percentage Change From Previous Year
1999–00	\$395.2	2.7%
2000–01	\$402.4	1.8%
2001–02	\$411.3	2.2%
2002–03	\$423.1	2.9%
2003–04	\$430.3	1.7%
2004–05	\$440.2	2.3%

Source: General Laws of Florida and, for FY 2004–05, Conference Report on HB 1835.

districts may also offer transportation services to elementary school students who face hazardous walking conditions. Finally, school districts offer rides to other students, known as “courtesy riders,” who live within 2 miles of their schools and face other constraints not specified in statute (including at present roughly 5% of all school bus riders in the state.) The formula for allocations to school districts is included in statute and is based on the price level index, bus occupancy index, and rural population in the district. If school districts spend more than their state allocation, they must use local funds to subsidize transportation services. For FY 2001–02, school districts spent over \$725 million in state and local funds for transportation. Of that total, 57% came from state funding (OPPAGA, 2004a, p. 1). As shown in Table 10, state appropriations for transportation have increased an average of 2.3% annually in the past six years. Factors that might contribute to higher transportation costs in future years include higher gasoline prices, pressure to diversify schools racially, and urban sprawl. In addition, busing is available to all children with disabilities.

**Safety and Security Programs.** Since 1996–97, the state has annually allocated funds for safe school programs. Initial funding totaled \$50.35 million, but that sum increased in FY 1999–2000 to \$70.35 million and in FY 2000–01, and thereafter to \$75.35

million. School districts are authorized to spend this money for after-school activities, alternative placement programs, and safety and security activities. In recent years, the money has been spent predominantly for safety and security activities. Legislation enacted in 2001 (the Safe Passage Act) also required school districts to conduct self-assessments and report on strategies they would use to improve school safety.

Distributions for safety and security programs are included as an adjustment to the FEFP and are determined by a formula that allocates \$30,000 to each district, with the remaining balance based on the latest Florida Crime Index and on each district's share of the state's enrollment. Obviously, school districts with larger metro areas are particularly beneficiaries of those allocations. For example, Miami-Dade received \$12.7 million, followed by Broward (\$6.5 million), and Hillsborough (\$5.8 million). Federal funding is also available through Title I Safe and Drug-Free Schools Entitlement Grants to support local programs that prevent the use of illegal drugs and violence at schools. The allocation to school districts for these grants totaled \$19.2 million in FY 2003–04.

**Programs Targeted to High-Risk Students.** We know that student enrollment has increased by 1.1 million since 1980 and that the enrollment growth was disparate across the state, with enrollment in some regions growing much more than in others. But are today's students as well prepared to meet the challenges of public education as children were in 1980? Of all the factors for young children (and there are several) that portend poor adult outcome, as well as poor academic outcome, poverty is the most important (Hodgkinson, 2003, p. 7). Programs to mitigate some of the effects of poverty and improve student performance add to educational costs. One measure, although imperfect, of low socioeconomic status is children's eligibility for free or reduced-price meals at public schools.<sup>29</sup>

Free and reduced-price meals are administered by the U.S. Department of Agriculture. Eligibility is linked to federal poverty

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<sup>29</sup> Subsidized lunch eligibility, although commonly used, is an imperfect measure for indicating student need because the cost of living in rural areas is less than in urban areas. Therefore, the poverty rate is overstated in rural areas and understated in urban areas.

guidelines. For FY 2003–04, a family’s income had to be no more than 130% of the federal poverty level for a child to qualify for free lunches, and 185% for a child to qualify for reduced-price lunches. For a family of four, this amounts to \$23,920 and \$34,040. States are required to match federal lunch reimbursements. The state match cannot exceed 30% of federal reimbursement and decreases by the percentage by which the state per capita income is below the per capita income of the United States. The Legislature appropriated \$16.9 million in FY 2004–05 for its share of funding for subsidized lunches. Over \$511 million was appropriated for FY 2004–05 from federal funds. So the state’s share is fairly small and we need not be concerned with future trends if federal funding continues to be such a significant portion of the match.

Table 11 shows the changes in percentage of students eligible for subsidized meals from FY 1992–93 through FY 2002–03. In recent years, eligibility has averaged about 44% of Florida’s student population. The percentages were 68% for African-American students and 62% for Hispanic students, compared to 26% for white students. By this measure, more than half of Florida’s minority students come from poor families.

In addition to being eligible for lunch subsidies, students from low-income families are more likely to need costly special programs because they are at higher risk of academic failure. Portions of that funding comes from federal Title I funds, but state and local monies are also used. For example, the Legislature appropriated \$654 million through the FEFP for supplemental academic instruction in both FY 2003–04 and FY 2004–05. Those funds are used for remedial instruction and other intervention services. Funding is also appropriated to assist at-risk students through the “Just Read, Florida” program which is designed to increase the reading proficiency of all students to their appropriate grade level. For FY 2004–05, appropriations totaled over \$90 million.

Obviously, intervention strategies come with price tags but the cost of alternative strategies to retain students in the same grade is likely to be more prohibitive. In 2001–02, 162,160 children were not promoted, so a ball-park cost of the extra year of schooling

**Table 11. Percentage Eligibility for Free/Reduced Price Lunches for Florida Public School Students by Selected School Year, 1992-93 to 2003-04**

School Year	% Eligible Students
1992-93	37.3%
1995-96	44.0%
2000-01	43.6%
2001-02	44.1%
2002-03	44.2%
2003-04	44.8%

Source: Florida Department of Education, *Pocket Digest of Florida Education Data*, August 2003, retrieved from [www.firn.edu/doe/eias/eiaspubs/pdf/PocketDigest\\_txt.pdf](http://www.firn.edu/doe/eias/eiaspubs/pdf/PocketDigest_txt.pdf), and Florida School District Data, August 2005, retrieved from [www.firn.edu.doe/eias/flmove/florida.htm](http://www.firn.edu.doe/eias/flmove/florida.htm)

approaches \$1 billion.<sup>30</sup> Moreover, disproportionate percentages of African-American and Hispanic students were not promoted in 2001-02—roughly 36% of African-Americans and 22% of Hispanics.

**Trends in Technology Usage.** Annual expenditures of Florida's school districts for computers and related technology is estimated to total \$500 million in FY 2003-04 (Florida Senate, 2003a).<sup>31</sup> Funding for education technology comes from the following sources: 60% local, 29% state, and 11% federal. In response to a recent Florida Technology Survey, Florida school districts reported that almost 475,000 Internet-capable computers and 138,000 non-Internet or multi-media capable computers are located in instructional areas of schools—mostly in classrooms. Over 97% of Florida's schools, 87% of classrooms, and 50% of students' homes have access to the Internet.

Arguably, the most effective use of computer technology entails one-to-one student use of computers. To that end, pilot projects have been initiated to evaluate the effectiveness of laptops on student achievement. But laptops are expensive, and estimates

<sup>30</sup>We multiply 162,160 by \$6,187, which was the current expenditure per UFTE in 2001-02.

<sup>31</sup>Funding of \$500 million does not include installations for new schools.

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for providing each student with a laptop total \$2.5 billion (\$1,000 multiplied by 2.5 million students) (Florida, 2003a).<sup>32</sup> Moreover, there is little evidence to date from the pilot projects that student test scores have been improved through availability of assigned pilot laptops, although other benefits have been cited.

Every school district in the state has a technology plan. Federal and state funding policies continue to support investments in computer technology and we might expect that trend to continue. In fact, federal Title I requires 25% of federal funding to be used for instructional technology for students. And the unit cost of computers is expected to decrease gradually, thus making them more affordable to a greater number of students.

**Trends in Teacher Salaries.** Policymakers and educators face the daunting task of responding to the demographic changes outlined earlier and the shifting set of demands and needs. At the same time, there is the need to ensure that the supply of qualified teachers will be available to meet those demands and needs. Of 154,741 teachers surveyed in February 2002, almost 38% were 50 years and older. Because of the age structure, an unprecedented number of teachers are expected to retire in 2006.

In November 2002, the Florida Department of Education projected that Florida school districts would need to employ over 162,000 teachers in fall 2010. And that projection did not take into account the Class Size Amendment. The Florida Revenue Estimating Committee estimated the need for an additional 31,800 teachers to meet class size requirements by 2010. It was projected that another 6,536 teachers to meet class size reduction requirements would be needed in 2003–04 alone.<sup>33</sup>

The challenge of ensuring an adequate supply of teachers is

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<sup>32</sup> This cost does not include laptops for teachers, increased technical support for one-to-one student use of laptops, increased professional development for teachers, Internet access for students who cannot afford it, internet content filtering, software, and insurance to pay for lost, stolen, and damaged computers.

<sup>33</sup> See Council of Education Policy, Research and Improvement (CEPRI), “Florida Teachers and the Teaching Profession,” March 2003, at p.2, for an estimate of the total number of teachers needed to implement the Class Size Amendment. See Florida Department of Education, *Estimated Need for Classroom Teachers 2003–2004*, Florida School Districts, March 16, 2003; spreadsheet received from Dr. Martha Miller, Florida Department of Education, December 9, 2003.

further compounded by requirements in NCLB that by the end of the 2005–06 school year all public elementary or secondary school teacher teaching a core subject must be “highly qualified.”<sup>34</sup> In Florida, teachers must have a valid Florida Temporary Certificate or a valid Professional Certificate to be fully certified under NCLB. Teachers participating in approved Florida alternative certification programs are considered to be “highly qualified.” Teachers of core academic subjects in charter schools are likewise required to meet NCLB qualification requirements, as are pre-kindergarten teachers who teach in programs receiving Title I funds. Beginning in 2005–06, states and districts will be required under NCLB to report teachers not designated as “highly-qualified” to the public and parents. These reporting requirements have already taken effect for teachers paid from or teaching in Title I programs.

Presently, many of Florida’s teachers lack appropriate certification—a problem that is more acute in certain subject areas, such as special education, science, math, and ESOL. According to the Florida Department of Education, 14.9% of all reading teachers, 34.8% of all ESOL teachers, 10.2% of all middle- and high-school science teachers, 9.8% of all middle- and high-school math teachers, and 13.7% of middle- and high-school social studies teachers were not appropriately certified in fall 2003.<sup>35</sup> As of fall 2002, 13.6% of all ESE teachers and almost 30% of new ESE hires in Florida’s public schools lacked certification (FDOE, 2003a).

The salaries of Florida’s public school teachers, excluding Title I teachers, are funded through the FEFP. The district cost differential component of the formula is intended to offset the higher salaries that school districts must pay in regions of the state with higher costs of living. Teachers’ salaries comprise the largest share of school districts’ operating budgets—almost \$6.2 billion in

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<sup>34</sup> Core subjects include English, reading, language arts, mathematics, science, history, civics and government, geography, economics, the arts, and foreign language. Special education teachers and teachers in Limited English Proficiency courses must be highly qualified if they teach core academic subjects.

<sup>35</sup> The fall 2003 information was e-mailed to Lynne Holt by Martha Miller on March 30, 2004.



**Table 12. Average Teachers' Salaries in Florida  
Selected Fiscal Years 1980–81 through 2003–04**  
All degree levels—public school elementary and  
secondary schools (constant 2004\$)

Fiscal Year	Florida	Broward	Duval	Escam- bia
1980–81	28,204	30,553	26,998	26,576
1985–86	33,801	36,467	33,211	31,214
1990–91	39,165	43,976	37,141	36,103
1995–96	38,438	42,565	37,417	33,461
2000–01	40,410	43,894	40,075	33,043
2001–02	40,839	42,602	40,442	35,197
2002–03	41,126	43,727	41,839	35,557
2003–04	40,598	41,964	40,335	34,286
% change 1981–2004	43.9%	37.3%	49.4%	29.0%

Fiscal Year	Hills- borough	Miami- Dade	Orange	Palm Beach
1980–81	26,690	34,030	27,497	27,003
1985–86	32,484	40,435	31,958	33,109
1990–91	37,128	48,160	35,881	43,389
1995–96	36,540	46,353	35,733	42,521
2000–01	40,084	46,577	36,577	44,333
2001–02	39,444	46,755	44,148	45,884
2002–03	39,592	46,338	38,601	46,397
2003–04	38,762	46,264	38,892	45,218
% change 1981–2004	45.2%	36.0%	41.4%	67.5%

Source: *Florida Statistical Abstract*, various issues, Table 20.60.

FY 2002–03. Table 12 shows the percentage change in Florida teachers' salaries from FY 1980–81 through FY 2003–04, both with and without adjustments for inflation, in seven varied districts, across which there is significant variation in salaries.

Finally, school districts in Florida will be competing with districts in other states for highly-qualified teachers. Florida's

salaries are not particularly competitive compared to salaries in Georgia, as previously noted, our most serious regional competitor. Whereas in FY 2002–03, Florida’s teacher salaries averaged \$39,465, Georgia’s averaged \$45,533. Florida’s average beginning salaries also lagged behind Georgia’s.<sup>36</sup> As we look to 2010, we can anticipate that teacher supply and competitive pressures from other states will continue to be a significant cost driver.

**Class Size Amendment.** The legislation enacted to implement the 2002 Constitutional Amendment (2003 SB 30-A) created several funding mechanisms. Among those established, the Class Size Reduction Operating Categorical Fund provides for allocations for operating expenditures to reduce class size. The statute provides that if funds are not needed for that purpose, priority should be given to increasing the salaries of instructional teachers and implementing the salary career ladder. The allocation to districts is based on a formula reflecting the number of students per classroom in core courses. Funding for operating expenditures to reduce class size in FY 2003–04 totals \$468 million; not surprisingly, given their large enrollments, Miami-Dade, Broward, and Hillsborough are the largest beneficiaries (FDOE, 2003b). To date, the Legislature appropriated over \$1.4 billion for this purpose—\$468 million in FY 2003–04, and almost \$979 million in FY 2004–05.<sup>37</sup>

**Capital Projects.** The Class Size Reduction Lottery Revenue Bond Program, which was also established in 2003 SB 30-A, authorizes the Division of Bond Finance to issue lottery revenue bonds for educational facilities to reduce class size. The program provides funding for two other programs: the Classroom for Kids Program and the District Effort Recognition Program. The Classroom for Kids Program provides funding to supplement the districts’ five-year capital programs to reduce class size. Funding

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<sup>36</sup>For estimated average salaries in FY 2002–03 in the southern region, see Gale Gaines, *Focus on Teacher Salaries: Recent Actions in the SREB States*, Southern Regional Education Board, October 2003. Beginning salaries applied to FY 2001–02 in American Federation of Teachers, *Survey and Analysis of Teacher Salary Trends 2002*.

<sup>37</sup> Funding of \$468.2 million includes \$80 million from lottery funds, \$1.9 million from the Principal Fund, and \$368.2 million from the General Revenue Fund.

**Table 13. Total Estimated Cost for Class Size Reduction for Public Schools Provided in 2002**  
(million \$)

Item	REC		CEPRI
	Analysis		Analysis
	25%	88%	88%
	Permanent	Permanent	Permanent
	Classrooms	Classrooms	Classrooms
	75%	12%	12%
	Relocatable	Relocatable	Relocatable
	Classrooms	Classrooms	Classrooms
Operations	\$15,556	\$18,137	\$19,685
Construction	\$4,232	\$8,697	\$8,740
Land	\$184	\$662	\$661
Total	\$19,971	\$27,493	\$29,085

Source: Council for Education Policy, Research and Improvement (CEPRI), 2002a.

may be used for construction, renovation, remodeling, repair of educational facilities, and purchase or lease-purchase relocatable educational facilities.

The District Effort Recognition Program provides effort recognition grants to eligible districts for capital projects. If voters have approved local funding (school capital outlay surtax, participation in the levy of the local government infrastructure sales tax, and millage for capital outlay purposes) through referenda for capital outlay projects, school districts are eligible for these grants. If school districts have not met the constitutional class size requirements, grant proceeds must be used to reduce class size. If they have, districts may use the money for other statutorily-authorized purposes.

To date, the Legislature appropriated \$600 million in FY 2003–04, and \$100 million in FY 2004–05 to fund new capital projects for smaller classes in Florida’s school districts.

Total Cost of Fully Implementing Class Size Reduction. Official estimates for full implementation of the Amendment have not been released since 2002. At that time, the estimates ranged from between almost \$20 billion and \$27.5 billion (Revenue

Estimating Conference [REC] Analysis), and over \$29 billion (Council for Education Policy Research and Improvement).

The EDR estimate to fully implement class size reduction was significantly lower—\$8.5 billion for operating costs and capital outlay. However, when the cumulative cost of operations was factored in, the total increased to almost \$18.4 billion (\$11.7 billion for operations and \$6.7 billion for capital outlay) (CEPRI, 2002b). The estimates provided in Table 13 may no longer be particularly reliable as the Florida Department of Education is using its own formulas for determining operating and capital outlay expenditures to reduce class size. However, no updated official estimate is currently available.

### *Trends in Revenue*

Having explored where the money for PK–12 goes, we now turn to where it comes from. First, we briefly look at the overall per capita trend, then expenditure trends by function, then revenue trends by source and then proceed to consider revenue in greater depth.

**Per-Capita Trends.** To set the broader context for an analysis of revenue and expenditure trends in affecting Florida’s public education system, we want to know whether Florida’s residents are paying more or less over time for public schools. After all, funding has increased, but so has the number of residents over time. First, we ask: Have Florida’s residents spent more on public schools in recent years? Table 14 suggests that they have. When inflation is factored in, the increase per resident is 5%.<sup>38</sup> According to national sources real spending per pupil, as opposed to per UWFTE, was roughly constant.

Next, we ask whether Florida’s residents’ tax burden has changed over time or whether it has stayed essentially the same. Table 15 shows that the revenue burden per resident, when adjusted for inflation rose by 12%.<sup>39</sup>

So, at least in past years, increases in residents’ spending and tax burdens for public education do not appear to have been

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<sup>38</sup> Expenditures are adjusted by the GDP deflator.

<sup>39</sup> This includes construction funding and debt repayment.

**Table 14. PK–12 Operating Expenditures per Resident  
FY 1990–91 through FY 2001–02**  
(constant 2004\$)

Fiscal Year	Number Residents (millions)	Total Expend- itures All Purposes (million \$)	PK–12 Enroll- ment UFTE (1,000)	Expend- itures per UFTE	Expend- itures per Resi- dent
1990–91	12.938	\$11,719	2,043	\$5,736	\$906
1991–92	13.196	\$11,768	2,118	\$5,556	\$892
1992–93	13.424	\$11,924	2,154	\$5,536	\$889
1993–94	13.609	\$12,553	2,219	\$5,657	\$923
1994–95	14.149	\$13,100	2,287	\$5,728	\$927
1995–96	14.412	\$13,388	2,313	\$5,788	\$931
1996–97	14.713	\$13,777	2,376	\$5,798	\$938
1997–98	15.001	\$13,680	2,294	\$5,965	\$912
1998–99 <sup>a</sup>	15.322	\$14,534	2,339	\$6,213	\$950
1999–00 <sup>a</sup>	15.982	\$14,647	2,329	\$6,289	\$918
2000–01	16.331	\$15,475	2,389	\$6,478	\$949
2001–02	16.675	\$15,757	2,454	\$6,421	\$947

<sup>a</sup> K–12 only.

Source: Florida Department of Education, Total Current Expenditures and UFTE Expenditures, *Pocket Digest of Florida Education Data*, August 2003, retrieved from [www.firn.edu/doe/eias/eiaspubs/pdf/PocketDigest\\_txt.pdf](http://www.firn.edu/doe/eias/eiaspubs/pdf/PocketDigest_txt.pdf). Student enrollment based on UFTE spreadsheet final calculations from Florida Department of Education. Residents compiled from *Florida Statistical Abstract*, Table 4.05. Expenditures per resident computed by BEBR.

particularly onerous if adjustments are made for inflation.

**Spending and Revenue Analysis by Function.** We now analyze past spending trends and incorporate insights gleaned from the prior summary of cost-driving factors. Our discussion addresses two categories—operating expenditures and fixed capital outlay. We analyze these expenditures separately because annual forecasting projections consider two scenarios: (1) attendance of all students in public education settings for purposes of school operating expenditures and capital outlay; and (2) attendance of those students who will place demand on the operations of the public school system but to a lesser extent or not at all on the

**Table 15. Revenues for PK–12 per Florida Resident  
FY 1990–91 through FY 2000–01  
(constant 2004\$)**

Fiscal Year	Total All Revenue Receipts (million \$)	Resident Population	Revenue per Resident
1990–91	\$13,613	12,937,926	\$1,052
1991–92	\$13,789	13,195,952	\$1,045
1992–93	\$14,122	13,424,416	\$1,052
1993–94	\$14,515	13,608,627	\$1,066
1994–95	\$15,294	14,149,317	\$1,081
1995–96	\$15,504	14,411,563	\$1,076
1996–97	\$15,990	14,712,922	\$1,087
1997–98	\$17,182	15,000,475	\$1,146
1998–99	\$18,625	15,322,040	\$1,215
1999–00	\$18,696	15,982,378	\$1,170
2000–01	\$19,214	16,330,601	\$1,176

Source: *Florida Statistical Abstract*, various issues, Table 4.05 and 20.63. Revenues per resident computed by BEBR.

physical assets of the public school system. For example, the state funds operating expenditures for students enrolled in public schools, charter schools, virtual schools, and private schools if they receive vouchers. However, the capital outlay formula is different for students in traditional public school settings than for charter school students. Since 1997, charter schools have been funded through line-item appropriations from the Public Education and Capital Outlay and Debt Service Trust Fund. The state also does not fund bricks and mortar in private schools or home schools.

**Past Trends in FEFP Expenditures Per Unweighted Student.** The lion's share of public schools' operating expenditures is included in the Florida Education Finance Program (FEFP)—a composite of state and local funding that serves as the primary means of funding and equalizing the operating costs of Florida's PK–12 public school system. As noted, it comprises approximately 79% of total operating expenditures in FY 2003–04 and is therefore an appropriate target for further examination. One

**Table 16. FEFP Funding per Unweighted FTE Florida Student, FY 1990–91 through FY 2003–04**  
(constant 2004\$)

Fiscal Year	Amount per Unweighted FTE <sup>a</sup>	Percentage Change
1990–91	\$4,929	(NA)
1991–92	\$4,719	(4.3)
1992–93	\$4,671	(1.0)
1993–94	\$4,736	1.4
1994–95	\$4,831	2.0
1995–96	\$4,922	1.9
1996–97	\$4,738	(3.7)
1997–98	\$5,134	8.4
1998–99	\$5,229	1.8
1999–00	\$5,200	(0.6)
2000–01	\$5,286	1.7
2001–02	\$5,175	(2.1)
2002–03	\$5,328	3.0
2003–04 <sup>b</sup>	\$5,499	3.2

(NA) Not available.

<sup>a</sup> Does not adjust for retirement.

<sup>b</sup> Based on 3<sup>rd</sup> calculation by FDOE.

Source: Florida Department of Education, Final FEFP Calculations. Percentages computed by BEBR.

relevant question in terms of analyzing funding adequacy is: Has funding in the school finance formula kept up with inflation from one year to the next? To gauge this, we compare FEFP dollars per unweighted FTE from FY 1990–91 to FY 2003–04. We use unweighted FTE for this comparison because certain categorical aid programs that are included in FEFP worksheets use different funding formulas. As Table 16 suggests, beginning in FY 1993–94, increases in funding per student have exceeded inflation for most, but not all, years.

**Florida Education Finance Program (FEFP) Revenue Sources and Impact on Select Districts.** Most of the FEFP funding over the years has come from state revenues. The state's

net portion, largely comprised of proceeds from the *General Revenue Fund* (predominantly from the state sales tax but also from other tax sources), is the differential of the total FEFP budgeted for a given year and the local revenues raised by counties (referred to as the “local effort”). Another source of state funding for the FEFP is the *Lottery* which supports two programs—the District Discretionary Lottery Funds and the School Recognition Program. The *Principal State School Trust Fund* comprised largely of proceeds from abandoned property receipts is included in state funding for the FEFP and also provides grant support to low-performing schools and reading programs, among others.

Each school district is required to raise revenue through the *ad valorem* tax to participate in the FEFP (although no more than 90% of a district’s total FEFP can come from local effort.) The local effort amount is established in annual legislative appropriations bills. In addition to required local effort, the Legislature annually sets the maximum discretionary millage. For FY 2004–05, it is .51 mills and districts may make an additional levy of not to exceed .25 mills, that will generate amounts of not more than \$50 per FTE student.

Local support from school districts for the FEFP has varied considerably. In FY 2003–04, Monroe raised the most money per unweighted FTE (\$13,128) and received the least in return; conversely, Liberty contributed the least (\$1,168) and received the greatest level of subsidy. Table 17 illustrates the effects of the redistribution effort per unweighted FTE in FY 2003–04 and the net amount of funding allocated to each of seven selected districts. In that year, Miami-Dade was the largest net beneficiary and Orange the largest net contributor, not only of the seven districts but of all 67 school districts.

A relatively small portion of redistributed funds through the FEFP (only \$40 million of approximately \$1.33 billion in FY 2001–02) was offset annually by an allocation of funds to districts with high costs because of sparsity.<sup>40</sup> Generally, the largest and smallest districts, as well as the poorest counties (those raising less than \$50 million in 2003–04), were net beneficiaries of the FEFP in past years.

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<sup>40</sup> The per-student amounts can be large for the small districts affected, however.



**Table 17. Net Contributions to and Receipts from FEFP  
Selected Counties/Districts, FY 2003–04**

County/District	Difference between Funds Raised and Received per UWFTE	Total Net Funds from FEFP (million \$)
Broward	\$50	\$13
Duval	(\$118)	(\$15)
Escambia	\$468	\$20
Hillsborough	\$150	\$27
Miami-Dade	\$717	\$262
Orange	(\$2,320)	(\$380)
Palm Beach	(\$1,521)	(\$256)

Source: Florida Department of Education; based on third calculation for 2003–04. Analysis by BEBR.

This redistribution mechanism is known as the district cost differential, or DCD, and allocations from it are based on the Florida Price Level Index (FPLI). Another redistribution mechanism is the sparsity supplement which compensates rural districts for sparse student populations. This supplement is based on a statutory formula in which the variable factor is a sparsity index. The funding formulas for both the DCD and sparsity supplement have been subject of much debate recently. A recent report by the Bureau of Economic and Business Research (BEBR) recommended the DCD be based on adjustments to the FPLI to take regional amenities into account. The report also recommended the sparsity supplement be either eliminated or scaled back substantially. The 2004 Legislature approved BEBR's recommended revisions to the DCD, but the sparsity supplement still remains. The effect of the change to the DCD formula in future years would be to reduce to some extent the funding redistribution from medium-size school districts with fast-growing enrollments, such as Orange, to the largest school districts, such as Broward and Miami-Dade (Dewey, Denslow, & Lotfinia, 2004). The change is phasing in from FY 2004–05 to FY 2006–07.

**Shifts in FEFP Revenue Sources since FY 1990–91.** Funding for the FEFP over the years has averaged slightly more than 60%

**Table 18. Percentage of State and Local Revenues to Fund the FEFP, FY 1990–91 through FY 2004-05**

Fiscal Year	State Funds as Percentage of Total	Local Funds as Percentage of Total
1990–91	62.5%	37.5%
1991–92	60.5%	39.5%
1992–93	60.6%	39.4%
1993–94	62.0%	38.0%
1994–95	61.7%	38.3%
1995–96	62.0%	38.0%
1996–97	60.9%	39.1%
1997–98	61.5%	38.5%
1998–99	59.4%	40.6%
1999–00	61.6%	38.5%
2000–01	61.4%	38.6%
2001–02	60.0%	40.0%
2002–03	59.0%	41.0%
2003-04	58.8%	41.2%
2004-05	58.2%	41.8%

Source: Florida Department of Education, Office of K-20 Budget, Florida Education Finance Program (FEFP), Final calculations for 1990-2004 and fourth calculation for 2004-05. Retrieved from [www.firn.edu/doe/strategy/fefp1st.htm](http://www.firn.edu/doe/strategy/fefp1st.htm)

from the state with the remaining 40% coming from local revenues. As indicated in Table 18, the local share in recent years has crept up slightly relative to state funding, largely because rising property values have boosted ad valorem revenues.

**Past Trends in Capital Outlay Expenditures (All Sources).**

New construction and maintenance projects in Florida's public schools are generally funded through bond issues. Proceeds to pay for the debt and cash service requirements may be appropriated from several funding sources: the Public Education Capital Outlay and Debt Service Trust Fund (proceeds from the gross receipts tax on utilities, the General Revenue Fund and other funding sources); the Educational Enhancement Trust Fund (proceeds from the lottery); and the Lottery Capital Outlay and Debt Services Trust Fund. Local funding sources may also be used for this purpose—

**Table 19. Capital Outlay Expenditures for Florida Public Schools, FY 1990–91 through FY 2000–01**  
(millions of constant 2004\$)

Fiscal Year	Capital Outlay	Debt Service	Total CO & DS
1990–91	\$2,190.30	\$585.90	\$2,776.20
1991–92	\$2,078.93	\$869.31	\$2,948.24
1992–93	\$1,743.21	\$723.42	\$2,466.63
1993–94	\$2,117.30	\$656.44	\$2,773.74
1994–95	\$2,426.89	\$692.51	\$3,119.40
1995–96	\$2,348.63	\$933.57	\$3,282.20
1996–97	\$2,180.22	\$717.40	\$2,897.61
1997–98	\$2,179.63	\$884.44	\$3,064.07
1998–99	\$2,305.58	\$1,656.94	\$3,962.52
1999–00	\$3,015.82	\$873.58	\$3,889.41
2000–01	\$3,022.11	\$899.20	\$3,921.31

Source: *Florida Statistical Abstract*, Table 20.65, various years.

property tax proceeds up to 10 mills (additional levies are authorized subject to voter approval), the school district portion of the Local Government Infrastructure Sales Tax, impact fees, and proceeds from a sales surtax that is subject to voter approval.

Table 19 shows fixed capital outlay expenditure trends for all funding sources from FY 1990–91 to FY 2000–01. One might note a significant increase beginning in 1998–99 when the impact of the Classrooms First and 1997 School Capital Outlay Bond Programs took effect. Beginning in FY 1997–98 and 20 years thereafter, \$180 million of lottery fund proceeds will be reserved to pay for bonds issued for various capital outlay projects of school districts. The bonds are intended to provide up to \$2.5 billion for such projects and, to date, almost all of that money has been allocated to school districts.<sup>41</sup>

<sup>41</sup> See <http://www.firn.edu/doe/oef/pdf/lotdisb.pdf> for disbursements for lottery bond programs by month.

### *Revenue and Appropriation Trends*

Historic revenue and appropriation trends might help us to better understand whether public school expenditures affected by the cost drivers discussed previously might be funded differently in the future than in the past. In other words, we are interested in potential funding constraints. Arguably, all monies for public education are fungible because the Legislature annually determines the funding sources for program expenditures governing public education. Ultimately, political decisions in the annual appropriations process determine not only the amounts to be authorized for public education (or for that matter, other government) expenditures, but also the revenues to be used to fund those expenditures. The process of designating funds as recurring and nonrecurring in the budgeting process, while not included in appropriations language, protects lawmakers from over-committing revenues to programs beyond the consensus revenue estimates.

Local governments may elect to augment state appropriated funds through several funding mechanisms authorized by statute. Such mechanisms include discretionary operating millages applied to the FEFP, local bonds for school-related capital projects, impact fees, and a sales surtax for school-related capital projects, technology implementation, and bond financing. The 2005 Legislature has proposed increasing the sales surtax cap from 0.5% to 1.0% for an estimated \$997.6 million in fiscal year extra revenue in 2004–05, if all counties were to levy the tax. Currently, 13 counties are levying the 0.5% surtax.

Finally, the state collects tax proceeds from motor vehicles and motor homes and credits them to the District Capital Outlay and Debt Service Trust Fund. Distributions are made to school districts and community colleges based on a constitutional formula. In FY 2003-04, the distribution to school districts from mobile home licenses totaled almost \$10 million and from motor vehicle licenses, \$114 million. The distributions to school districts from motor home license proceeds have been approximately the same in recent years. However, the distributions from motor vehicle license proceeds have been rising steadily, resulting in a

**Table 20. Revenues for Florida Public Schools by Funding Source, FY 1990–91 through FY 2001–02**

Fiscal Year	Federal %	State %	Local %
1990–91	6.4	51.5	42.1
1991–92	7.2	49.5	43.3
1992–93	8.2	49.6	42.2
1993–94	7.6	50.9	41.5
1994–95	7.5	50.1	42.4
1995–96	7.2	49.6	43.1
1996–97	7.3	49.8	42.9
1997–98	7.5	50.6	41.9
1998–99	7.7	51.8	40.5
1999–00	8.5	49.7	41.8
2000–01	9.0	49.0	42.0
2001–02	10.1	45.6	44.3

Source: Florida Department of Education, *Pocket Digest of Florida Education Data*, August 2003, retrieved from [www.firn.edu/doe/eias/eiaspubs/pdf/PocketDigest\\_txt.pdf](http://www.firn.edu/doe/eias/eiaspubs/pdf/PocketDigest_txt.pdf); for 1990–91, *Change and Response to Change in Florida's Public Schools*, April 2005, retrieved July 8, 2005, from [www.firn.edu/doe/eias/eiaspubs/pdf/changes04.pdf](http://www.firn.edu/doe/eias/eiaspubs/pdf/changes04.pdf)

real 11% increase since FY 1990–91.<sup>42</sup>

**Revenues by Funding Source.** To set the broader context for revenue trends, Table 20 provides a profile of revenues—federal, state, and local—by source of public education funding from FY 1990–91 to FY 2001–02. The state's revenue commitment in proportion to other funding sources continued to decline after FY 1998–99.

However, implementation of the class size amendment, in particular, has increased state funding commitments and changed the revenue mix. The Amendment explicitly prohibits the replacement of federal funds for class size reduction and explicitly states that funding for this purpose is a responsibility of the state and not the school districts. According to OPPAGA (2003b), in FY

<sup>42</sup> For a history of annual distributions to school districts on motor vehicle license tax proceeds, see Florida Legislative Committee on Intergovernmental Relations. Available at <http://fcn.state.fl.us/lcir/data/motvehlict.xls>

2003–04, school districts received 56.9% of their revenues from state sources, 32.9% from local sources, and 10.3% from federal sources. The state-local split may be calculated differently from Table 20. Fiscal year 2003–04 is also the first year of implementing class size reduction to realize the amendment’s requirements.

The federal funding share has continued to increase, from 6.4% in FY 1990–91 to over 10% at present. The reasons will become clear in the section titled “Trends in Federal Revenues for Public Education.”

In our review of funding sources, we recognize that sales tax proceeds, lottery proceeds, and local tax levies are used to fund both operating and fixed capital expenditures of Florida’s public schools. Therefore, an analysis of revenue trends, for the most part, defies the same neat categorization that we have applied to our discussion in the previous section.

**Trends in General Revenue Collections and Appropriations for Public Schools.** General revenue funds are mostly comprised of sales and use tax (72.5% of net general revenue collections in FY 2002–03) and several other taxes and fees. These revenue sources are primarily used to fund the FEFP but are also used for other public school operating expenditures. They also may be used for public school capital outlay expenditures, particularly for nonrecurring purposes.

Total general revenue collections increased annually throughout the 1990s and to the present. Florida’s general revenue collections in terms of real dollars per capita (using 1996 dollars) increased from \$860.4 in FY 1990–91 to \$1,053.2 in FY 2002–03—an increase of 22.4% (Florida Consensus Estimating Conference, 2003 [FCEC], Table 1.1). However, a closer look at recent collection trends from FY 1999–2000 to FY 2002–03 reveals that the per capita amount in real dollars declined after FY 2000. Population growth outpaced general revenue collections in real dollars. However, the long-term forecast is for general revenue collections per capita in real dollars to steadily increase after FY 2003–04 (FCEC, 2003).

The slower growth in general revenue collections in those years, however, did not, with the exception of FY 2002, directly carry over to General Revenue Fund appropriations for Florida’s

**Table 21. Florida Public School Appropriations  
(Recurring and Non-Recurring)  
FY 1998–99 through FY 2004–05**  
(millions of constant 2004\$)

Fiscal Year	Total Appropriations General Revenue Fund	Total Appropriations to Education (all levels)	Total Appropriations to Public Schools
1998–99	\$19,918	\$10,671	\$6,188
1999–00	\$19,967	\$11,079	\$7,815
2000–01	\$20,725	\$11,264	\$8,031
2001–02	\$19,837	\$10,447	\$7,502
2002–03	\$20,927	\$11,042	\$7,687
2003–04	\$21,180	\$11,224	\$7,986
2004–05	\$23,206	\$11,906	\$8,209

Source: Florida Department of Education, 2004-05 Education Appropriations, Funded by the Florida Lottery, December 2004, retrieved from [www.firn.edu/doe/strategy/pdf/lottery.pdf](http://www.firn.edu/doe/strategy/pdf/lottery.pdf). BEBR compiled GRF for schools in FY 2004–05, based on general appropriations for that year.

public schools. Real appropriations from the General Revenue Fund increase by 33% from FY 1998–99 to FY 2004–05 for public schools in Florida (Table 21). In that same time interval, by contrast, general revenue appropriations for purposes other than education rose by only 22%.

**Trends in Lottery Revenues and Appropriations for Public Schools.** In November 1986, voters approved an amendment to the state constitution providing for a state-operated lottery. Lottery allocations were first made in FY 1987–88. The initially determined allocation for education (all levels) was 35%, then 37.5%. Beginning in July 1990, the allocation for education was increased to 38%. Beneficiaries of Trust Fund expenditures include public schools, community colleges, and state universities and the allocation of funds among them is determined through the annual appropriations process and varies from year to year. For FY 2004–05, Florida’s public schools received \$615 million to \$650 million of \$1.17 billion (or over 55%) of all funds credited to the

**Table 22. Lottery Proceed Transfers to Educational Enhancement Trust Fund for Public Schools, FY 1990–91 through FY 2004–05, Appropriations per Pupil (constant 2004\$)**

Fiscal Year	Sales (millions)	Total Educational Enhancement Trust Fund Appropriations (millions)	Allocation to Public Schools (millions)	Schools Percentage of Total Appropriation
1990–91	\$2,838	\$1,329	\$994	74.7%
1991–92	\$2,788	\$1,093	\$765	70.0%
1992–93	\$2,659	\$1,045	\$732	70.0%
1993–94	\$2,637	\$1,052	\$736	70.0%
1994–95	\$2,684	\$1,138	\$796	70.0%
1995–96	\$2,423	\$974	\$682	70.0%
1996–97	\$2,387	\$956	\$657	68.8%
1997–98	\$2,326	\$932	\$589	63.2%
1998–99	\$2,353	\$911	\$534	58.6%
1999–00	\$2,487	\$867	\$501	57.8%
2000–01	\$2,462	\$997	\$600	60.2%
2001–02	\$2,463	\$1,052	\$609	57.9%
2002–03	\$2,982	\$1,008	\$536	53.1%
2003–04	\$3,132	\$1,183	\$628	53.0%
2004–05	\$3,129	\$1,172	\$650	55.5%

Source: Office of Economic and Demographic Research, *Lottery Revenue*, February 2004, retrieved from [www.state.fl.us/edr/Archives2004/Spring2004/Conferences/lottery0204.pdf](http://www.state.fl.us/edr/Archives2004/Spring2004/Conferences/lottery0204.pdf), and Florida Department of Education, *2003–2004 Education Appropriations*, retrieved from [www.firn.edu/doe/strategy/pdf/lottery.pdf](http://www.firn.edu/doe/strategy/pdf/lottery.pdf)

Educational Enhancement Trust Fund. The programs funded from the Trust Fund are described in a report by the Florida Department of Education, *2003–2004 Education Appropriations*.<sup>43</sup> Until 1997, most of the lottery money was designated to school boards as

<sup>43</sup> This report was issued on January 2004, and funded by the Florida Lottery.



discretionary funding, with a smaller portion dedicated to preschool programs. In 1997, two policies were adopted which had major implications for lottery appropriations in subsequent years. First, the Bright Futures Scholarship Program was established. That program must be funded entirely from proceeds credited to the Educational Enhancement Trust Fund before monies can be distributed to the public schools, community colleges, and universities. Second, the Legislature established the Classrooms First School Construction Bonds Program referenced earlier.

As Table 22 indicates, lottery sales have vacillated since 1990, but the public schools' share of the pie was reduced during the latter part of the 1990s, perhaps due in part to the significant growth of Bright Futures. The downward trend for public school funding reversed significantly in FY 2000–01, with major infusions of funds to the School District Discretionary Lottery Fund Program and the School Recognition/Merit Schools Program. Bright Futures has continued to increase at a far more rapid pace than transfers to education, and if this trend continues, that could put pressure on public school allocations in future years. Most of the jump in FY 2003–04 is attributable to funding operating and capital expenditures to reduce class size.

**Trends in Gross Receipts Tax Revenues and Appropriations.** Gross receipts revenues are a major source of funding for new construction and maintenance of buildings at Florida's public schools, community colleges, and universities. Proceeds come from a tax which is imposed at the rate of 2.5% on the gross receipts of sellers of electricity and natural or manufactured gas, and at a rate of 2.37% of sellers of telecommunications services. The funding for Public Education Capital Outlay (PECO) for public schools, community colleges, and state universities comes from bond and cash proceeds. These proceeds are credited to PECO and the Debt Service Trust Fund. A certain portion of the tax collection proceeds—90% of the average annual tax collections of the prior two years—is set aside to pay for bonded indebtedness.<sup>44</sup> Because of the funding mechanism, the

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<sup>44</sup> A good explanation of how the gross receipts tax becomes PECO appropriation is found online at <http://www.state.fl.us/edr/conferences/peco/pecoflow.htm>

**Table 23. Distribution of Gross Receipts Tax Proceeds to Florida School Districts  
FY 1992–93 through FY 2004–05**  
(millions of constant 2004\$)

Fiscal Year	Statewide Net Gross Receipts Tax Collections	PECO Appropriations Total Bonds and Cash	Allocations to School Districts New Construction/Maintenance	Percentage of Total Allocations to School Districts
1992–93	\$561	\$1,342	\$621	46.3%
1993–94	\$563	\$1,064	\$453	42.6%
1994–95	\$610	\$1,178	\$464	39.4%
1995–96	\$638	\$746	\$388	52.0%
1996–97	\$660	\$694	\$303	43.7%
1997–98	\$673	\$720	\$335	46.4%
1998–99	\$717	\$703	\$212	30.1%
1999–00	\$740	\$565	\$270	47.8%
2000–01	\$783	\$684	\$313	45.7%
2001–02	\$824	\$1,257	\$441	35.1%
2002–03	\$817	\$839	\$280	33.3%
2003–04	\$851	\$768	\$234	30.4%
2004–05	\$873	\$762	\$268	35.2%

Source: Office of Economic and Demographic Research, Gross Receipts Tax Estimating Committee, March 3, 2005, retrieved from [www.state.fl.us/edr/conferences/peco/grutable.pdf](http://www.state.fl.us/edr/conferences/peco/grutable.pdf); PECO sources of revenue (bonds and cash) retrieved from [www.state.fl.us/edr/conferences/peco/pecohists.pdf](http://www.state.fl.us/edr/conferences/peco/pecohists.pdf); Florida Department of Education and appropriations bills for PECO allocations to school districts, 2004-05, Funding for Florida School Districts, retrieved from [www.firm.edu/doe/felp/pdf/fefpdist.pdf](http://www.firm.edu/doe/felp/pdf/fefpdist.pdf). Percentages computed by BEBR.

most significant factor in the magnitude of annual PECO appropriations is the annual growth in tax collections. For example, a growth rate in tax collections of 6% would generate twice as much in bond proceeds as a growth rate of 3%. Table 23 indicates that tax collections continue to increase. The sizes in bond sales obviously vary from one year to the next. Therefore, the amounts credited to the Trust Fund will likewise fluctuate.

Public schools' needs for available funding for new construction and maintenance must compete with those of colleges and universities, and distributions are determined annually through the legislative process. As noted in Table 23, the percentage of allocations to school districts has varied from a low of 30.1% in FY 1998–99 to a high of 52.0% in FY 1995–96. On the whole, total PECO funding for schools in recent years has lagged behind funding in the early 90's, perhaps in part because lottery bond proceeds are being used to pay for schools' new construction and renovation projects. Moreover, transfers of funds from the Education Enhancement Trust Fund (lottery proceeds) to the PECO Trust Fund have occurred in past years.

**Trends in Ad Valorem Tax Levies for Public Schools.** Ad valorem millages may be levied for both capital outlay and operations of public schools. Florida's constitution limits to 10 mills the non-voted ad valorem tax levy that may be imposed by school districts. However, voters may approve an additional millage for capital outlay purposes for a period not to exceed two years and an additional millage for operations not to exceed four years (Florida Statutes 1011.71.) The required local effort and discretionary local effort of the FEFP fall under this 10-mill cap and do not require voter approval. The Legislature must prescribe annually the maximum amount of millage in local effort and discretionary local effort a district may levy. School boards may levy up to 2 mills without voter approval for new construction and remodeling, for maintenance, renovation, and repair of existing facilities, and for other capital outlay projects specified in statute.

Proceeds may also be used for other purposes, such as buses, leasing, and equipment. The Florida Department of Revenue annually reports the school district levies for operations and capital outlay.

School district taxable value has increased by 98% from \$449 billion in 1990 to \$888.9 billion in 2002. During the same period, current expenditures per student (all sources) increased by 38.3% from \$4,475 in FY 1990–91 to \$6,187 in FY 2001–02. The average millage rate assessed by school boards increased steadily throughout the 1980s and 1990s until 1998–99 when a downward trajectory began. Nonetheless, as indicated in Table 24, tax proceeds increased more than inflation in recent years due to

**Table 24. Average Tax Millage Rates and School Taxes Levied, FY 1990–91 through 2004–05**  
(constant 2004\$)

Fiscal Year	School Board Average Millage Rate	School Taxes Levied (billion \$)	Annual Percent Change
1990–91	9.06	\$5,142	9.28%
1991–92	9.27	\$5,366	4.35%
1992–93	9.38	\$5,368	0.04%
1993–94	9.46	\$5,413	0.85%
1994–95	9.76	\$5,710	5.49%
1995–96	9.78	\$5,853	2.50%
1996–97	9.92	\$6,093	4.09%
1997–98	9.58	\$6,133	0.65%
1998–99	9.64	\$6,456	5.27%
1999–00	9.48	\$5,881	-8.90%
2000–01	9.01	\$6,387	8.60%
2001–02	8.73	\$6,817	6.73%
2002–03	8.66	\$7,355	7.89%
2003–04	8.14	\$8,011	8.92%
2004–05	8.23	\$8,540	6.61%

Source: Florida Department of Revenue. Average millage rates and Taxes Levied from *Florida Tax Handbook*, various issues. Annual percentage changes computed by BEBR.

rapidly escalating school district valuations.

**Trends in Federal Revenues for Public Education.** Table 25 provides a snapshot of allocation trends to Florida of ESEA Title I grants (all programs), Special Education—Grants to States, and Vocational Education State Grants. Since enactment of NCLB in 2001, several federally-funded grant programs have been initiated (e.g., Reading First State Grants, Improving Teacher Quality, Education Technology, 21<sup>st</sup> Century Community Learning Centers) and others have been dropped (Class Size Reduction, ESEA Title I—Capital Expenses for Private School Children).

Federal allocations for special education programs in Florida have increased fourfold since 1991, whereas the population of students with disabilities has increased by almost 77%. However,

**Table 25. Federal Allocations for Select State Formula Programs for Florida, FFY 1991 through 2004**  
(millions of constant 2004\$)

Federal Fiscal Year	ESEA Title I All Programs	Special Education Grants to States	Vocational Education State Grants
1991	\$338	\$117	\$47
1992	\$376	\$125	\$52
1993	\$356	\$128	\$52
1994	\$349	\$134	\$52
1995	\$358	\$145	\$50
1996	\$353	\$145	\$50
1997	\$406	\$193	\$52
1998	\$414	\$235	\$52
1999	\$439	\$264	\$52
2000	\$443	\$297	\$54
2001	\$485	\$364	\$54
2002	\$593	\$422	\$58
2003	\$632	\$490	\$60
2004	\$673	\$551	\$62
% Change 1991–2004	99%	373%	32%

Source: U.S. Department of Education, Budget, Budget tables, retrieved July 08, 2005, from [www.ed.gov/about/overview/budget/history/index.htm](http://www.ed.gov/about/overview/budget/history/index.htm) and [www.ed.gov/about/overview/budget/statetables/Florida](http://www.ed.gov/about/overview/budget/statetables/Florida)

the greatest increase in both ESE enrollment (over a 50% increase) and federal funding for special education programs occurred after 1997, when amendments to the federal Individuals with Disabilities Education Act added the requirement that school districts provide appropriate public education to all students who lack a high school diploma and are under the age of 22. Federal funding for Florida's disadvantaged students has increased more rapidly after the passage of NCLB. As we will discuss further later, this Act has, as one of its major objectives, closing the achievement gap between disadvantaged and more affluent children. We also note that President Bush's budget request

includes no federal funding for vocational students in FFY 2005.

### *Enrollment Trends*

School districts' budgets are based on student enrollment projections. Therefore, an understanding of the factors affecting enrollment is useful for any revenue and expenditure projections for public education. In 2003–04, enrollment in Florida's public schools was almost 2.6 million for PK–12. Enrollment actually declined throughout the second half of the 1970s, but then increased by 72% from 1980–81 to the present. The lion's share of that increase occurred from 1990–2000.

**Shifts in Enrollment Growth by Grade.** Policymakers care about the grades in which enrollment growth occurs. All things being equal, it costs more to educate students enrolled in basic education programs in high school than in the lower grades.<sup>45</sup> Over the past 23 years, there has also been a discernible shift in the grades most impacted by enrollment increases in Florida's public schools. For example, enrollment in the 9<sup>th</sup> grade has almost doubled from 127,440 students in 1980–81 to 254,697 in 2003–04. Since 1990, enrollment in the 9<sup>th</sup> grade has increased by almost 72%, compared to a total enrollment increase of less than 40% for Florida's public schools (all grades). Part of the explanation might be transfers to Florida's public schools from home-schools and private schools. Also, transfers to Florida public schools from schools in other states occur more often in the 9<sup>th</sup> grade than in the other grades.<sup>46</sup> Enrollments in most school districts fall from the 9<sup>th</sup> to the 10<sup>th</sup> grades, in large part due to policies that retain poor-performing students in the 9<sup>th</sup> grade. The other similarly impacted grade is Kindergarten, where enrollment has increased by over

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<sup>45</sup> For example, the cost factor in the FEFP formula applied to high school students enrolled in basic programs is 1.132 in 2004–2005, compared to 1.012 in grades K–3 and 1.000 in grades 4–8.

<sup>46</sup> An October 2002 survey conducted by the Florida Office of Economic and Demographic Research (EDR) on *Location of Students in the Prior Year* found that 4,857 students entered 9<sup>th</sup> grade public schools from Florida private schools—over 20% of all students transferring from Florida private schools to Florida public schools in grades 1–12. To put this in context, 9<sup>th</sup> grade students in fall 2002 comprised only 10.8% of all students in grades 1–12 in Florida public schools.

**Table 26. Enrollment Trends in Florida's Public Schools**

School Year	Number of Students in Florida Public Schools	Annual Percentage Change
1980–81	1,510,517	
1985–86	1,562,872	0.7%
1990–91	1,861,592	3.5%
1995–96	2,175,233	3.1%
2000–01	2,434,403	2.3%
2004-05	2,638,127	2.0%

Source: 1980-2004 *Florida Statistical Abstract* various issues, Table 4.20; percentage change computed by BEBR, University of Florida. 2005 Florida Department of Education, Membership in Florida's Public Schools, Fall 2004, retrieved July 05, 2005, from [www.firn.edu/doe/eias/eiaspubs/pdf/pk-12mbrship.pdf](http://www.firn.edu/doe/eias/eiaspubs/pdf/pk-12mbrship.pdf)

115% since 1980–81, with much of that growth occurring since the mid-1980s.

**Migrations to Florida School Districts.** An understanding of migration patterns to Florida school districts and the assumptions underlying those projections is important for at least three reasons. First, revenue and spending policies are based on enrollment forecasts. If those forecasts rely on flawed assumptions, the numbers could be understated or overstated and result in funding that may be respectively inadequate or excessive to meet actual demand. For example, in 2000–02, enrollment projections underestimated migration into the state. In 2002–03, in-migration decreased after September 11<sup>th</sup> so enrollment projections were overstated (EDR, 2003). Second, trends in migration to Florida are also tied to changes in the economy so we might expect increased enrollment resulting from students moving to Florida to increase if the state's economy is strong. Thus, understanding employment trends in Florida should shed some light on enrollment trends. Third, we might expect student performance as measured by assessment test scores to be related to enrollment stability. The Florida Department of Education concluded in a recent report that there appears to be a relationship between the enrollment stability rate and FCAT performance (FDOE, 2003c). In its analysis, the Florida Department of Education defines "stability rate" as the

percentage of students in the October membership (in this case 2000–01) still present in the second semester. Districts with lower stability rates appeared to have lower proficiency rates on the FCAT than districts with higher stability rates. Although more research would be needed to apply that finding to students who come from other states or countries at the beginning of the year, it seems intuitive that there would be a cost (e.g., poorer performance) for students to move and then adjust to a new curriculum, all things being equal.

Another trend worth considering is the pattern of net migration among Florida school districts. A survey conducted in fall 2002 of the location of students in the prior year gives us some insight into this dynamic. Miami-Dade experienced the greatest net out-migration of students to other Florida school districts—mostly to Broward (1,559 students). These transfers were due in large part to upwardly mobile families who considered Broward to provide a better public education than Miami-Dade (Florida Chamber Foundation, 2003, pp. 2-49). Likewise, Orange, Palm Beach, Hillsborough, and Escambia experienced net out-migration to other Florida school districts. In each of those four cases, most of those migrations were to smaller contiguous school districts that were generally not as affluent (as measured by per capita income) and had smaller minority student populations.<sup>47</sup>

Comparable to migration between school districts, moves between schools within the same district can prove disruptive to students and teachers, alike. Data from 1997–98, for example, show that intra-district transfers averaged approximately 17% in Florida, with the lowest percentage occurring in high school (14%) and the highest occurring in middle school (21%). In that school year, 16% of elementary school students switched from one school to another within the same district.<sup>48</sup>

A related migration trend concerns the number of out-of-state students entering Florida’s public schools. In fall 2002, that number was equal to 2.5% of the total enrollment for grades 1–12.

The largest number entered public schools in Orange’s school

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<sup>47</sup> See map of Net Migration Between Contiguous Counties in Florida Office of Economic and Demographic Research, *Location of Students in the Prior Year*.

<sup>48</sup> Data compiled by Dr. David Figlio, Department of Economics, University of Florida. Transmitted via e-mail to Lynne Holt, April 16, 2004.



**Table 27. Change in Student Composition by Race/Ethnicity in Florida's Public Schools, 1977 to 2004**

Year and % Change	All Students	White Enrollment	African- American Enrollment	Hispanic Enrollment
1977	1,534,041	1,072,136	352,413	99,636
2004	2,638,127	1,287,374	621,763	594,417
% Change	72%	20%	76%	497%

Source: Florida Department of Education, Membership in Florida's Public Schools, Fall 2004, retrieved July 05, 2005, from [www.firn.edu/doe/eias/eiaspubs/pdf/pk-12mbrship.pdf](http://www.firn.edu/doe/eias/eiaspubs/pdf/pk-12mbrship.pdf)

district—almost 10% of all out-of-state incoming students. Other districts with a proportional “over-representation” of out-of-state students included Escambia, Duval, and Hillsborough. Finally, immigration from other countries to Florida has picked up since the downward turn attributed to September 11. The recent influx of foreign students is particularly noticeable in Palm Beach, Orange, Osceola, and Broward (FEFP, 2003).

**Changes in Racial/Ethnic Composition of Public School Students.** Policymakers care about changes in the composition of public student membership because such changes may portend the need for certain student services and for strategies to hire a different ethnic and racial composition of teachers and other academic professionals. In addition, migration trends have resulted in significant changes to the state's public school student profile.

A recent report by the Florida Department of Education (2004b) compared the growth of white and minority student populations from 1977 to 2004 (Table 27). In that 26-year period, the percentage of white students in Florida's public schools decreased from almost 70% in 1977 to less than 50% in 2004. At the same time, the percentage of minority students increased from 30% to almost half of the total student population. The greatest enrollment gains were realized by the Hispanic student population.

**Impact of Universal or Voluntary Pre-Kindergarten on Enrollment.** Pre-Kindergarten or PK deserves some comment because, unlike grades K–12, it was not mandated by the state. Florida's youngest, most vulnerable preschool children (poor,

disabled, or both) already receive services from several state- and federally-funded educational programs. The Florida Partnership for School Readiness in the Agency for Workforce Innovation coordinates these programs. In FY 2002–03, one or more government-subsidized school readiness programs served 61,555 four-year-old children (including some who were disabled and not economically disadvantaged) (Florida State Board of Education Universal Pre-Kindergarten Education Advisory Council, 2003, p. 6-3). More recent estimates place that number at 64,743 or 32.5% of all four-year old Floridians.<sup>49</sup> Children from working families with incomes that barely exceeded 150% of federal poverty level, or children who did not meet other facets of the eligibility criteria, literally “fell through the cracks.” To redress these problems, Amendment 8 to the Florida—the Voluntary Universal PK program—was placed on the ballot and subsequently approved in November 2002. That Amendment requires “*every* four-year-old child in Florida...be provided...[with] a high quality pre-kindergarten learning opportunity in the form of an early childhood development and education program which shall be voluntary, high quality, free, and delivered according to professionally accepted standards.”

The 2004 Legislature established the Voluntary Pre-Kindergarten Education Program. This program provides three options: a 540-hour PK program developed by a child development provider meeting specified standards; a 300-hour summer PK program delivered by a public school taught by at least one Florida-certified teacher for every 10 students; and a 540-hour PK program delivered by a public school in school districts that meet class-size reduction requirements.

The cost of the Voluntary PK initiative has yet to be determined, as it will not be implemented until fall 2005. The 2004 legislation requires funding to be included as categorical funding subject to equalization, in addition to annual FEFP appropriations. As of January 1, 2003, almost 199,000 children in Florida were four years old. No state-subsidized transportation funding may be used for this program. Assuming a participation or take-up rate of 70%, approximately 140,000 children might be anticipated to

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<sup>49</sup> See School Readiness Estimating Conference, January 28, 2004.

enroll in the Voluntary PK program in 2005. If participating children reflect the economic profile of all four-year-old children in the state, we might expect approximately 43% of four-year-old students enrolled in publicly supported PK programs to come from low socio-economic backgrounds.<sup>50</sup>

**Impact of Private Schools and Vouchers on Enrollment.**

There are two reasons to consider the trends in private school enrollment in Florida. First, like migration projections, private school enrollment projections affect public enrollment forecasting and the funding that is based on such forecasting. Second, as is discussed below, private schools in recent years have been affected by federal and state policy changes so the assumptions underlying historical private school enrollment projections might need to be reevaluated.

A private school is defined in Florida law as “an individual, association, co-partnership, or corporation, or department, division, or section of such organizations, that designates itself as an educational center that includes kindergarten or a higher grade...below college level.” The Florida Department of Education’s reports on private school enrollment generally compute enrollment to include PK. In recent years, as reflected in Table 28, enrollment in private schools (PK–12) has continued to grow, accounting for 386,843 of all children enrolled in Florida’s public and private schools in 2004-05, compared to 234,022 in 1980–81.

Not surprisingly, the largest school districts in the state have the largest number of private school students. In terms of absolute numbers, Miami-Dade had the most students enrolled in private schools in 2003–04 (73,733), followed by Broward (44,421). In terms of percentage of total enrollment—public and private schools within a district—Jefferson led the charge, with 19.0% of all students enrolled in private schools (FDOE, 2004c).

At least three developments are expected to lead to increased private school enrollment in future years:

- (1) The federal No Child Left Behind (NCLB) Act requires supplemental educational services to be offered to students

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<sup>50</sup> Ibid. Of 198,918, 4-year-olds in Florida, 86,256 were living as of January 2003 below 200% of poverty level.

**Table 28. Private School Enrollment  
1980–81 through 2004-05**

School Year	Number (PK–12)	Percentage of Total School Enrollment (PK–12)
1980–81	234,022	13.4%
1985–86	248,093	13.7%
1990–91	246,593	11.8%
1995–96	245,229	10.1%
1996–97	257,805	10.5%
1997–98	270,554	10.5%
1998–99	274,711	10.5%
1999–00	288,248	10.8%
2000–01	348,736	12.5%
2001–02	354,541	12.4%
2002–03	377,701	12.9%
2003-04	381,346	12.8%
2004-05	386,843	12.4%

Source: 1980-2004, *Florida Statistical Abstract*, 2004, Table 4.06. Data for 2004-05 from Florida Department of Education, Florida K-20 Education Delivery System, 2005, retrieved July 5, 2005, from [www.fdoe.org/osi/meeting-2005-06-20/III/FI%20Ed%20Sys.pdf](http://www.fdoe.org/osi/meeting-2005-06-20/III/FI%20Ed%20Sys.pdf)

from low-income families if these students are enrolled in schools that fail to meet state standards for at least three years. Such services could potentially be provided by private schools approved by the state.

(2) In Florida, three voucher programs currently allow public funds to be applied to enrollment in private schools. Each program, briefly summarized below, targets a specific high-risk population—children in low-performing schools, children with learning disabilities, or poor children.

- The Opportunity Scholarship Program provides scholarships to Florida students assigned to or enrolled in “failing” schools; students can use these vouchers either to attend a higher performing public school or apply them toward private school tuition. Students are

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eligible for this voucher program if the school they attend has earned a failing grade under Florida's A+ Accountability Plan for two of the past four years. Approximately 660 students attend private schools with assistance from this program. Program expenditures are expected to be \$2.8 million this year although the funding committed for the program is currently being litigated (*The Gainesville Sun*, 2003, p. 4B).

- The McKay Scholarships for Students with Disabilities Program, enacted by the Legislature in 1999, provides vouchers for students with disabilities whose parents are dissatisfied with their children's progress in school. Vouchers can be applied to grades K–12 in another public school or may be applied toward tuition in a private school. To be eligible, students must have been enrolled in a public school during the previous year and have an Individual Education Plan. Over 9,000 students received these vouchers for public and private schools in 2002–03 and approximately 12,200 are currently using them. The program is administered by the Florida Department of Education. Funding flows through the Florida Education Finance Program (FEFP) for these scholarships and has increased from approximately \$6 million in 2000–01 to \$53 million in 2002–03. A recent legislative report recommended changes to the program to improve the accountability of the Florida Department of Education's administration of the program and the accountability of the private schools participating in the program. Despite accountability problems, a report from the Manhattan Institute noted a higher level of parental satisfaction with private school services for their children with special needs than with public school services (Florida Senate, 2003; Greene & Forster, 2003).<sup>51</sup>
- Corporate Income Tax Credit Scholarship Program,

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<sup>51</sup> Parental responses were elicited from telephone interviews with 600 parents whose child was enrolled in a school receiving McKay vouchers, and with 215 parents whose child no longer attended a school receiving McKay vouchers.

enacted by the Legislature in 2001, provides scholarships to students who are eligible for the free or reduced-price lunch program. Businesses may receive a tax credit equal to 100% of eligible donations to private scholarship organizations for poor children. The total amount in tax credits to be granted each state tax year is \$50 million. To qualify for scholarships, students must either be entering Kindergarten or must have attended a Florida public school the previous year. Scholarships under this program may not exceed \$3,500, and may be used by students to attend private schools or to pay for transportation to another public school. The Department of Revenue approved \$46.9 million in tax credit applications for tax year 2002. In FY 2002–03, 19,206 students received scholarships to attend a private school and 107 received scholarships to cover transportation to a public school in another district. A recent legislative report recommended changes to the program to improve the accountability of the State Board of Education, the Florida Department of Education, and scholarship-funding organizations in implementing this program (Florida Senate, 2003c).<sup>52</sup>

(3) The 2004 Legislature enacted legislation that would allow 4-year-olds to participate in public school programs and privately-run programs (child development providers) that meet specified curriculum standards and include private schools, child care or family day care facilities, or faith-based establishments. Regional child development boards would be established to coordinate the PK programs and pay public schools and child development providers for the program costs (excluding transportation costs) of enrolled students.<sup>53</sup>

**Impact of Home Schools on Enrollment.** Home education was statutorily authorized in 1985. A *home education program* is defined in Florida law as a “sequentially progressive instruction of a student by his or her parents.” These programs must meet certain

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<sup>52</sup> Note that the amount for that program was increased to \$88 million in 2003, but reverted in the special session in June to \$50 million, with the remaining \$38 million applied to the FEFP for enrollment growth in public schools.

<sup>53</sup> See 2004 CS for CS for SB 3036.

instructional criteria and test students' progress. Parents are required to notify the school district of their intent to establish or maintain a home school program. The Florida Department of Education provides technical assistance, information and materials on home education to school districts and parents. In contrast to voucher programs, no state funding is appropriated for the instruction of home-schooled students. However, we note that home schooling—the venue for a relatively small population of students (mostly white males of elementary school age)—is on a steady upward trajectory and could have implications in the future for assumptions underlying enrollment projections. The number of Florida's children receiving home-schooling has more than quadrupled, increasing from 11,048 students in 1991–92 to 45,333 in 2002–03. Broward is the district with the highest number of home-educated students (3,196) in the state, followed in rank order by Duval, Hillsborough, Palm Beach, Orange, Pinellas, and Polk. Miami-Dade is a distant eighth, with 2,254 home-schooled students.

**Impact of Charter Schools on Enrollment.** In 1996, the Florida Legislature authorized the establishment of charter schools for the express purpose of improving student learning, increasing teaching innovation, providing students and teachers with more choice, increasing accountability, and providing competition within the public school system. Charter schools in Florida are publicly funded, nonsectarian schools that operate under performance contracts with their sponsoring local school district boards or university. These charter schools have a great degree of independence and autonomy in terms of institutional operation, but they must meet certain statutory requirements, including the state's accountability system and graduation requirements. To be eligible for state funding, charter schools also must be open to all children. They may offer programs targeted to at-risk children or focus on specific curricula, such as science or the arts. Legislation enacted in 2003 requires that reading be a primary focus of the charter school curricula, regardless of other areas of concentration.

As indicated in Table 29, the growth in both the number of charter schools and the number of enrolled students has been significant. Moreover, the average number of students per school has continued to increase.

**Table 29. Number of Charter Schools in Florida  
1996–97 through 2003–04**

School Year	Number of Charter Schools	Students in Charter Schools	Students per Charter School
1996–97	5	574	115
1997–98	30	2,799	93
1998–99	74	9,135	123
1999–00	118	16,120	137
2000–01	182	25,989	143
2001–02	201	40,465	201
2002–03	222	53,016	239
2003–04	255	67,512	265

Source: Florida Department of Education, 2005, retrieved July 5, 2005, from [www.fldoe.org](http://www.fldoe.org). Number of students per charter school computed by BEBR.

Policymakers care about charter school enrollment projections because Florida's charter schools, like other public schools, receive operating funds through the formula of the Florida Education Finance Program, or FEFP, based on enrollment projections. However, the funding formula for capital projects of charter schools is different from that of traditional public schools.<sup>54</sup> The Legislature used to limit the number of charter schools authorized in a given school district but those restrictions were repealed in 2003 legislation. Consequently, we might expect the number of charter schools to increase rapidly in future years, thus imposing pressure on policymakers to change the charter school capital outlay formula. Offsetting that pressure to some extent is the observation that over 85% of new charter school students come from other public schools in Florida and less than 15% come from private schools and home schools. Therefore, public funds would have been expended in any case for capital projects to accommodate the majority of those students and perhaps at even greater cost to some districts than is presently the case.

Florida's charter schools are also under pressure to improve

<sup>54</sup> Charter school capital outlay allocations to school districts are based on a formula of 1/15 per student of the cost per student multiplied by the school's projected enrollment subject to an annual limit of \$27.7 million.



their level of accountability—both in terms of financial stability and student performance. In a recent report, the Office of Program Policy Analysis and Government Accountability (OPPAGA) concluded that the fiscal condition of the state’s charter schools had improved over the three-year period (1997–2000), but the report also called for the Department of Education to increase its technical assistance to charter schools, and for school districts to improve their monitoring capabilities (OPPAGA, 2002).

In terms of student performance accountability, research findings that compare performance outcomes of students in charter schools to their peers in traditional schools have found mixed results. A longitudinal study of 32 charter schools and 1,541 traditional schools in Florida compared the performance of students at both types of schools on the norm-referenced portion of the FCAT in reading and mathematics. This study covered test scores from the school years, 1999–2000 through 2001–02. The researchers found that students in sampled charter schools, on average, began behind and remained behind their peers in traditional schools on their performances on the FCAT/NRT tests. One explanation is that students at the sampled charter schools were slightly more disadvantaged than those at the traditional schools. Nonetheless, students at the charter schools, on average, made higher gains than those at traditional public schools in reading and equivalent progress in math (Oldham, Wooley-Brown, Topping, & Dedrick, 2002).<sup>55</sup>

**Impact of the Florida Virtual School on Enrollment.** Another public-supported alternative to charter schools is the Florida Virtual School (FLVS). The FLVS provides Internet-based curricula to students in grades 7–12 and to adults seeking GEDs. Until 2003–04, the FVS was supported through an annual line-item appropriation. Effective FY 2003–04, the Legislature has shifted

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<sup>55</sup> Note that much depends on the methodology used, the schools that were subject to the research, the student population profiles, and the performance measures that were assessed. A good compilation of summary findings of 98 studies conducted since 1995 was compiled by the advocacy organization, the Center for Education Reform. *What the Research Reveals about Charter Schools: Summary and Analyses of the Studies*, September 2003, available at [http://www.edreform.com/\\_upload/research.pdf](http://www.edreform.com/_upload/research.pdf). The collective gains of charter school students in both reading and math were statistically significant.

the basis of operating funds of FLVS to the Florida Education Finance Program (FEFP), with funding based on the number of credits completed. In addition to authorizing FEFP monies, the Legislature appropriated funding in both FY 2003–04 and FY 2004–05 for the operations of two pilot virtual schools to serve children in grades K–8.

Florida law requires that FLVS give priority to students needing expanded access to courses, such as students in home education, inner-city students, and students in rural areas lacking access to higher-level courses. Students seeking to graduate one semester early are also given priority. Policymakers monitor enrollment of students in FLVS for much the same reasons as they do for students in charter schools. First, there is a concern about accountability. The FLVS has established standards and developed an accountability system to assess its progress in meeting standards for student achievement although a recent OPPAGA report found that the FLVS's goals and accountability system were not aligned with its statutory mission. Second, there is a concern that program costs be accurately reflected and monitored.

Enrollment in FLVS has continued to increase since 1997, when it was initiated as a joint project between the Alachua County and Orange County school boards. Now funded at \$8.4 million, FLVS projects enrollment to reach 15,000 in 2003–04.<sup>56</sup> We might expect growing enrollment in FLVS to have at least some effect in reducing the need for funding of new construction and ongoing maintenance.

**Impact of Accelerated Progression on Enrollment.** Florida's students have several options to graduate early. They can do so by enrolling in: FLVS courses, advanced placement courses, the International Baccalaureate, Advanced International Certificate of Education, and dual enrollment courses. Florida law provides students scheduled to graduate in 2004 with three high school graduation trajectories that can include those options. In addition to the 24-credit four-year program, students may also opt for a three-year standard college preparatory program or a three-year career preparatory program. Accelerated progression reduces costs to schools because they can educate students for a shorter period of

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<sup>56</sup> See [http://www.flvs.net/about\\_us/facts](http://www.flvs.net/about_us/facts).

**Table 30. Florida Dropout Rates by Selected District  
1998–99 through 2003–04**

School Year	State	Broward	Duval	Escambia
1998–99	5.4%	2.8%	8.6%	2.6%
1999–00	4.6%	2.3%	8.5%	3.0%
2000–01	3.8%	1.6%	8.3%	2.4%
2001–02	3.2%	1.3%	5.7%	2.3%
2002–03	3.1%	1.0%	4.6%	2.5%
2003–04	2.9%	1.1%	5.1%	2.4%
School Year	Hills- borough	Miami- Dade	Orange	Palm Beach
1998–99	4.2%	10.6%	5.7%	3.8%
1999–00	2.6%	8.0%	6.8%	3.2%
2000–01	2.7%	5.4%	4.9%	2.5%
2001–02	2.2%	4.4%	2.8%	2.6%
2002–03	2.6%	4.2%	4.4%	2.6%
2003–04	1.9%	4.6%	2.5%	2.6%

Source: Florida Department of Education, 2005, retrieved July 5, 2005, from [www.fldoe.org](http://www.fldoe.org)

time. To some extent, that savings is offset by increased costs to districts for providing gifted programs. However, larger student enrollments in accelerated progression programs should contribute to slower enrollment growth in the long-term.

**Impact of Dropout Rates on Enrollment.** Dropout rates also affect enrollment trends. Prior to 1998–99, the Florida Department of Education included in its dropout rate calculations only those students who were 16 years old and older and exceeded the age of compulsory school attendance. Since that time, the dropout rate has included all children in grades 9–12 who drop out of school. Table 30 shows the trends for 1998–99 to 2002–03. For the state and our “focus” districts, the dropout rate has decreased since 1998, most significantly for Miami-Dade. In the most recent year, that trend has reversed slightly in three of the districts, perhaps due to more employment opportunities.

One explanation for the declining dropout rate may be implementation of the Learnfare Program. Temporary cash

assistance may be reduced for habitual truants or dropouts who are either dependent children of families eligible for such assistance or teen-age mothers under 16. Another explanation may be Florida legislation linking drivers' license issuances to school attendance. Students who accumulate 15 unexcused absences in a period of 90 calendar days risk not receiving, or even losing, their driver's licenses. Finally, absences (the percentage of students absent 21 or more days) and dropout rates are reported on the Florida Department of Education's web site at the state, school district, and school levels. Perhaps not surprisingly, the percentage of chronic student absences, like the dropout rate, has declined since 1998–99.

**Enrollment Projections—2000–2020.** In 1980, 20% of Floridians lived in the northern part of the state, 38% in the central region, 8% in the southwest, and 34% in the southeast. Since 1970, the population has grown more rapidly in the central region of the state than in the southeast region and since 1980, it has grown almost as rapidly in the northern region as in the central region. In fact, the population is expected to grow more rapidly in the northern region than in the southeast region in the not-too-distant future (Smith, 2004). So we might expect public school enrollment patterns to follow suit and there is some evidence that this trend is already beginning. If we look at enrollment for grades PK–12 in the Flagler, St. Johns, and Clay school districts from fall 2000 to fall 2004, increases of 43.4%, 21.1%, and 15.2%, respectively, far exceed the state average of 8.4% (FDOE, 2005).

Enrollment in Florida's public schools increased by 30.8% in the 1990s, but is generally expected to slow down in future years as is reflected in Table 31. Part of the reason for slower growth is demographic but part may be attributable to the state's retention policy and to increasing numbers of students enrolling in private schools, home schools, and accelerated graduation programs. To some extent, this decline in growth should be offset by lower dropout rates. We believe these trends will continue.

The high school population—the most expensive population to educate for basic education programs—will increase at the fastest

**Table 31. Public School Enrollment Projections, PK–12<sup>57</sup>  
1999–2000 through 2010–11**

School Year	PK–5	Grades 6–8	Grades 9–12	Total
1999–00	1,132,280	555,818	638,152	2,326,250
2000–01	1,147,694	577,166	660,269	2,385,129
2001–02	1,161,977	599,033	688,704	2,449,714
2002–03	1,166,473	612,236	715,369	2,494,078
2003–04	1,188,894	623,234	740,993	2,553,121
2004–05	1,210,247	632,005	767,504	2,609,756
2005–06	1,255,629	623,607	782,507	2,661,743
2006–07	1,288,634	631,916	795,389	2,715,939
2007–08	1,321,255	638,532	815,548	2,775,335
2008–09	1,348,867	664,655	815,231	2,828,753
2009–10	1,371,646	681,419	828,278	2,881,343
2010–11	1,393,803	698,330	840,354	2,932,487
% change 1999–00 to 2010–11	23.1%	25.6%	31.7%	26.1%
% change 2004–05 to 2010–11	15.2%	10.5%	9.5%	12.4%

Source: Preliminary Projections from Office of Economic & Demographic Research, March 2004, subject to change. Enrollment projections do not include summer term for Juvenile Justice Offenders. Percentage changes computed by BEBR.

rate during the entire decade and PK–5 at the slowest rate.<sup>58</sup> However, a closer examination of preliminary long-term enrollment projections shows that from 2004–05 to 2010–11, the student population projected to experience the fastest growth will

<sup>57</sup> There is some difference in historic year enrollment numbers furnished by EDR and those cited in other sections of this paper. In general, EDR's numbers are lower because they: only include PK students who are funded through the FEFPP formula; the annual enrollment is an average of the October and February surveys; and the data are audited.

<sup>58</sup> See EDR, *Demographic Information for Members and Staff*, February 2004. High school students (ages 15–17) are projected to increase by 17.8%, compared to only 4.9% for the younger cohorts (4–15).

be elementary school children (PK–5), with overall slower growth rates expected for middle school and high school student populations. This may be good news for the state and school districts in some ways, because elementary school children are generally the least expensive group of students to educate in terms of basic education and capital outlay expenditures. However, these costs would “bump” up over the decade as the elementary students progress through the public education system and need more costly basic services. We also note that class size reduction is more expensive per student in the lower grades so the two trends will counteract each other to some extent.

***Projected Expenditure Trends for Public Schools in FY 2010–11***

To get a crude idea of what it would cost to fund the operating expenditures of public education in FY 2010–11, we assume that 2.9 million students will enroll in Florida’s public schools (See Table 31). We know it cost \$6,187 in current expenditures (all funding sources) to educate public school students in FY 2001–02 (See Table 14). If we adjust for inflation using the same inflation rate (26.9%) for the nine-year period spanning FY 2001–02 to FY 2010–11, as actually occurred from July 1991 (FY 1991–92) to July 2000 (2000–01), our per student expenditure would be \$7,851. So operating expenditures for PK–12 public education would total \$22.8 billion (all sources) in FY 2010–11, based on those assumptions (\$7,851 multiplied by 2.9 million students). In FY 2001–02, current expenditures per resident totaled \$911 (See Table 14). We assume the projected population in 2010 will be approximately 19 million Florida residents. Therefore, the spending burden per resident based on that population estimate for 2010 would be \$1,178 (\$7,851 multiplied by 2.9 million students/19 million residents).<sup>59</sup> If inflation is less than 29% from July 1, 2001 to July 2010, this increase would be reduced correspondingly.

Of course, the estimate could be understated due to several factors identified in previous sections. Among the most likely,

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<sup>59</sup> See *Florida Statistical Abstract 2004*, Table 1.40 for the population estimate of 19,397,414 in 2010.

given our previous analysis are: (1) the rapid growth in recent years of students with special needs; (2) pressures on teacher salaries; (3) increasing transportation costs; (4) growing demand for computer technology; and (5) mandated class size reduction.

Factors that might be expected to offset that pressure, at least to some extent, include: the changing composition of public school students in the next five years (a slower growth rate of high school students relative to that of elementary school students who generally cost less to educate); more students enrolled in private and home schools (who will not receive publicly-subsidized instruction and support services); and students opting for accelerated graduation programs.

Litigation concerning funding adequacy in almost half the states in the country may have implications for funding decisions in Florida. As one might guess, these lawsuits are being monitored closely, although none of these lawsuits have progressed to the U.S. Supreme Court. An attempt was made by plaintiffs who petitioned the Court to hear a funding adequacy case affecting Ohio, but the Court rejected that request without comment. Nonetheless, decisions by courts in several states, including New York, New Jersey, Ohio, and Kansas, have ruled in favor of the plaintiffs and have ordered states to remedy their funding methodologies (National Conference of State Legislatures, 2003).

### ***Projected Revenue Trends for Public Schools in FY 2010–11***

Long-term revenue projections, like expenditure projections, should always be taken with a large grain of salt. Unanticipated changes to the economy, unforeseen policy changes (at all levels of government), and international policy decisions can affect Florida's economy in multiple and complex ways. Long-term revenue projections are perhaps most useful at pointing to revenue sources that are more or less capable of meeting changing demands for government services and programs if a government's tax policy remains essentially the same in future years and historic trends can be used somewhat reliably to predict future funding capacity. We should keep these observations in mind as we consider the revenue projections below. The details will undoubtedly change over the next few years.

**Table 32. General Revenue Collections and General Revenue Fund Appropriations per Florida Resident/Student Actual FY 2003–04 Compared to Projected FY 2010–11**

School Year	Total General Revenue Collections (million \$)	Number of Students in Public Schools <sup>a</sup>	General Revenue Fund Appropriations for Schools (million \$)	General Revenue Fund Appropriations per Student	General Revenue Fund Appropriations per Resident
2003–04	\$21,748	2,555,674	\$8,373	\$3,276	\$478
2010–11 Projected	\$31,273	2,958,624	\$11,878 <sup>b</sup>	\$4,014	\$604

<sup>a</sup> Number of regular-term students, PK–12 in Florida Public schools, Economic and Demographic Research, February 2005. Includes special districts and virtual school. PK students funded only through FEFP formula.

<sup>b</sup> Assumes the same percentage of general revenue proceeds appropriated for public schools in FY 2010–11 as in FY 2003–04 (37.98%).

Note: Projected revenue for 2004-05, \$23,575.9 (Florida Revenue Estimating Conference, Revenue Analysis FY 1970-1971 through FY 2013-14, Fall 2004).

Source: General Revenue collections from Florida Revenue Estimating Conference, Revenue Analysis FY 1970-1971 through FY 2013-14, Fall 2004. General Revenue Fund Appropriations for Schools from Florida Department of Education, 2005. Florida population from Office of Economic and Demographic Research, March 2005, (estimated number of residents in 2010, 19,655,095 million). Retrieved July 5, 2005, from:

[www.state.fl.us/edr/Archives2005/Spring2005/conferences/publicschools022505.pdf](http://www.state.fl.us/edr/Archives2005/Spring2005/conferences/publicschools022505.pdf)

[www.state.fl.us/edr/conferences/publicschools/publicschools.htm](http://www.state.fl.us/edr/conferences/publicschools/publicschools.htm)

[www.firn.edu/doe/strategy/fefp1st.htm](http://www.firn.edu/doe/strategy/fefp1st.htm)

[www.state.fl.us/edr/conferences/population/fdec0502.pdf](http://www.state.fl.us/edr/conferences/population/fdec0502.pdf)

**General Revenues.** Public schools in Florida received approximately 37.7% of general revenue proceeds collected in FY 2002–03—over \$7.5 billion of total general revenue collections of almost \$20 billion in FY 2002–03 (Table 32). If we assume that share of public school appropriations (37.7% of total general revenue proceeds) stays the same in FY 2010–11 as in FY 2002–03, public schools would receive \$10.7 billion based on a total revenue projection of \$28.4 billion for FY 2010–11 (Florida



Consensus Estimating Conference, 2003).<sup>60</sup> Spending per resident for public education would increase by about 25%, although adjusted for inflation in real dollars there might be little difference. This assumes the inflation rate from July 2002 to July 2010 is similar to that of 23% realized for the eight year period from July 1992–July 2000.

Based on Revenue Estimating Conference projections (March 2004) and assuming no economic downturn until after FY 2010–11, projected general revenue collections for public schools in FY 2010–11 could be under pressure to meet growing demand. Compliance with the Class Size Amendment and NCLB will increase public schools' demand for a larger share of general revenue proceeds than they have received through annual appropriations. The constitutional amendment provides that funding for class size reduction is the state's, and not the school districts', responsibility. We also expect greater pressure for nonfederal public school funding to increase, particularly as schools pay for teachers with qualifications meeting the requirements of NCLB in order to avoid federal sanctions. If past practice continues, a portion of operating expenditures for class size reduction and a significant portion of funding for teacher compensation will come from the General Revenue Fund.<sup>61</sup> The impact of the class size reduction should be considered cumulative, with the greatest impact affecting the last years of this decade.

But policymakers always have several options. The determination of recurring and nonrecurring revenues in the budgeting process helps to prevent the state from over-committing to existing programs. To fund the FEFP, local effort could be increased relative to state funding as school districts have not yet reached their 10-mill caps. But political opposition from counties (especially those with the greatest subsidization burden) might need to be considered. Another option always open to policymakers would be to shift funding from programs in other agencies to fund PK–12 public education programs or increase taxes. These measures would involve political considerations

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<sup>60</sup> Note that \$21,408.2 billion is the revised general revenues net collection for FY 2003–04 from the March 2004 Revenue Estimating Conference.

<sup>61</sup> For example, in FY 2003–04, \$386.3 million was appropriated from the General Revenue Fund for class size reduction.

**Table 33. Lottery Revenue Funding per Florida Student  
FY 2003–04 and FY 2004–05  
Compared to Projected FY 2010–11**

School Year/ Fiscal Year	Lottery Transfer to Education (million \$)	Lottery Funding for Schools (million \$)	Funding per Student
2003–04	\$984	\$615	\$240
2004–05	\$998	\$650	\$249
2010–11 Projected	\$1,123	\$696	\$272

Source: 2003-2005 Lottery Transfer to Education from Florida Lottery Revenues, February 2004; Projection for 2010-11 from Florida Revenue Analysis FY 1970-1971 through FY 2013-14, Fall 2004. Florida Department of Education, 2003–2005 Education Appropriations; appropriations per pupil computed by BEBR. Projections based on assumptions discussed above. The projected enrollment for 2010–11 comes from preliminary projections of EDR, March 2005. Retrieved from [www.firn.edu/doe/strategy/pdf/lottery.pdf](http://www.firn.edu/doe/strategy/pdf/lottery.pdf) and [www.state.fl.us/edr/conferences/publicschools/publicschools.htm](http://www.state.fl.us/edr/conferences/publicschools/publicschools.htm)

outside the scope of our analysis.

**Lottery Proceeds.** We assume that lottery transfers to education (all levels) will increase at about the same rate from FY 2005–06 to FY 2010–11, as in the previous five fiscal years. From FY 2001–05, there was an increase in transfers of 15.06%.<sup>62</sup> For projections in Table 33, we use the same ratio of lottery revenue allocations to public schools/lottery transfers to education (all levels) for FY 2011 (62.4%) as in FY 2003–04 to derive projected lottery revenue receipts for public schools in FY 2010–11 (\$1,159.9 billion).<sup>63</sup>

Existing policy calls for Florida’s Bright Futures Scholarship Program to be funded annually before any distributions are made, based on an equitable distribution formula, to public schools, community colleges, and universities. So, we recognize that any

<sup>62</sup> See Consensus Estimating Conference on the Lottery, February 2004 for transfer history through FY 2006.

<sup>63</sup> We use the projection of \$1,159 billion instead of the lower projection of \$990 million for FY 2010–11 in Florida Consensus Estimating Conference, 2003. The estimate in that report which was published a year ago seems to be on the low side given more recent data on lottery revenue collections.

policy changes affecting funding of the Bright Futures Program could also affect allocations to public schools.

If assumptions underlying Table 33 prove to be fairly accurate, the projected revenue increase per student would be only 4.1% from FY 2003–04 to FY 2010–11. However, that projected increase might not accommodate anticipated revenue needs, assuming the same percentage of lottery proceeds is transferred to school districts in FY 2010–11 as in FY 2003–04. The requirements of implementing class size reduction and NCLB could be expected in the next five years to place greater pressure on public school demands for additional state revenues. This is especially true if we consider the cumulative operating cost scenario of funding class size reduction addressed previously; this program (operations and capital outlay) has been funded substantially from lottery proceeds. Moreover, if teacher recruitment continues to be an issue, as Florida competes with other states for certified teachers, reliance on alternative funding sources might be needed to defray costs to help teachers become nationally certified, and also to promote teacher development and innovative teaching practices. (These programs are currently funded with lottery proceeds from the Educational Enhancement Trust Fund.) Alternatively, the state could simply discontinue funding several of those initiatives (especially if they are considered nonrecurring revenues for budgeting purposes) and give school districts the option of continued support for those programs at their own expense.

**Gross Receipts.** The Gross Receipts Tax Estimating Committee’s projection of gross receipts collection for FY 2010–11 is \$985 million (Table 34), an 18% increase from the Committee’s March 2004 estimate of \$833.3 million for FY 2003–04. Despite the estimated increase in collections, the Committee projects that maximum appropriations for capital projects will steadily decrease from \$752.4 million in FY 2003–04 to \$479.7 million in FY 2004–05 and slowly increase until FY 2011–12, before dipping. So the projection for FY 2010–11, as noted in Table 34, calls for maximum appropriations for all capital projects (financed by both cash and proceeds from bond sales) to be \$595.1 million.

Public schools share PECO funding with community colleges

**Table 34. Gross Receipts Tax Collections and PECO  
Appropriations to Florida School Districts  
FY 2004–05 through Projected FY 2013–14**

Fiscal Year	PECO Appropriations (million \$)	Gross Receipt Tax Collections (million \$)
2004–05	\$762	\$857
2005–06	\$844	\$879
2006–07	\$607	\$895
2007–08	\$334	\$914
2008–09	\$361	\$936
2009–10	\$421	\$960
2010–11	\$525	\$985
2011–12	\$645	\$1,011
2012-13	\$542	\$1,036
2013-14	\$810	\$1,092

Source: Office of Economic and Demographic Research, Gross Receipts Tax Estimating Committee, March 2005. Retrieved July 05, 2005, from [www.state.fl.us/edr/conferences/peco/grutable.pdf](http://www.state.fl.us/edr/conferences/peco/grutable.pdf) and [www.state.fl.us/edr/conferences/peco/pecohists.pdf](http://www.state.fl.us/edr/conferences/peco/pecohists.pdf)

and state universities. Actual appropriations totaled \$269 million in FY 2002–03 and \$228.8 million in FY 2003–04 for maintenance and new construction of Florida’s public schools.<sup>64</sup> Distributions from the PECO Fund are determined annually through the legislative appropriations process. It is therefore, not possible with any level of confidence to project PECO funding for public schools in FY 2010–11, because no constitutional or statutory requirements stipulate the distribution of funding among public schools, community colleges, and universities. Given fiscal constraints on

<sup>64</sup> See PECO Estimating Conference, March 3, 2004 for FY 2002–03 (revised) gross receipts tax collection. For actual 2002–03 allocations to public schools, see Florida Department of Education, 5-year K–12 PECO Projections for SOD (Maintenance) and NC (New Construction) 2002–03 through 2007–08. Enrollment projections for capital outlay are generally lower than for other purposes because, as noted above, certain students who receive FEFP funding and are included in other enrollment series of both the Florida Department of Education and EDR do not physically attend public schools.

the PECO funding mechanism, it seems likely that the past practice of paying for facilities to reduce class size would come from other funding sources, as is the case in both FY 2003–04 and FY 2004–05. If the decision to fund class size reduction from other revenue sources continues, and if the percentage public schools currently receive from that PECO Fund remains the same in FY 2010–11 as in FY 2003–04, public schools would receive \$180.9 million to serve almost 2.8 million students in Florida’s public schools. (The projected enrollment for capital outlay expenditures is lower than for operating expenditures because students attending virtual schools and private schools through vouchers do not use public school facilities.) However, if the PECO appropriations estimate for FY 2010–11 is indeed as low as currently expected, funding will either need to come from local revenues or be transferred from other state funds, such as the General Revenue Fund or the Education Enhancement Trust Fund, to meet anticipated demand. We note that funding transfers of this sort have occurred in earlier years. But our analysis of projected general revenues and lottery proceeds may lead us to conclude that those funding sources might not grow sufficiently rapidly to meet projected needs without programmatic adjustments or funding shifts from other agency programs.

**Ad Valorem Tax Proceeds.** Because approximately a third of school districts’ funding comes from local sources in FY 2003–04 and a significant portion of local school funding comes from the ad valorem taxes levied by school districts, a review of projected 2010–11 school taxable valuation and estimated taxes levied might be instructive. To derive those projections, we rely on 2010 projections from the Consensus Estimating Conference Committee on the Ad Valorem Tax (March 8, 2004). We note in Table 35 that school taxable value is projected to grow annually; the rate of growth is expected to slow down incrementally from 2004 to 2009 but increase thereafter.

The tax per capita from the school district tax levy (state average) would increase from approximately \$460 in 2002 to almost \$733 in 2010, assuming a population projection of 19 million Floridians in 2010. Although the tax burden per resident would increase, this tax should generate more revenues per student

**Table 35. Certified School Taxable Value Statewide  
Projected 2005–2011 Tax Roll**

Statewide Average	2005	2006	2007	2008	2009	2010	2011
Billion \$	1,257	1,351	1,450	1,552	1,657	1,770	1,893
% Change		7.5%	7.3%	7.0%	6.8%	6.8%	7.0%

Source: Office of Economic and Demographic Research, Ad Valorem Estimating Conference, March 2005, retrieved July 5, 2005, from [www.state.fl.us/edr/conferences/advalorem/advalorem.htm](http://www.state.fl.us/edr/conferences/advalorem/advalorem.htm)

than was available in 2002, all things equal.<sup>65</sup> So policymakers might be under increasing pressure to increase local spending in the FEFP formula to offset possible state revenue constraints. Such a measure, of course, has political implications because those districts with greater funding capacity (generally wealthy, medium-size districts) could be called upon to subsidize smaller and larger districts to an even greater extent than is presently the case.

**Concluding Observations on Projected Revenues.** Our analysis suggests that revenues traditionally used to fund capital projects of public schools—lottery proceeds and gross receipts tax proceeds—will probably not grow sufficiently fast to meet anticipated demand in FY 2010-11, assuming allocations to public schools remain approximately the same as they are now. General revenues, mostly from sales tax proceeds, will be under great pressure to fund the additional and cumulative costs of compliance with NCLB and the 2002 Class Size Amendment. Ad valorem tax proceeds appear to provide the greatest capacity to respond adequately to many of the cost pressures identified earlier. However, they will be constrained by constitutional and statutory limitations, unless measures are enacted in future years to make greater use of them for capital projects.

With respect to the operations of public schools, policymakers will face added pressure to shift some of the funding burden on to local revenues. Presently, class size operations are included in the FEFP program, so they are already subject to some degree of

<sup>65</sup> See *Florida Statistical Abstract 2004*, Table 1.40, for the population projection for 2010.

subsidization. Counties that are net subsidizers may balk if local revenues must become a proportionately larger share of the funding mix for that program. As we have observed in Table 25, federal revenues have continued to increase over the past few years for programs targeted mostly to high-risk students and students with disabilities, but it is impossible to project federal funding trends for FY 2010.

To conclude, funding in future years may have to be shifted from other agency programs or raised by increasing taxes to pay for expanded services, particularly if policymakers hope to realize the objectives addressed in the next section.

### *A Word on Quality*

Now we return to the question posed at the beginning of this report. Will our investments in public education in FY 2010-11 produce the quality education Florida's students need? There is considerable disagreement as to what actually constitutes "quality" education. But our state and national governments have adopted policies in recent years that connect that concept to measurable student achievement and improvement over time. Two statewide tests which are currently used to assess student achievement of higher-order cognitive skill are the Florida Comprehensive Assessment Test (FCAT) and the National Assessment of Educational Progress (NAEP) State Assessment. Each test has different objectives and different ways of measuring competencies.<sup>66</sup> However, both the Norm-Referenced Test (NRT) component of the FCAT and the NAEP enable educators, researchers, parents, and others to compare Florida test results in math and reading to test results in other states. Since 2001, when the NRT component of the FCAT was introduced, Florida's student achievement in reading and math has generally improved across the board in terms of scale scores (the exception being 10<sup>th</sup> grade math and reading and 8<sup>th</sup> grade reading).

**The NAEP Results for Florida and the Nation.** The NAEP tests students in 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> grades. Florida's students have

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<sup>66</sup> See <http://www.firn.edu/doe/sas/naep/pdf/naep-fcatconnect.pdf> for a good comparison of the two assessment tools.

clearly demonstrated progress in 4<sup>th</sup> grade reading (based on the percentage of students with scores at proficient and above levels) since 1996. Math scores (ranked proficient and above) were significantly better in 2003 than in 1996 for Florida's 4<sup>th</sup> and 8<sup>th</sup> grade students, but average reading and math scores for 8<sup>th</sup> grade students continue to trail behind the national average. What these performance results suggest is that our public education system may be more effective at inducing achievement gains in earlier grades than in higher grades and may not be as good at sustaining achievement gains.

In recent years, one of the major objectives of our state and federal public education policies has been to reduce the achievement gap between white and minority student populations and both the NRT FCAT and NAEP provide test results by ethnic/race to allow for comparisons within and between ethnic subgroups. The FCAT findings are generally consistent with NAEP results so we will focus here on the latter assessment. NAEP test scores show impressive improvement since 1996 in the average scale scores of each population—white, black, and Hispanic (Table 36).

Admittedly, researchers do not understand what factors, or combination of factors, contribute to this achievement but there are many hypotheses. Florida's students have improved in those subject areas accorded statewide priority, namely reading and writing.<sup>67</sup> Despite these significant improvements, the achievement gap between ethnic populations still persists. The development of effective strategies to bridge that gap is perhaps one of the most daunting policy challenges facing public education as we look toward 2010-11.

**Addressing the Achievement Gap.** The voters' approval of constitutional amendments on Universal PK and class size

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<sup>67</sup> In a presentation to the Askew Institute (February 6, 2004), Professor Carolyn Herrington, Florida State University, made these points and further noted that if these achievement gains can be sustained, it is important that we isolate the causal factors. She observed that we hope to replicate them only if we can first isolate them. The possible causal factors she cited included: school grading; testing; the threat of vouchers; consequences of poor performance; and the allocation of resources to poor performing schools. See "School Reform in Florida: Is Accountability Working?" available at <http://web.clas.ufl.edu/askew/>



**Table 36. Comparison Race/Achievement Levels—Florida and Nation, Percentage of Students with Scores of Proficient or Above Math and Reading 4<sup>th</sup> and 8<sup>th</sup> Grades, 1996, 1998 and 2003**

Race/Ethnicity	Florida	Nation	Florida	Nation
<i>Reading</i>				
4th Grade	1998		2003	
White	35%	45%	53%	49%
Black	9%	11%	15%	14%
Hispanic	22%	14%	29%	16%
8th Grade				
White	31%	40%	41%	43%
Black	7%	11%	12%	12%
Hispanic	17%	13%	20%	15%
<i>Math</i>				
4th Grade	1996		2003	
White	22%	28%	48%	47%
Black	3%	4%	8%	10%
Hispanic	7%	7%	30%	16%
8th Grade				
White	28%	34%	41%	43%
Black	2%	4%	8%	7%
Hispanic	9%	9%	19%	12%

Source: NAEP 2003 Mathematics: Florida Technical Summary; NAEP 2003 Reading: Florida Technical Summary, available at <http://www.firn.edu/doe/sas/naephome.htm>

reduction presents policymakers with both challenges and an opportunity. The challenges are pretty obvious. Both initiatives, particularly the Class Size Amendment, have large and cumulative price tags. There has been extensive debate and disagreement about the actual relationship between class size reduction and improvements in student achievement—particularly in upper grades. However, there appears to be more agreement that the benefits of class size reduction accrue in large measure to younger children—particularly poor, minority children—in the earliest grades. As of January 1, 2003, the estimated number of Florida children below 200% of the poverty level exceeded 86,000 and

most of them resided predictably in counties with the largest populations. A well designed standards-based Voluntary PK program, with an aggressive parental involvement component could work in tandem with smaller classes to help develop the cognitive skills of PK-children who are at the highest risk of academic failure. And these efforts might succeed over time in shrinking the achievement gap indicated in Table 36. A concerted effort to improve reading and math competencies in the earliest grades might also contribute to reduced numbers of African-Americans being placed in special education. As already noted, over half of all special education students are African-American.

What makes a strategy focused on improving competencies in the earliest grades even more compelling is the projected number of elementary school students who will be entering the public school system in the next few years—students with many of the attributes outlined in earlier sections of this report. Beginning in 2005-06, the most significant enrollment growth is projected to occur in Kindergarten—over 205,000 students are expected to enroll, compared to more than 192,000 today.

**Argument for Effective Teachers for High-Risk Students.** Anticipated enrollment growth in the earlier grades presents us with the opportunity that comes with the challenges. We might not understand all the factors that contribute to student achievement and their exact interactions but we do have significant research findings that suggest that that very effective, high-quality teachers make a difference for the achievement of low-income and minority children. And although there is a lack of consensus on the actual relationship of teacher certification to high-quality teaching, our state and federal policies assume that causality (Lenze, 2004).<sup>68</sup> Despite the lack of consensus about what constitutes “quality” teaching, in one area there seems to be general consensus. As one report aptly stated, “No matter which study you examine, no matter which measure of teacher qualities you use, the pattern is always the same—poor students, low-performing students, and students of color are far more likely than other students to have teachers who are inexperienced, uncertified, poorly educated, and under-

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<sup>68</sup> Recent research by David Lenze suggests that the requirements for teacher certification are positively correlated with teacher quality in U.S. public schools.

performing (Carey, 2004, p. 8). And they are also likely to be taught by a more transient faculty. According to another report, “teacher turnover is 50% higher in high-poverty schools than in more affluent ones, and new teachers in urban districts exit or transfer at higher rates than suburban counterparts. As a result, these schools are often staffed disproportionately with inexperienced, as well as ill-prepared, teachers,” where it is precisely in these schools that the need for highly-qualified teachers and well-trained professionals is greatest (Darling-Hammond and Sykes, 2004). Therefore, school districts that do not aggressively tackle the issue of placing very effective teachers in such schools will miss an opportunity for shrinking the achievement gap.

### *Summary*

In this chapter we have discussed revenue and expenditure trends in Florida’s PK-12 public education. Beside the usual elements of revenue and cost projections, which are explored in more detail here than in the other PK-12 education chapter, we have provided an alternative perspective on implications of the class size amendment and of No Child Left Behind. We have looked at teachers’ pay relative to other occupations and other states and have partitioned the increase in real spending per student during the 1980s and 1990s among teachers’ pay, non-teaching staff pay, exceptional student educators, and other use. The chapter closes with expenditure and revenue projections, by use and by source.

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# The Squeeze Facing Higher Education

# 8

## *Overview*

### **Carol Weissert**

Higher education in Florida, as in other states, is a target for cuts in tough economic times. Higher education is largely funded by states and, unlike many health and transportation programs, is not heavily subsidized or matched by federal dollars. This primacy of state funding often makes cuts in higher education politically easier than those in other programs—without demands from Washington or threats of court-action by disgruntled program recipients. Florida and other states have had to reduce spending in recent years, and higher education is often the target for these cuts or spending-growth reductions. Nationwide, over the past two fiscal years, state spending on higher education grew less than the growth for overall state spending (National Association of State Budget Officers, 2003). However, these actions come at a time when the demands on higher education are increasing.

Florida's population increased by 23% from 1990 to 2000, almost double the national average of 12.8%. While the state's population of 18-24 year olds did not increase at the same rate, it did grow an impressive 10%, compared to a national rate of only 1%. The U.S. Department of Education estimates that the number of public high school graduates in Florida will increase by more than 30% between fiscal year 2001 and fiscal year 2013. The only state in the country with a higher expected growth is Nevada. The overall national growth over that period is expected to be 11%. (National Center for Educational Statistics, 2004).

Florida compares poorly with other states in the number of bachelor's degrees granted per 100,000 18-44 population in 2003. Florida had 1,273 bachelor's degrees awarded per 100,000 in the 18-44 age grouping, compared to the national average of 1,601 (National Information Center for Higher Education Policymaking and Analysis, 2004).

Between FY 1996 and FY 2000, educational and general

**Table 1. Total State Spending for Higher Education: Aggregate and as a Percentage of Total State Spending; Florida, the Nation and Comparable States, FY 2003**

State	Total Spending for Higher Education FY 2003 (dollars)	Spending as % of Total State Spending
Florida	\$4.7 billion	9.6
Texas	\$8.0 billion	13.5
North Carolina	\$4.3 billion	14.8
Georgia	\$4.2 billion	14.9
U.S.	\$123 billion	10.8

Source: National Association of State Budget Officers, 2004.

expenditures of public degree-granting institutions in Florida grew by 34%—compared to the national growth rate of 28%<sup>1</sup> (National Center for Educational Statistics, 2002). However, Florida's population grew at a much greater rate than the national average, stepping up the demand for higher education in this state.

Florida's total spending for higher education as a percent of its total budget lags the country's average (Table 1). In FY 2003, Florida spent 9.6% of its total budget on higher education—lower than the national average of 10.8%<sup>2</sup> and lower than the four other large Southern states and every Southern state except West Virginia (National Association of State Budget Officers, 2004).

In 2004, Florida's spending for higher education per capita (per resident) was \$165—well below the national average of \$211 and below comparable Southern states. Table 2 shows the change between FY 1998 and FY 2004 in Florida's appropriations for higher education per capita in 2004 dollars. The table illustrates that, when adjusted for inflation, spending for higher education is less generous in FY 2004 than in FY 1998 in Florida and across the country. The biggest drop across all states was the FY 2002-2004 period when many states suffered fiscal difficulties and reduced spending.

<sup>1</sup> Educational and general budgets are those that cover the core functions of a university: instruction, research, and public service.

<sup>2</sup> This number includes capital expenditures.

**Table 2. State Spending for Higher Education Per Capita:  
Florida, the Nation, and Comparable States**  
(in 2004 dollars)

State	1998	2000	2002	2004
Florida	\$183	\$194	\$182	\$165
Texas	\$267	\$284	\$298	\$219
North Carolina	\$327	\$342	\$334	\$291
Georgia	\$280	\$272	\$262	\$193
U.S.	\$243	\$260	\$263	\$211

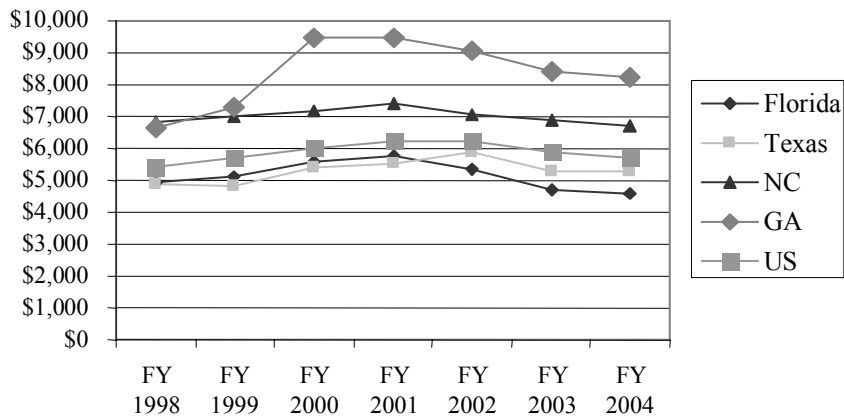
Source: The National Information Center for Higher Education Policymaking and Analysis. Retrieved July 22, 2005, from <http://www.higheredinfo.org>

Another way to compare Florida to other states and over time is to examine state and local public higher education appropriations per full-time equivalent student. Florida's state and local governments spent \$4,559 per student in FY 2004, compared to \$4,937 in 1998. The comparable figures nationally were significantly higher: \$5,428 in FY 1998 and \$5,721 in 2004. Figure 1 shows the appropriations per student for the U.S., Florida, and three comparable Southern states. It shows that Florida has consistently had lower per-student appropriations than the United States, as well as below Georgia and North Carolina. The gap between the per-student appropriations of Florida and the nation has widened notably over the same seven years.

It is important to remember that much of the state's contribution to higher education is in the form of tuition assistance to students through a popular scholarship program called Bright Futures. In part, because of this program and low tuitions discussed later in the chapter, the state provides a larger proportion of total university funding than the national average. In 2000, across the 50 states, state appropriations, grants, and contracts made up 35.8% of current fund revenue for public degree granting institutions. In that year, state appropriations made up 53% of Florida universities' current fund revenue (National Center for Education Statistics, 2003).

In short, Florida's spending for higher education generally lags that of the nation and comparable states, particularly in recent

**Figure 1. State and Local Public Higher Education Appropriations per Full-Time Equivalent Student FY 1998 to 2004**



Source: The National Information Center for Higher Education Policymaking and Analysis.

years. This gap is particularly evident when spending per student and per resident is analyzed.

### *Florida's Higher Education System*

Florida has 11 public four-year institutions. The two most recent were established in the past decade: Florida Gulf Coast University opened in 1997; New College of Florida was established in 2001.<sup>3</sup>

The structure of governance of Florida's higher education institutions has undergone considerable change in the past few years—and has not yet stabilized. A constitutional amendment adopted in 1998 made the commissioner of education a gubernatorial appointee and created a new body to replace the State Board of Education, a state body convened for the purpose of ruling on K–12 and higher educational issues. State law enacted in

<sup>3</sup> New College operated for many years as an autonomous honors college of the University of South Florida. It was separated from USF and made a member of the State University System of Florida in 2001.

2000 created the Florida Board of Education (FLBOE) to oversee education in the state and eliminated all other statewide governance bodies, including the Florida Board of Regents (FLBOR) for the State University System, setting up in its stead separate boards of trustees for each of the universities. In 2002, the legislature gave authority to the FLBOE for planning and coordinating all segments of education, presenting a unified budget, and managing the assessment and performance funding systems for all segments. Opponents of this organizational restructuring succeeded in getting a constitutional amendment on the ballot in November 2002, creating a Board of Governors for all universities to serve as a governing agency for the boards of trustees at the universities and removing them from the formal control of the FLBOE (Franks, 2004).

The delineation of responsibilities between the Florida Board of Governors, the State Board of Education and the universities' own boards is still rather vague. The language of the constitutional amendment—that the board of governors provides oversight of the state university system—contradicts provisions in the school code that give the State Board of Education that responsibility. In fact, Florida statutes define who should serve on the board of governors but not what their responsibility is. The constitutional language, in contrast, provides that the board of governors shall operate, regulate, control, and be fully responsible for the management of the whole university system. There are also questions concerning the delineation of responsibilities between the individual university boards and the board of governors. University presidents want strong boards of trustees for their universities, while some state officials and others often prefer a stronger board of governors. For example, Florida Senator Bob Graham actively encouraged voters to adopt Amendment 11 establishing the board of governors with overall responsibility for the university system (Rodriguez, 2004).

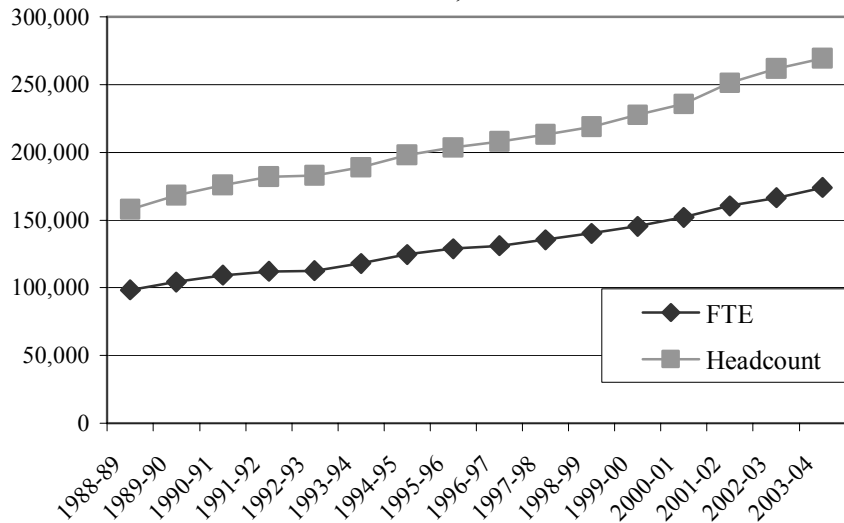
In 2004, a group called Floridians for Constitutional Integrity sued in state court arguing that lawmakers and the state department of education were violating the 2002 constitutional amendment by denying the Board of Governors full oversight of the state public universities. (The issue came to a head in November 2004 over legislative funding to set up a chiropractic school at Florida State University and an Alzheimer's institute at the University of South

Florida without the approval of the board of governors.) In 2005, the circuit court turned down the case ruling that the plaintiffs had no standing to bring the case.

Unlike some states, Florida’s businesses have an organized role to play in higher education policy. The Florida Council of 100, an organization of business leaders from across the state, has issued several recent reports on the needs of Florida’s higher education system. The council’s latest report called for major changes in funding for higher education (Florida Council of 100, 2004).

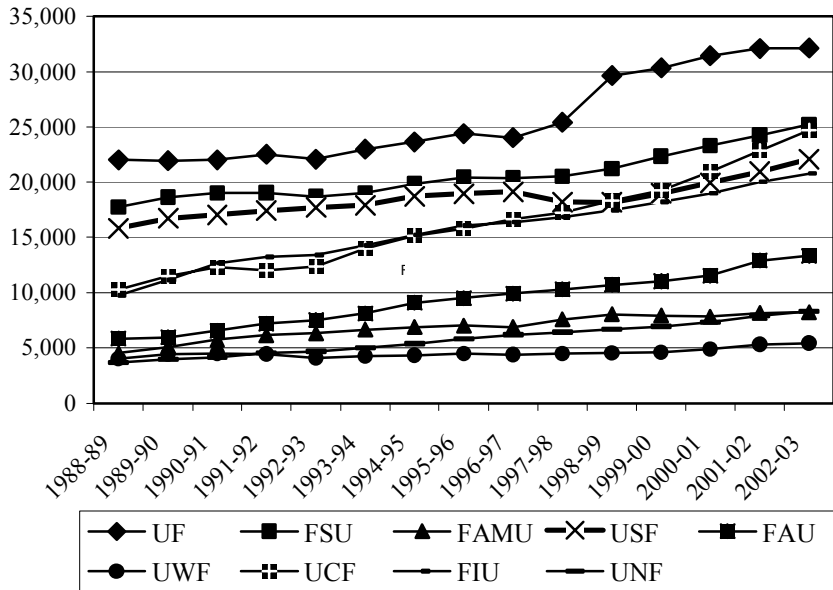
Governance of Florida’s higher education system is in flux and has not yet been fully delineated. Clearly the politics involved in governance play out in legislative decisions for funding and delegation of authority, as well. While several other states have recently changed their governance systems, Florida’s changes have been ongoing and substantial. The uncertainty involved in governance—along with some fiscal constraints and increasing demands of more students—has made higher education politics and policy in Florida visible and volatile.

**Figure 2. FTE and Headcount Enrollment:  
Florida Universities, FY 1989 to 2004**



Source: Florida Department of Education, retrieved July 26, 2005, from [www.flbog.org/factbook/default.asp](http://www.flbog.org/factbook/default.asp)

**Figure 3. FTE Enrollment Florida Universities  
FY 1989 to 2004**



Source: Florida Department of Education.

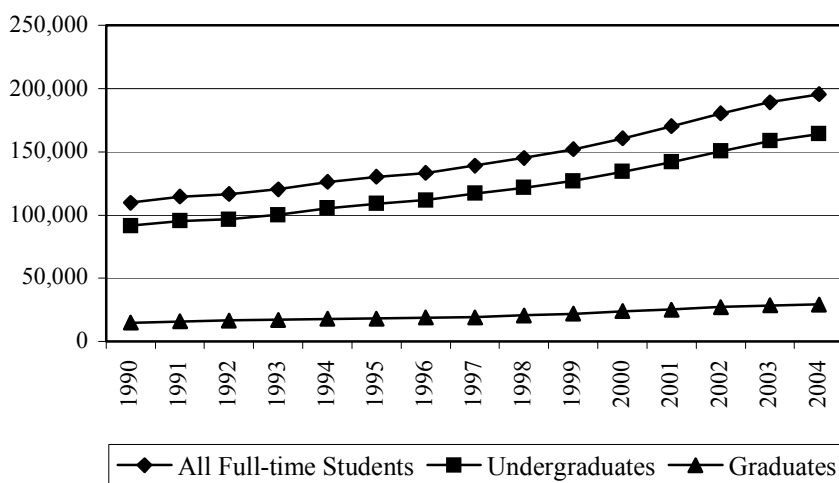
**Enrollment Trends**

Florida universities have seen a substantial increase in enrollments over the past decade. Figure 2 shows the number of students in Florida’s universities since FY 1989. The headcount reflects the total number of students, including part-time students; the full-time equivalent reflects those who take similar student credit hours to full-time students. The full-time line illustrates that throughout the 1990s, the enrollment increased gradually; since 2000, the full-time line has increased somewhat more sharply. The headcount line, reflecting all enrollment, is substantially higher, as expected, and has increased at an even greater percentage than the full-time line since 2000.

Figure 3 breaks down the full-time enrollment by university since FY 1989. The University of Florida saw a big enrollment increase in the late 1990s; other universities, including Florida State University, University of South Florida, University of Central



**Figure 4. Undergraduate and Graduate Enrollment in Florida Universities, FY 1990 to 2004**



Source: FLDOE, <http://www.fldcu.org/factbook/enrollment.asp>

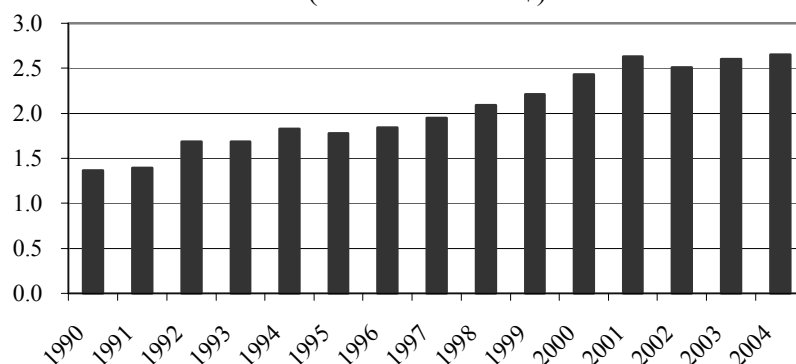
Florida, and Florida International University, saw growth a few years later. At the current time, the University of Florida continues to lead the other universities in enrollment, but the University of South Florida, Florida International University, and the University of Central Florida are much closer to Florida State University’s enrollment than they were 15 years ago.

Figure 4 provides more information on the enrollment patterns across all Florida universities between FY 1990 and 2004. While the absolute number of undergraduates dwarfs the number of graduate students, the percentage increase in graduate students is larger than that for undergraduates. Over this period, graduate enrollments nearly doubled—from 14,633 to 28,976. Undergraduate enrollment increased as well—from 91,712 in FY 1990 to 164,330 in FY 2004, an increase of 79%.

### *Higher Education Funding Trends in Florida*

In aggregate inflation-adjusted dollars, state appropriations for educational and general aspects of the state university system almost doubled from FY 1990 to FY 2001. As Figure 5 illustrates, the

**Figure 5. Annual Educational and General Funds of the University System of Florida  
FY 1990 to 2004**  
(billions of 2004\$)



Note: Values adjusted for inflation, GDP deflator to constant 2004 dollars.

Source: Florida Department of Education, *Fact Book 2003-04*, retrieved July 26, 2005, from [www.flbog.org/factbook/default.asp](http://www.flbog.org/factbook/default.asp)

growth in state funding has ceased in recent years.

Florida's higher education system is funded from general revenues, the lottery and tuition dollars. The Legislature of Florida sets tuition and appropriates amounts of lottery funds that go to higher education, which is not the case in many other states. Higher education receives around 15% of the proceeds from the lottery. In FY 2004, the Division of Universities received 14% of the lottery revenues and community colleges received 11%.

Overall, nearly two-thirds of Florida's universities' higher education expenditures, including capital spending, came from the state's general fund in FY 2003. This compares to a national average of 49% (National Association of State Budget Officers, 2004). Beginning in FY 2003, the state appropriations to higher education include four sources of funding: general revenue, educational enhancement trust fund (the lottery proceeds), major gifts trust fund, and the phosphate research trust funds (shown in the table as other trust funds). Most student fees are now under the control of the individual universities. The level of these fees varies by university.

**Table 3. Educational and General Expenditures in Public Degree-granting Institutions FY 1981, FY1996, and FY 2001**  
(millions of constant 2004\$)

State	FY 1981	FY 1996	FY 2001	% Change 81-96	% Change 96-01
Florida	\$1,962	\$3,910	\$5,277	99%	35%
Texas	\$4,171	\$8,103	\$10,676	94%	32%
North Carolina	\$1,779	\$3,324	\$4,365	87%	31%
Georgia	\$1,151	\$2,729	\$3,821	137%	40%
U.S.	\$62,565	\$110,813	\$144,402	77%	30%

Note: Values adjusted for inflation, GDP deflator 2004 dollars.

Source: National Center for Educational Statistics, 2003, retrieved July 26, 2005 from [www.nces.ed.gov/programs/digest/d02/dt354.asp](http://www.nces.ed.gov/programs/digest/d02/dt354.asp) and [www.nces.ed.gov/programs/digest/d03/dt353.asp](http://www.nces.ed.gov/programs/digest/d03/dt353.asp)

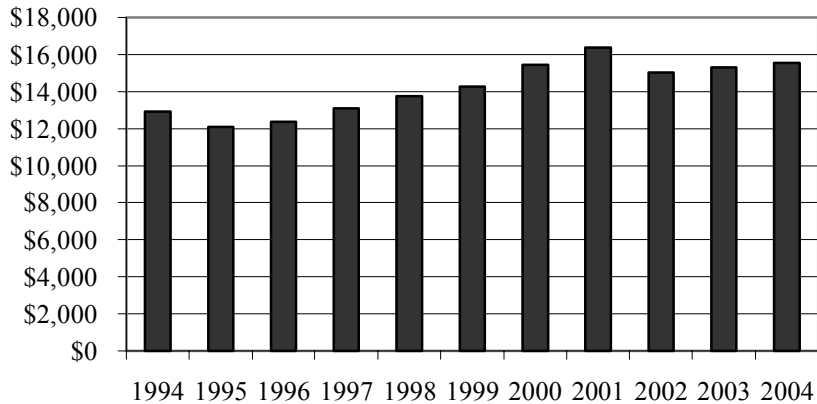
The Educational and General funding provided to the state universities includes funded enrollment for a set number of full-time equivalent students. This funded enrollment is typically less than the actual enrollments.

Expenditures. Between FY 1996 and FY 2001, educational and general expenditures in Florida grew by 35%—greater than the national average of 30% and greater than two of the three large Southern states (see Table 3). However, these numbers do not reflect the growth in the number of students.

Figure 6 examines educational and general funding since FY 1994 in the State University System per student (Full-Time Equivalent enrollment). Appropriated educational and general dollars in FY 2000 were \$15,449 per FTE student; for FY 2004, it had risen only slightly to \$15,557. Figure 6 shows that while there has been some increase in spending per student over this period, the spending peaked in 2001 and has remained stable since 2002. While the legislature has increased the funding for universities over this time, the growth in the number of students has outpaced the growth of funding.

Tuition. Florida public university tuitions have traditionally

**Figure 6: Appropriated Educational and General Funding per FTE Student, FY 1994 to 2004**



Source: Florida Department of Education.

been much lower than the national average—perhaps a function of the fact that the legislature sets the tuition rates for all students. Florida is only one of four states where the legislature establishes tuition (OPPAGA, 2004c). In FY 2003, the national average undergraduate tuition and required fees for full-time equivalent in-state students in four-year public degree-granting institutions was \$4,059. The comparable figure for Florida was \$2,594. In 2003, only two states had lower tuition and fees: Nevada (\$2,529) and Arizona (\$2,587). As Table 4 illustrates, the Southern universities tend to have low tuition, but Florida’s average tuition and fees are lower than those of public universities in comparable Southern states.

Florida’s 11 universities charge the same tuition, but student fees can and do vary. There are two types of fees: general, which apply to all students, and discretionary fees for programs or services that students choose to use. Three general fees, building, capital improvement, and financial aid, are set by credit hour in statute and capped at 40% of tuition. The fee for financial aid has a further cap of 5% of tuition. The general fees imposed on undergraduate students in FY 2004 ranged from \$641 per student at New College of Florida to \$926 for Florida Atlantic University.

Universities may also impose some discretionary fees that

**Table 4. Average Undergraduate Tuition and Fees for Full-Time In-State Students in Four-Year Degree-Granting Institutions, FY 2003**

State	Tuition and Required Fees
Florida	\$2,594
Texas	\$3,318
North Carolina	\$3,097
Georgia	\$2,945
United States	\$4,059

Source: National Center for Education Statistics. 2005.

students choose to use. Examples include laboratory materials, library services, orientation, parking and safety and security (OPPAGA, 2004a).

A 2004 OPPAGA report compared each of the 11 Florida universities to its peer institutions in other states and found that the differences in tuition were greater at Florida's larger state universities. The University of Florida and Florida State University saw gaps of \$2,942 and \$2,266 between their tuition and the median of the peer institutions nationally. The University of South Florida also had a substantial gap: \$2,605. For smaller schools such as Florida A&M, Florida Gulf Coast, and the University of West Florida, the gaps were lower—an average of \$617. Even when general fees are added to the tuition, Florida universities remain lower than their peers nationally, with the larger, research universities seeing the largest gap.

Six of Florida's public universities charge lower tuition and general fees for non-resident undergraduate students than the median of their peers. The University of Florida charges non-resident undergraduates \$3,896 less than the median of its peers; Florida State University charges \$1,586 less. The other four universities are New College of Florida (the smallest of the Florida institutions of higher education), Florida International, University of South Florida, and Florida Atlantic University. Non-resident enrollment is capped in Florida universities by state law to 10% of the total system-wide enrollment (OPPAGA, 2004a).

Finally, OPPAGA points out in its study that even though

Florida universities are a good bargain, relative to their peers across the country, there are costs in addition to tuition and fees and those total costs can make up a hefty portion of parents' incomes. In fact, given that Florida's median family income is lower than that of the nation as a whole, these costs can make up a higher percentage of family income. OPPAGA estimates that the average annual cost of sending a child to a Florida University is 17% of Florida's median family income; the national average—and the Southeastern state average—is 16%.<sup>4</sup>

Shortly after becoming the University of Florida's president, Bernard Machen made the case for tuition increases in an interview with the *Tampa Tribune*. Machen supports a tiered system where some universities charge higher tuition and where universities are given some leeway to charge higher tuition for some majors or degrees. He also supported possible changes to Florida's prepaid plan to accommodate these and other changes in tuition. The politics of the issue appeared in the same article when the chair of the Florida Prepaid College Tuition Plan promised to "fight him [Machen] right to the end" to preserve the right of the legislature, not the universities, to set tuition rates (Haber, 2004).

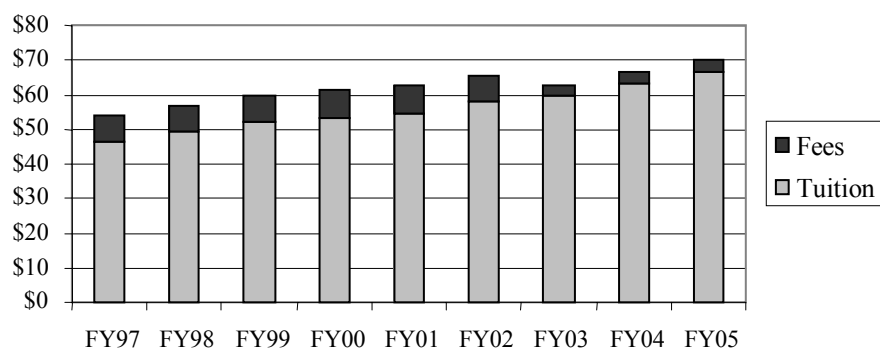
In fact, Florida's tuitions have been rising. The FY 2004 tuition reflected the ninth straight year of increases (Haber, 2004). Figure 7 illustrates the growth in tuition and fees for in-state undergraduates between FY 1997 and FY 2005. Adjusting for inflation, tuitions have increased an average of 5% over the eight-year period, ranging from only 3% to 6% (Florida Department of Education, 2004).

In its FY 2005 session, the Florida legislature raised tuition by 5% for undergraduate in-state students. They provided a modest funding boost to the universities of \$145 million. The governor vetoed two measures directed at universities. One, which the governor initially proposed, would have penalized university students if they did graduate in roughly four years. The bill called for students taking more than 120% of the credit hours they need to graduate to pay a 75% tuition surcharge. The measure also applied to community colleges which complained that the measure would

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<sup>4</sup> However, those families whose children qualify for Bright Futures are spared some or all of the tuition costs.

**Figure 7. Tuition and Fees, Undergraduate Residents  
FY 1997 to 2005**



Note: Values adjusted for inflation, GDP deflator 2004 dollars.

Source: Florida Department of Education, Division of Colleges and Universities, retrieved July 26, 2005, from [www.flbog.org/factbook/default.asp](http://www.flbog.org/factbook/default.asp), Table 35.

hit their students after only five extra classes. Governor Bush vetoed the measure because of the potential negative impact on community colleges. The second veto was for a bill that would have made it harder for students to declare themselves Florida residents so they could qualify for in-state, cheaper tuition.

In 2005, university boards were given the ability to set out-of-state and graduate tuition rates. However, Governor Bush vetoed a provision that would have allowed universities to raise tuition rates for graduate and professional programs. The governor signed a 2005 bill that allows the Florida legislature, not the Board of Governors, to set tuition and fees for undergraduates. University presidents generally support the devolution of power to set tuition to individual university boards.

Another development in 2005 originated with the Board of Governors, not the legislature. The board announced that it wanted half of the degrees awarded by the 11 public universities to be in nine high-need fields by 2012. Fields targeted included nursing, engineering, an education. The question remains whether such a target is reasonable and what the board might do if it is not met.

While having the ability to raise tuition on out-of-state students and graduate students is, no doubt, welcomed by university leaders, the effect will be limited, since the overwhelming numbers of students in Florida's public universities are in-state and

undergraduate. In 2003, more than 92% of total students in Florida public universities were from Florida. In that year, the University of Florida and Florida State have 87% of their graduate and undergraduates from Florida (Florida Department of Education, 2004a).

The ability to increase graduate tuition might be more meaningful for certain universities. While the percentage of graduate students across all the universities is 17.1%, the range is from 24.5% at the University of Florida to 11.5% at the University of North Florida (two universities—Florida Gulf Coast and New College—have no graduate programs). At Florida State University, graduate students make up 18.1% of the student body; at University of South Florida the percentage is 17.4%.<sup>5</sup>

### ***Quality, Accessibility and Return on State Funding***

Evidence is persuasive that higher education translates into higher salaries, which means states can better compete for workers and can enjoy increased taxes from the higher paid workforce. College graduates earn nearly twice as much over their lifetimes as do those with only a high school education (\$2.1 million compared to \$1.2 million). Those with graduate degrees earn substantially more (\$2.5 to \$4.4 million) (Proenza, 2002). These higher salaries contribute to state revenues in Florida in the form of sales and consumption taxes.

In the technology-oriented world of the 21<sup>st</sup> Century, education will be become even more important. Carnevale (2003) has estimated that of the 20 million new jobs expected to be created by 2008, 14 million will require at least some college education. Some Florida business leaders are concerned about the availability of a highly trained workforce in Florida (Lynch, 2001).

A 2001 report prepared for the Florida Leadership Board for Applied Research and Public Service found that the State University System yields a return to the Florida economy of \$9.72 for every state taxpayer dollar invested (Lynch, 2001). The report

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<sup>5</sup> These percentages were derived from full-time equivalent enrollment by level, term, and university 2002-2003, for annual full-time equivalent students in education and general spending. The source is the student data files, Florida Department of Education, Division of Colleges and Universities.



also noted that the annual rate of return for the public's investment is 34%. The 34% return on investment includes both direct dollar expenditure associated with the university system and indirect effects, such as economic activity, engendered from the university and its students.

The single largest contribution of the SUS to the Florida economy is the increased productivity and enhanced value of its graduating students (Lynch, 2001). In FY 1999, the average SUS bachelor's degree recipient only one year out of college earned \$13,342 more than a Florida high school graduate. A first-year master's student would have received \$23,222 more than the high school graduate that year; a newly minted Ph.D. one year out of school would have received \$37,067 more than the high school graduate.

Other economic advantages to the state include grants and awards to SUS faculty members and economic activity occurring on or near each member campus, including books and supplies, food and lodging, and spending related to athletic contests, artistic events, conferences, and other campus events. Finally, the state university system contributes to the quality of life that Floridians enjoy, including advancements in medicine, environmental quality, public service, and performing arts (Lynch, 2001).

A 2004 report from the Florida Council of 100 also dealt with return on state funding, as well as the value and accessibility of higher education in Florida. The Council's measure of quality was the percent increase in salary after offering a bachelor's degree as recognition of the market's valuation of a degree from the state's institutions. In this ranking, Florida universities were 36<sup>th</sup> (out of 50 states). The Council also criticized the accessibility of Florida universities to the state's poorest families. According to their analysis, these families need to pay 13% of their income (after financial aid) compared to 8% in other top states. In part, this disparity is due to the comparative low offering of need-based financial aid available in Florida. Need-based aid provided by Florida as a percent of federal Pell grant aid for Florida was an extremely low 16%, compared to 108% for the top state. The Council notes that the Pell Grant is used as a basis of comparison, since it is the largest federal aid program and has uniform definitions and qualification standards (Florida Council, 2004).

Nationwide there are disparities in the accessibility of higher education based on race and income. Nearly 80% of high school graduates from families with high income went directly to college in 1997, while only half of the high school graduates from low-income families did so (National Center for Education Statistics, 2000). There were also key racial differences. In 1997, nearly half of all high school white graduates (46%) were enrolled in college, while only 39% of African American graduates and 36% of Hispanic graduates were. And these percentages are understated by the high dropout rates of both African Americans and Hispanics, who are not reflected in the percentage (Carnevale, 2003).

### ***Recent Policy Changes***

The state's university presidents organized a grassroots lobbying effort in Fall 2003 to fund higher education in the state. They were reacting to a proposed \$40 million cut in higher education budgets for FY 2003–04 and the increasing state IOUs for the matching gift program. They asked state policymakers to maintain the base level of general revenue and lottery funding. They also wanted their own universities' boards of trustees to make tuition policies, including block fees and differential tuition by program. University Presidents in 2004 sought additional funding for the enrollment growth, increased fees for capital improvement, which were capped under state law, and the ability to raise technology fees (Peltier, 2004).

In 2005, the presidents of the 11 universities were once again warning that the money proposed in the governor's budget (an increase of 4.3%) was simply not enough. The presidents of the University of Florida and Florida State University urged legislators to provide a new tuition system that would charge in-state, undergraduate students the same amount for all four years of college. The initial tuition would be substantially higher than it currently is but there would be no increases over the following four years. Many fees would also be rolled into the new tuition. The legislature was not persuaded and the plan failed.

Tuition will increase by 5% for in-state undergraduates in FY 2005-06, following a 7.5% increase in FY 2004-05. Most of the increase covers the cost of increased enrollment and, presidents

argue, does not provide for innovations and improvements. In recent years, the legislature has provided matches for a long list of private donations to the universities (the state funding for matching private dollars was frozen for several years).

There are increasing pressures on the universities to enroll—and graduate—more students. In May 2004, the Florida Board of Governors adopted a goal calling for the number of Florida students earning undergraduate diplomas to increase to about 40,000 per year (Hirth, 2004). The plan would essentially double the number of students with bachelor’s degrees over the next eight years, thus increasing the percentage of Florida residents with bachelor’s degrees. The state now ranks 45<sup>th</sup> in bachelor’s degrees per capita. The board has not yet addressed steps to achieve this goal.

***Other Issues***

Two other important policies that affect higher education are: Bright Futures and the Florida Prepaid Tuition Plan.

**Bright Futures.** The Bright Futures Scholarship was established in 1997 and funded through proceeds from the lottery. The Bright Futures Program has as one of its goals to increase baccalaureate production by making college more affordable and encouraging better academic performance (OPPAGA, 2003a).

One-fifth of the lottery’s funding for education supports Bright Futures. In FY 2003, more than 106,000 scholarships were awarded at a cost of \$203 million. Three different awards are available through Bright Futures. All are merit-based. The awards and their initial eligibility include:

<p><b>Academic Scholars Award</b></p> <ul style="list-style-type: none"> <li>• 3.5 GPA and above; SAT scores of at least 1270</li> </ul>	<p>100% of tuition and fees covered and \$650 for books (RB)</p>
<p><b>Medallion Scholars Award</b></p> <ul style="list-style-type: none"> <li>• 3.0 GPA and 970 SAT scores</li> </ul>	<p>75% of tuition and fees covered</p>

<p><b>Gold Seal Vocational Scholars Award</b></p> <ul style="list-style-type: none"> <li>• 3.0 GPA on 15 credits required for HS diploma OR</li> <li>• 3.5 or better unweighted GPA in minimum of 3 credits from same vocational program</li> <li>• Minimum scores of each subsection of the SAT, ACT or FL College Entry-Level Placement Test</li> </ul>	<p>75% of tuition and fees covered</p>
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Source: The Florida Council of 100, Higher Education Funding Task Force Position Paper, March 2003.

Almost one-third (32%) of Florida’s high school graduates are eligible for the Bright Futures funding. Of the 35,511 students receiving either Academic Scholar or Medallion Scholar status in 2002–2003, 75% met the requirements to continue receiving funding in 2003–2004 (Florida Department of Education, 2004b).

Since 1997 and the creation of Bright Futures, Florida high school graduates have improved their academic performance and are attending Florida universities in greater numbers. In 1997, some 52% of new Florida high school graduates were enrolled in Florida universities and community colleges. In 2001, 61% of new Florida high school graduates went on to college in the state (OPPAGA, 2003a).

Concerns about Bright Futures fall into four areas: its cost, its relatively low eligibility standards; its impact on students with financial needs; and its linkage to tuition and fees.

Rising Costs. The scholarship has proven both popular and costly. As Table 5 illustrates, the number of students receiving awards doubled in its first four years, and the funding is up to an estimated \$268 million in 2004–05. Well over three-quarters of Florida State University students and over 90% of University of Florida students are recipients of these awards.

Low Eligibility Standards. While Bright Futures is designed as a merit-based approach, its designation of merit is low. In fact, the average SAT score in Florida is 995 (the national average is 1025). Thus, as the Florida Council of 100 points out, Florida is giving

**Table 5. Recent Bright Futures Enrollments and Appropriations, FY 1997–2005**

Fiscal Year	Number of Students	State Appropriations (million \$)
1997	26,240	\$52
1998	43,244	\$84
1999	56,281	\$103
2000	70,000	\$143
2001	92,000	\$173
2002	98,000	\$181
2003	110,000	\$206
2004	121,678	\$236
2005	125,101	\$263

Note: Values adjusted for inflation, GDP deflator 2004 dollars

Source: Florida Department of Education, *Statistical Highlights of the Bright Futures Program Since Inception*, accessed February 23, 2004. Florida Post-Secondary Education Planning Commission, 1999. Updated with information from the House Education Appropriations Committee Hearing on Florida Bright Futures Scholarships, November 20, 2003, and the Student Financial Aid Estimating Conference, March 1 and March 4, 2004.

merit scholarships to those who score below the Florida (and well below the national) average on the SAT. The Council notes that Florida finances a significantly larger share of student tuition through non-need based aid than peer states (2004).

Impact on Students with Financial Needs. The Bright Futures Scholarship is not means-tested, and the scholarships go primarily to students who would likely go to college without the assistance. According to the Florida Council of 100, 71% of students receiving the scholarship in 2000–01 did not need financial assistance. Overall, Florida’s proportion of total undergraduate state aid based on need is 24%—compared to the national average of 79% (Council of 100, 2003).

Impact on Tuition and Fees. There are concerns that the legislature will reduce general purpose funding or other funding for state universities as scholarship costs continue to rise. After all, the argument might go, those dollars are going to the universities. Yet university presidents and others point out that they would

receive the tuition and fees from the parents or students if not from the state. So there is no gain for the universities from the program. Legislative cuts in other programs made to “offset” rising costs of Bright Futures will be difficult to recoup. FSU President, T.K. Wetherell, in 2003 and 2004 urged lawmakers to either cap the Bright Futures program by creating a voucher-type award or raise the SAT standard to eliminate thousands of students who now qualify (Peltier, 2004).

One problem is that the state’s lottery funds Bright Futures, state universities, community colleges and public schools. Bright Futures currently gets nearly one-fourth (24%) of the lottery funding. Lottery funding is growing very slowly and is expected to continue its slow growth over the next few years. Meanwhile, the popular Bright Futures program continues to grow. One estimate is that between FY 2003 and FY 2010, Bright Futures will more than double its take from the state lottery (from 24% to 46% of the slowly growing pot of money), while other education programs, including state universities, community colleges, and public schools will see funding fall. According to this estimate, universities will see their percentage of lottery funding drop from 11 to 7% (Bradley, 2004).

Any increase in tuition amounts or university discretion that leads to higher tuition directly affects Bright Futures, which pays for a percentage of actual tuition and fees instead of a specified dollar amount. The 2004 and 2005 legislatures have not made changes in the Bright Futures program.

**Florida’s Prepaid Tuition Plan.** Florida’s Prepaid College Tuition Plan is the nation’s largest, having sold over 987,000 contracts since 1988—including 75,000 in the most recent sign-up period, which ended Jan. 30, 2004 (Haber, 2004). Some 84,000 families have paid for their children’s college education since its inception (Florida Council of 100, 2003). There are some concerns about this program, especially since fees and tuition are rising faster than estimated by the actuaries of the program. A 2003 review by the Office of Program Policy Analysis and Government Accountability concluded that while the program is currently fiscally sound, substantial long-term annual tuition increases could jeopardize the program (OPPAGA, 2003b). Yet, there seems to be reluctance on the part of the legislature to deal with these future

funding issues, which continue to accelerate as each new year's contracts are sold. OPPAGA (2004c) estimated that if university tuition increases averaged 10% annually, by 2018 the Florida prepaid program would be unable to fulfill current contracts without additional funding.

Other concerns about the program deal with its appeal primarily to those who probably can afford to pay for college. The prepaid contracts are primarily sold to high-income families and non-minorities. Since its inception, 81% of those purchasing the contracts are white (Florida Council, 2004).

This program has a dampening effect on possible tuition increases. When Governor Bush recommended a 12.5% increase in tuition in 2003, a public outcry arose that such increases threatened the prepaid college tuition plan, and a smaller increase was enacted (Peltz, 2004b).

In November 2002, the Florida College Investment Program became available. Under this program, residents can put money into a higher education savings account with tax-free growth of varying risk and return. Unlike the prepaid tuition program, the college investment plan carries some investment risk and is not closely linked with potential tuition increases in Florida universities.

**Other Programs. Florida Resident Access Grant (FRAG)** provides a per-student subsidy for each Florida FTE student attending non-public institutions of higher education (those that are independent, nonprofit, SACS-accredited). The Florida Council of 100 (2004) has urged the legislature to increase per-student funding for the FRAG program. In 2005, the legislature increased the state funding for each FRAG student from \$2,369 to \$2,850. However, others argue that the state should not be providing public dollars for private university education. In 2004, a new program was added to provide state assistance for Florida students attending one of three for-profit schools. The program is called the Access to Better Learning and Education (ABLE) program which provided \$1,500 each for 1,200 students in its first year of operation (Vogel, 2005).

**The Florida Student Assistance Grant (FSAG)** is a need-based grant program funded by general funds for a student attending a state university. Some 103,000 students were funded

with this program in 2003–04 for a total state appropriation of \$86 million (Florida Department of Education, 2003).

**Critical Teacher Shortage Program** was developed to provide financial assistance for teachers in shortage areas. Fiscal year 2003 appropriation was \$1.8 million.

**Access to Better Learning and Education Grant Program.** Enacted in 2003, this provides tuition assistance to students attending accredited for-profit post secondary institutions in Florida.

### *Outcome Measures*

Given the importance of higher education to state policy, increasing attention has been given to performance measurement. Where used, these measures have primarily focused on inputs, rather than outputs. They have also focused on one aspect of university production—the instruction of students. They have not dealt with the equally important, yet highly elusive to measure, increases in knowledge. So-called report cards are popular measures of data on higher education. California’s report card contains more than 75 separate indicators, including population, finances, student preparation, student access, and student outcomes. South Carolina law requires funding to flow from information organized in 37 performance indicators, but implementation has been difficult (Wellman, 2003). Florida universities collect and make publicly available on the web similar information on their progress toward performance indicators. A new system for measuring student performance is being developed to ensure students can communicate and think critically by the time they graduate. However, questions remain about the validity of the measurements and whether a certification process separate from granting of degrees might lead to legal challenges (Matus, 2004).

In 2003, Florida enacted a law calling for performance funding that tied as much as 10% of the universities’ annual funding to graduation rates, degree production and other goals. The board of governors has targeted certain critical needs of the state in future years and wants to encourage universities to step up in their graduation production in these areas.

More attention has been focused in recent years on outcomes,



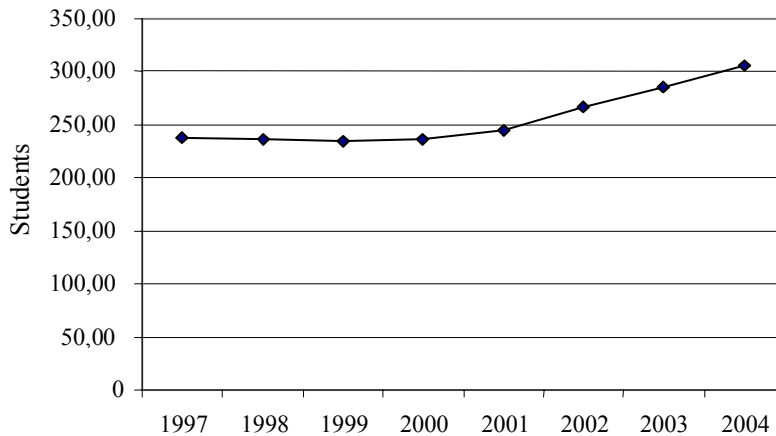
tied to additional flexibility in use of state dollars. Kettl (2001) highlights the Oregon experience, where the state granted its university system a large measure of fiscal and operational autonomy in 1995. In return, the university system agreed to serve 2,000 more resident undergraduate students without additional general-fund support. Oregon universities retain all the revenues they raise, including tuition. System-wide investment funds are designed to leverage collaboration across institutions.

### *Community Colleges*

Florida’s community college system consists of 28 colleges, 58 campuses, and 173 sites. In 2002–03 there were 880,046 students in these colleges, some 35% of whom were full-time. In FY 2004, community college funding totaled \$1.3 billion—\$792 million from state general revenue, \$93 million from lottery funding, and \$433 million from student fees (Florida Department of Education, 2004c).

Enrollments in Florida’s community colleges have increased recently after several years of little growth (Figure 8). Between 2003 and 2004, enrollment increased by 7% to a new record of 305,000 students. An earlier spurt of enrollment for the state’s

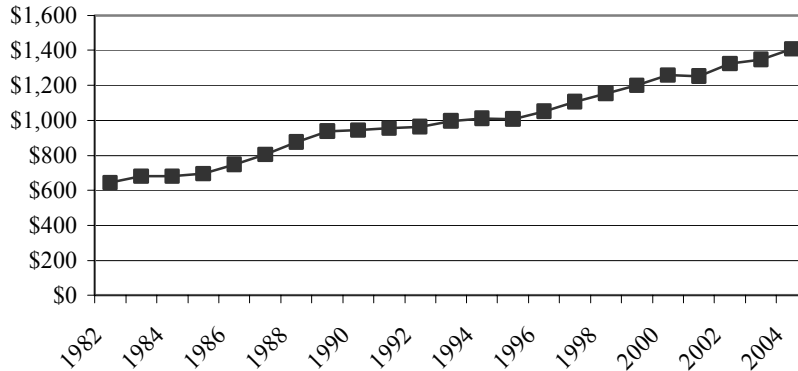
**Figure 8. FTE Enrollment in Florida Community Colleges 1987 to 2004**



Note: A Community College FTE is defined differently than the SUS FTE and should not be compared.

Source: Florida Community College, *Fact Book 2004*.

**Figure 9. Community College Budgets  
1982 to 2004**  
(millions of constant 2004\$)



Note: Values adjusted for inflation, GDP deflator, 2004 dollars.

Source: Florida Department of Education, Florida Community College System, retrieved from [www.firn.edu/doe/arm/cctmis/pubs/factbook/fb2005/factbk05.pdf](http://www.firn.edu/doe/arm/cctmis/pubs/factbook/fb2005/factbk05.pdf)

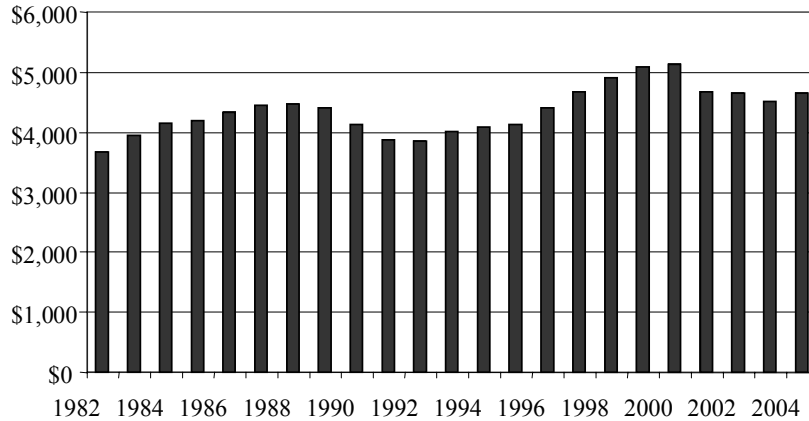
community colleges was between 1988 and 1994. Enrollment stabilized or fell slightly until 2002, when enrollments jumped by nearly 10% over 2001 enrollments.

Funding for community colleges has been more consistent over the 1982–2004 period. Figure 9 shows the growth in budgets for community colleges in inflation-adjusted dollars. While this shows a steady increase, it does not factor in the increasing numbers of students served.

Figure 10 provides the information on the basis of spending per FTE student. This understates the spending, since it does not include all students but provides a standard measure across the years. As Figure 10 illustrates, spending per FTE student peaked in FY 2000, and dropped 10% in the next four years. From 1982 to 2000, real spending per student rose 20%. Among states with similar demands for community colleges in FY 1999, Florida ranked 35<sup>th</sup> out of 44 surveyed states in terms of total average expenditures per FTE community college student (Education Commission of the States, 2000).

The legislature appropriates a lump sum for each institution, and local boards of trustees formulate autonomous

**Figure 10. Community College Spending per FTE  
1982 to 2004**

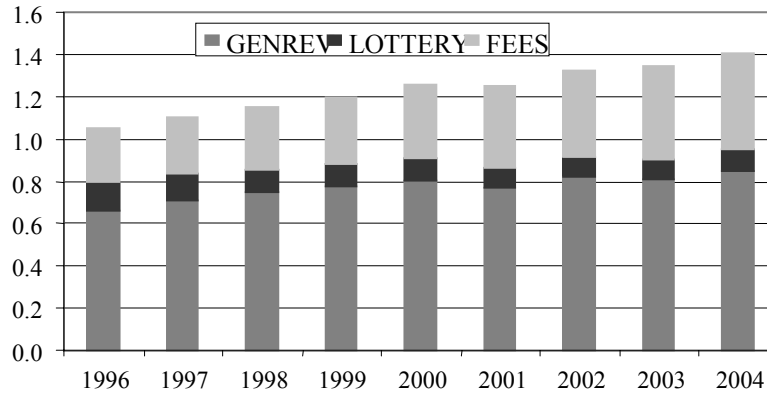


Note: Values adjusted for inflation, GDP deflator 2004 dollars.

Source: Florida Department of Education, Florida Community College System, 2005, retrieved July 26, 2005, from [www.firn.edu/doe/arm/cctmis/pubs/factbook/fb2005/factbk05.pdf](http://www.firn.edu/doe/arm/cctmis/pubs/factbook/fb2005/factbk05.pdf)

budgets from these allocations. The state dollars are primarily from state general revenue (60%), but funds are also provided from the

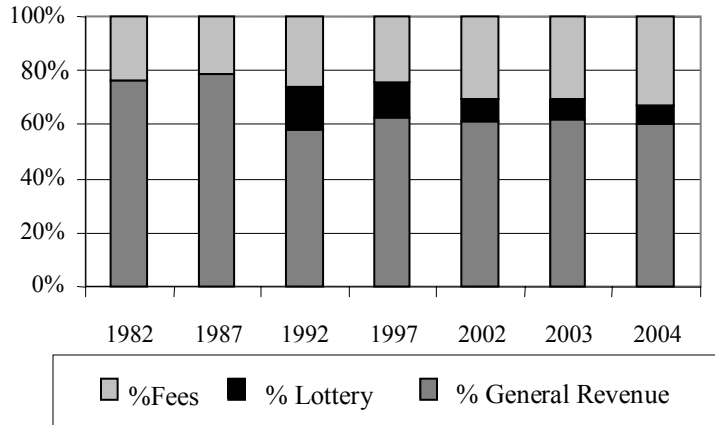
**Figure 11. Sources of Community College Revenues  
1997 to 2004  
(billions of constant 2004\$)**



Note: Values adjusted for inflation, GDP deflator 2004 dollars.

Source: Florida Department of Education, Florida Community College System, 2005, retrieved July 25, 2005, from [www.firn.edu/doe/arm/cctmis/pubs/factbook/](http://www.firn.edu/doe/arm/cctmis/pubs/factbook/)

**Figure 12. Sources for Community College Funding  
Selected Years 1982-2004**



Source: Florida Department of Education, Florida Community College System, *Fact Book 2004*.

lottery (7%). Student tuition and fees account for the remaining 33% of revenues. Figure 11 shows the breakdown of community colleges revenues for the past eight years. It illustrates the importance of student fees for community colleges, especially since 2002. Between FY 1997 and 2004, student fee revenues increased 93%, while lottery fund allocations for the system decreased nearly 22%.

Figure 12 breaks down the percentages contributed by the three funding sources for selected years since 1982 and for the past three years. In the early years of the graph, state general funds made up a greater percentage of the total but there were no lottery dollars contributed. Yet, even with the addition of lottery dollars, by 1992, the state share had fallen, and the contribution of student fees had increased. The percentage of total funding provided by state general funds has remained stable since 1997, but lottery funding has fallen. The percentage of funding contributed by the lottery peaked in 1992 at 17% and has fallen steadily since. Student fees are up substantially as a percentage of the total.

The Florida legislature specifies the standard student fee amount per credit hour that community colleges can charge. The local boards of trustees can set fees at their college within 10% below or 15% above this amount (Florida Department of Education, 2004d). Local contributions to community colleges are

**Table 6. Funding for Community Colleges by Funding Source for Florida and Other Large Southern States, FY 1999**  
(percentage)

State	Federal	State	Local	Tuition/Fees	Other
Florida	0.25	68.5	0.02	23.1	8.0
Texas	14.4	37.9	17.9	19.9	9.8
North Carolina	3.2	75.2	12.9	8.2	0.5
Georgia	10.0	63.0	14.0	13.0	0.0

Source: Community College Policy Center, retrieved July 26, 2005, from [www.communitycollegepolicy.org](http://www.communitycollegepolicy.org) and [www.communitycollegepolicy.org/pdf/cc%20finance%20survey.pdf](http://www.communitycollegepolicy.org/pdf/cc%20finance%20survey.pdf)

minimal—comprising less than one-half of 1% of total funding. Florida is among 18 states where community colleges do not have access to local tax revenues. Other states allow community college districts to levy property or sales taxes. Local sponsors, either the county or school district, contribute substantially to community colleges in some states.

Georgia, Texas, and North Carolina community colleges receive substantially higher percentages of their budgets from local contributions. The percentage in Georgia is 14%, in North Carolina 13%, and in Texas 18%. Not all large Southern states have this pattern, however. Virginia's localities contribute less than 1% of the community college budgets—a situation comparable to that in Florida (Education Commission of the States, 2004). There are large variations among the states in the percentage of community college funding that comes from the state. Table 6 illustrates that three of the four large Southern states are heavily reliant on state funding. Only Texas community colleges do not rely on state funding for well over half of their funding. Among the large Southern states, Florida community colleges are most dependent on tuition and fees. The data in Table 6 understate the situation in Florida because they were collected in 1999, and since that time, community colleges have become even more reliant on fees.

Florida's 1971 statewide articulation agreement guarantees admission to upper-division university programs for anyone with

an associate's degree (except for certain "limited access" programs). These transfers are admitted as juniors and have fulfilled the universities' general education requirements. The mean GPAs for these transfers has increased in recent years from 2.86 in 1994 to 2.96 in 2002.

Florida has developed a series of performance measures for community colleges, including job placement, transfer rates, graduation rates and service to special populations. There are no penalties for failure to meet performance standards in Florida, but incentives can be provided for those who exceed standards. Florida's community colleges have high retention rates and reflect diverse populations. Some 76% of students who first entered a community college in 1998 were retained after their first year of enrollment, and 30% of those students still enrolled completed a degree or certificate program in three years in Florida. The national average for this cohort was a retention rate of 68% (Florida Department of Education, 2003b). In Fall 2004, 16.6% of full-time students were black, and 18% were Hispanics. When both full- and part-time students were accounted for, the percentages remain very similar—17% for Blacks and 18.7% for Hispanics (Florida Department of Education, 2004d).

While Bright Futures may have helped increase the enrollments in community colleges over the past few years, the program's financial assistance has also encouraged many students to go directly to four-year colleges. As evidence, in FY 1995, Florida's community colleges supplied 63% of upper-division students enrolled in the state's four-year university system. By 2002, that percentage had fallen to 52% (Florida Department of Education, 2003c).

### ***Conclusions and Policy Choices***

Florida's squeeze on higher education is similar to the actions of other states across the country. Tuitions are increasing and state support is falling in relative terms. Across the country during the most recent state budget difficulties, higher education was the area most targeted by state legislatures for cuts, and the cuts were made at a higher percentage than cuts in other areas. On average, a study of 10 states by the Rockefeller Institute of Government found that those states projected spending 4.5% less on higher education in

FY 2004 than in FY 2003 and that they raised tuition and fees by almost 14% (Fossett & Burke, 2004).

At the same time that states are cutting higher education, there is a push for production of more university graduates. The political and fiscal squeeze—between greater demand and limited supply—is problematic and likely to get worse in Florida and elsewhere.

Florida's university leaders are highlighting the economic value of spending money on higher education—providing a workforce with more income potential, funding high-tech jobs, and retraining those whose jobs have been lost to demands from the global economy (Wiley, 2004). Florida's business community seems sympathetic to this key linkage. The problem lies, in large part, on political will. There is little desire for more taxation, and efficiencies can only go so far.

There are many calls for revising the Bright Futures program, which provides tuition assistance for the brightest and the not-so-brightest students of Florida. For example, the Florida Council of 100 recommends making Bright Futures “a true merit program” by increasing the minimum SAT requirements and using that money instead to increase funding of need-based aid. The Council also recommended that university funding through the education and general budget be increased, tuition and fees be raised to reach national average tuition and fee level, and financial aid to students attending Florida's private schools be increased substantially.

Similarly, Florida's current pre-paid tuition program is a funding sieve that steadily and indirectly drains more and more dollars from the general fund. A careful actuarial assessment of what is realistically needed for future students and actions by the legislature to adopt measures reflecting those assessments is needed. The Council of 100 also recommended that the pre-paid tuition program be re-priced for all new contracts.

Finally, the university presidents' call for more flexibility is in line with national trends and expectations. While outcome measures are still somewhat elusive, some initial evidence shows that both state policymakers and universities can benefit from working together on common goals, recognizing the demands on the horizon affecting the state, its citizenry, and its higher education system.

Like the four-year colleges, community colleges find

themselves strapped for funding at the time when the number of students is increasing. One possible source of new funding is to allow local governments to contribute to the community colleges, perhaps under a “matching” program with the state or with local businesses. Further, some of the areas identified as critical state needs are those where community colleges can provide training, including health care and emerging technologies. Community colleges should play a role in the planning efforts for meeting educational needs of these critical need areas.

Over the past few years, higher education policy has been a controversial, often politically painful, area involving both organizational and funding issues. Yet, neither has been adequately addressed, and problems persist and will do so until efficiency begins to trump politics in public programs such as Bright Futures and Pre-Paid Tuition.

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# Expenditure Projections: **9** Roads and Transportation

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## *Introduction*

### **David Denslow**

Before 1993, road spending per resident in Florida was lower than elsewhere, somewhat oddly since one would expect per-resident spending on roads to be higher in tourist states and especially in rapidly growing states. After all, spending on construction of buildings, both commercial and residential, is higher where growth is rapid. Since 1993, spending per resident in Florida and in other states has been roughly the same. Since 1980, Florida has devoted a larger share of its road spending, about 60%, to capital outlays. Consequently, the state's total road capital spending per resident over the past 25 years matches that of the rest of the country.

One reason Florida is merely average in its road spending per resident in spite of its rapid growth is that road spending depends partly on area, and the state is more densely settled than average. A statistical analysis of state and local road spending in 2000 shows that on average doubling population increases road spending 77% and doubling area increases it 23%.<sup>1</sup> Ten percent higher income is associated with 5% higher road spending. Spending varies inversely with growth, however. An extra percentage point of annual growth is associated with almost a percentage point lower

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<sup>1</sup> The equation is  $SPEND = -7.03 + 0.23*AREA + 0.77*POP + 0.55*INCOME - 0.91*GROWTH$   
(2.73) (0.04) (0.04) (0.26)  
(0.36)

where the observations are the 50 states and DC in the year 2000, SPEND is state and local spending on roads per resident, AREA is land area, POP is population, INCOME is income per resident, and GROWTH is the ratio of 2000 population to 1990 population. All variables are in logs, standard areas are in parentheses, observations are weighted by population, and the  $R^2$  is 0.96. Parentheses contain standard errors. There is a replication constraint: the coefficients of AREA and POP are constrained to sum to one.

spending.

State population growth and investment in roads have been either inversely related or independent for at least the past half century. Since roads are very long-lived assets, this has enormous implications for the road infrastructure of rapidly-growing states such as Florida. Because we think that understanding *why* Florida has a road shortage relative to other states will help persuade people that we *do* have a road shortage, we go to some length here to describe how the shortage came about. In brief, the federal Interstate system was designed to provide continental *connectivity*. Interstate miles in Florida, a remote peninsula at the corner of the continent, were less useful for connectivity than roads through states in the middle of the country so fewer miles were built than our population share would indicate. Those Interstate miles, however, came to be used for urban *access*, moving people daily from suburb to central city and back. Coastal cities received less federal funding for the transportation infrastructure that made their downtowns and other shopping and business centers accessible than did interior cities.

To add to the problem, the coastal cities turned out to grow faster than the interior ones. Not only did the coastal cities have fewer lane-miles built during the Interstate construction boom, they now have relatively more people compared to the 1960s, 1970s, and 1980s than do the interior cities. As some of the coastal cities became more and more densely settled, the federal government added mass transit spending to highway bills, helping the largest and densest coastal cities build fixed-rail systems. In Florida, where cities are less compact, fixed-rail systems were less feasible and could handle only a small fraction of commuting traffic. The result is that Florida has less federally funded access lane-mileage relative to its needs than almost any other state (Center for Urban Transportation Research, 1995, p. 5).<sup>2</sup>

To document how this came about, we go back to the 1950s and bring the story up to 1999; the most recent year for which comparable urban data are available. (The most recent delineation

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<sup>2</sup> The Center for Urban Transportation Research report notes that over a period of four decades (1956-1995), Florida had received an average of only \$.80 of funding from the Federal Highway Trust Fund for each dollar paid in taxes.

of urban areas for a national population census was in 1999.) Roads, as mentioned, are very long-lived and relative road mileages change slowly. The situation in 1999 is quite similar to that today. We begin with the passage in 1956 of the Federal Aid Highway Act. The original intent of the Interstate System that act funded was to complete a “National System of Defense and Interstate Highways” and to “facilitate military transportation during the Cold War” (U.S. Department of Transportation [U.S. DOT], 2002a, p. 23-2). The intent of the 1956 legislation (and federal aid from the Highway Trust Fund) was not directed to considerations of residential population growth. The federal funding formula was based on area and population but not at all on anticipated growth.

In 1950, Florida had 1.8% of the nation’s land area in the contiguous states and also 1.8% of the nation’s population. However, federal funding of \$110 million authorized for Florida under the 1956 Act for the three fiscal years of 1957, 1958, and 1959 represented only 1.69% of all federal funding—less than Florida’s share of the nation’s population in 1950 (U.S. Bureau of the Census, 1995). By 1960, to make matters worse, the state’s population had increased to 2.76% of the nation’s—an increase of 51% (Kendrick, 1964, p. 19).<sup>3</sup> In 2000, Florida’s population was an estimated 15.9 million or 5.68% of the nation’s population (more than three times the state’s share of the nation’s population in 1950). Similarly, in that year, the state’s share of total vehicle-miles traveled in the nation was 5.53%. However, FY 2001 federal-aid apportionments to Florida for transportation projects were only 4.77% of all apportionments (U.S. DOT, 2002b). Federal-aid lagged behind, and continues to lag behind, the percentage of funding we might have predicted for transportation projects based on both population and vehicle-miles of travel.

As a consequence of the two effects—lower per-resident spending from federal funds and rising population share—Florida now has much less federally-funded roadway per resident than the rest of the nation. We estimate the shortfall as of 2000 by adjusting

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<sup>3</sup> The three-year funding allocation of \$110.4 million to Florida was apportioned as follows: \$13.4 million for the primary highway system; \$8.7 million for secondary or feeder roads; \$8.4 million for urban highways; and \$79.9 million for the interstate system.



annual federal allocations for 1950 through 2000 for inflation and allowing for a 2.0% annual depreciation.<sup>4</sup> We omit all spending before 1950. This is not an important omission because the effect of spending before that year on current road infrastructure is minor.

To illustrate the shortfall calculation, we select federal transportation funds in 1980. In that year, apportionments to all states totaled \$9.6 billion and to Florida, \$479 million. If we adjust those amounts for inflation to 2000 dollars, they total \$15.9 billion to all states and \$796 million to Florida. If we allow for 2.0% annual depreciation, those values fall to \$10.6 billion (all states) and \$531 million (Florida). If we divide by population in 2000, the apportionments become \$80 per resident for the nation and \$33 per resident for Florida. Summing similar calculations over the years from 1950 through 2000, we calculate that the year 2000 value of federally-funded transportation infrastructure was \$1,785 per resident for the nation and \$641 per resident for Florida. The value for Florida was 36% of that for the nation. Per resident, the value of federally-funded roads in Florida was just over one-third of that for the nation.

We need to point out a serious limitation to our calculation. It values the land used for urban roads at the price paid at the time of purchase, adjusted for inflation minus depreciation. Most urban land values in Florida have risen more rapidly than overall inflation, meaning that our calculation undervalues the land component of existing roads. Assembling the data to calculate this correctly, a midsize project in itself, is beyond the scope of this report. Our guess is that with such an adjustment we would conclude that the value of federal funding in Florida accumulates to be about 40% less than nationally, instead of 64% less. In that guess we are influenced by the Interstate lane-miles presented in Table 1.

To summarize to this point, Florida's large urban areas are short of federally-funded roads, and Interstate lane-miles in particular, because of their rapid growth and, in most cases, their

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<sup>4</sup> The data are from Bureau of Public Roads and, later, Federal Highway Administration, *Highway Statistics, 1950* and later years. We had to interpolate 1970 and 1993.

coastal location. If this explanation is correct coastal cities nationally should have fewer Interstate lane miles. That turns out to be true. The regression below uses 1999 data for the 400 largest urbanized areas in the country:

$$\text{INTERSTATE} = -0.46 + 1.01 \text{ AREA} + 0.39 \text{ POP} - 0.60 \text{ COAST}$$

(0.36) (0.16) (0.14) (0.20)

n = 400 largest urbanized areas

Where: INTERSTATE is the log of interstate lane-miles;  
 AREA is the log of urbanized land area in square miles;  
 POP is the log of population; and  
 COAST is a dichotomous variable that takes the value one if the urbanized area is on the coast and zero otherwise.<sup>5</sup>

The regression shows that a doubling of an urban area's square miles is associated with twice the Interstate lane-miles. A doubling

<b>Table 1. Florida's Relative Share per Urban Resident of Urban Road Type</b>	
Type of Road	Florida Relative Share per Resident (%)
Total freeway lane-miles	66
Principal arterial centerline	84
Minor arterial centerline	58
Collector centerline	112
Local road centerline	100
Addendum: Interstate lane-miles	60
Addendum: Other freeway and expressway lane-miles	77
Source: Authors' calculations from 1999 U.S. Transportation Survey.	

<sup>5</sup>Tobit was used for estimation since there are no urbanized areas with negative interstate lane-miles. The log of zero was taken to be zero, making zero miles indistinguishable from one, a good enough approximation. There were 100 censored observations. No R<sup>2</sup> is given because Tobit regressions do not yield R<sup>2</sup>'s. Standard errors are in parentheses.

of population size is associated with about 40% more lane-miles and coastal location is associated with 60% *fewer* lane-miles. Since 17 of the 26 urbanized areas in Florida are on the coast, compared to 42 of 374 in the rest of the country, this effect explains most of the Interstate shortfall in Florida's urbanized areas.<sup>6</sup> Being coastal, Florida's cities received a small share of a highway network designed for continental connectivity and experienced rapid population growth.

To emphasize the importance of the Interstate shortfall, we present Table 1, showing that Florida's 26 large urban areas have *more* than their share per capita of collectors and local roads, in contrast to only 60% of their share of Interstate lane-miles.

### ***Benefit-Cost Consideration***

Congestion can be extremely costly. Since 1982, the Texas Transportation Institute (TTI) has issued an annual urban mobility study that provides information about urban congestion in 75 metro areas in the United States, including associated costs (Schrank & Lomax, 2005). To capture costs from congestion delay, TTI developed a travel time index that measures how much more time it takes to travel during a peak period than during other times of the day. The study ranks 75 metro areas with respect to the cost impact of congestion in 2003.<sup>7</sup> This list is divided into three categories: (1) the cost of congestion in terms of delay and wasted fuel; (2) the cost of congestion to each traveler during the peak congestion period; and (3) the cost of congestion for each person. Table 2 lists eight metro areas in Florida extracted from the

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<sup>6</sup>It does not account for it fully, however. If a dichotomous variable for Florida is added to the regression above, its coefficient is significantly negative and quite large in magnitude at minus 0.74 (0.31), and the coefficient of coast declines in magnitude to minus 0.41.

<sup>7</sup> The "cost of congestion" is defined in this study as: "the value of the extra time and fuel that is consumed during congested travel. The value of time for 2003 is estimated for passenger vehicles and trucks and the fuel costs are the per-gallon average price for each state. The value of a person's time is derived from the perspective of the individual's value of their time, rather than being based on the wage rate. Only the value of truck operating time is included; the value of the commodities is not. The value of time is the same for all urban areas."

**Table 2. Annual Congestion Costs in Six Metro Areas in Florida, 2003**

Urban Area	Annual Cost due to Congestion				
	Delay (million \$)	Fuel (million \$)	Total (million \$)	Per Peak Traveler (\$)	Per Person (\$)
Miami-Hialeah	2,353	133	2,486	869	487
Ft. Lauderdale- Hollywood- Pompano Beach <sup>a</sup>	710	100	810	1,105	520
Tampa- St. Petersburg- Clearwater	841	44	865	772	422
Orlando	609	34	643	935	510
Pensacola	47	3	50	300	162
Sarasota- Bradenton	91	6	97	316	170
West Palm Beach- Boca Raton- Delray Beach <sup>a</sup>	345	50	395	835	385
Jacksonville	270	15	285	573	308

<sup>a</sup> The Ft. Lauderdale-Hollywood-Pompano Beach and West Palm Beach-Boca-Raton-Delray Beach numbers are for 2000 from the 2002 *Urban Mobility Report*. Those MSAs were not studied for the 2005 *Report*.

Source: 2005 *Urban Mobility Report*; extracted from MSA tables.

lengthier list included in TTI's study. The total annual cost due to congestion in terms of delay and fuel in the six metro areas was \$5.63 billion. The cost of congestion per person in the eight metro areas was \$439.

Congestion may also have impacts that are less easily quantifiable. According to a study by Robert Putnam at Harvard University, for every 10 minutes spent commuting, there is a reduction of 10% in civic education, such as scouting, involvement in clubs, and community work.<sup>8</sup> Congestion also provides fertile ground for traffic accidents that are not always quantifiable in

<sup>8</sup> National Wildlife Federation, "Unbearable Traffic Congestion;" available at: <http://www.nwf.org>

terms of costs.

Because the return on investment in expanded road capacity (added lane-miles) is probably greatest where congestion is the most significant, we focus on the Florida Intrastate Highway System (FIHS). Legislation establishing the FIHS in 1990 required the Florida Department of Transportation (FDOT) to develop a statewide transportation network plan that would allow for “high-speed and high-volume traffic movements within the state.”<sup>9</sup> To realize that objective, FDOT selects FIHS projects that “improve safety, provide connectivity and add new capacity to relieve congestion” (FDOT, 2000, p. 3). Components of the plan include interstate highways, the Florida Turnpike System, and selected expressways and major arterial highways—a total of 3,834 miles (FDOT, 2002).<sup>10</sup> The FDOT (2000) has determined that the FIHS is the “centerpiece of Florida’s road network” (p. 5). According to the Department’s FIHS modal plan, the network includes only 3% of Florida’s public roads but carries 32% of all traffic and 70% of the truck traffic. Specifically, the corridors of I-95 and I-4—part of the FIHS—have relatively high levels of truck travel (over 5,000 trucks per day) that contribute to critical congestion levels (p. 12). Not surprisingly, the state’s congested metro areas listed in Table 2 are also included in the FIHS highway network. The FIHS also is linked closely to economic development as approximately two-thirds of Floridians and jobs are within five miles of system roads (p. 6).

There are many complications in any attempt to assess the costs and benefits of additional road spending. A major one is that building more roads results in more people remaining in and moving into an area. Work done by Jim Dewey of the University of Florida’s Bureau of Economic and Business Research finds that a 10% increase in road construction boosts population by 4% over the long run. An increase in roads alleviates congestion initially, but part of that relief dissipates as more people move into the area and as families move farther from where they work and shop.

That leads many observers to advocate congestion relief

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<sup>9</sup> 2002 Florida Statutes 338.001(1).

<sup>10</sup> The miles indicated here refer to existing highway miles. An additional 101 miles were proposed or were under construction at that time.

through reducing the demand for using roads instead of increasing the supply. That view is reflected in legislation enacted in 1993, requiring each metropolitan planning organization in Florida to develop traffic congestion management systems to be coordinated by FDOT.<sup>11</sup> A congestion management system is defined in the Federal Register as:

*[A] systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The CMS results in serious consideration of implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that reduce SOV (single occupant vehicle) travel and improve existing transportation system efficiency.<sup>12</sup>*

A 2001 study by the transportation advocacy group, the Surface Transportation Policy Project (STPP), found that management of traffic and providing commuters with choice in transportation modes is a more effective strategy than adding lanes. STPP also concluded that metro areas with the fastest growing road systems are generally no less congested than metro areas that are adding the fewest roads. This conclusion was derived from an analysis of a congestion burden index developed by the STPP (2001) that ranked 68 major metro areas in terms of the burden that congestion places on its residents. Ft. Lauderdale ranked 9<sup>th</sup>, Miami-Hialeah 15<sup>th</sup>, Orlando 22<sup>nd</sup>, Tampa 27<sup>th</sup>, and Jacksonville, 42<sup>nd</sup>.<sup>13</sup>

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<sup>11</sup> See Florida Statutes 339.217; also, Florida Department of Transportation, "Florida's Mobility Management Process" available online at <http://www.dot.state.fl.us/planning/systems/sm/conman/>

<sup>12</sup> See 23 CFR Section 500.109, December 19, 1996.

<sup>13</sup> The STPP's methodology for measuring the congestion burden is similar to that of the Texas Transportation Institute but STPP expands the congestion burden index by including a transportation choice ratio. This ratio indicates the availability of transportation modes other than driving to work.

**Table 3. Needs and Shortfall**  
(2000\$, in billions)

Item	2000–10	2011–20	Total Need 2000–20
Needs	31	16	47
Available Funding	10	7	17
Mobility 2000	1	–	1
Shortfall or Unfunded Needs	20	9	29

Source: Florida Department of Transportation, *Florida Intrastate Highway System*, July 2002.

### ***Expenditure Projection***

As far as we can determine, the most recent estimate of the statewide transportation infrastructure shortfall was prepared by the University of South Florida's Center for Urban Transportation Research in 1995. Even though it would be useful to have updated numbers for all roads, more relevant for our purpose is the Florida Intrastate Highway System, since it is funded at the state level. We use, therefore FDOT's twenty-year transportation plan. Table 3 shows its projected available funding and shortfalls from years 2000–10 and 2011–20, as well as the projected cumulative amount for 2000–20.

In spite of the possibilities for reducing demand, we will assume that to alleviate congestion and accommodate population growth, Florida will turn primarily to widening and building roads. For expenditure projections one could use the most recent FDOT long-run budget based on available revenue as our modal case, and assume spending sufficient to make up half the estimated shortfall over the next twenty years as an alternative projection.

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# Expenditure Projections: **10** Public Safety

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**David Denslow**  
**with**  
**Chifeng Dai**

## *Introduction*

Our organization in this chapter differs from the others. We simply look at past trends and project spending, without extensive comparison to other states or discussion of benefits and costs. A major reason for this is that our economic assessment of benefits and costs of incarceration, for example, would be heavily influenced by such work as that by Rasmussen and Benson on the economic results of imprisonment for possession of recreational drugs and thus, would lead us far from anything the state of Florida is likely to do.

The major components of public safety spending are police protection, fire protection, and corrections. In constant 2002 dollars, Florida's state and local spending per resident in FY 1980–81 through FY 2001-02 rose slightly for police, rose slightly for fire protection, and almost doubled for corrections.

We turn to Table 1, showing Florida spending per resident in constant 2002 dollars from 1980–81 through 2001-02 on police protection, fire protection, and corrections, taking the categories in order. With respect to police protection, the slight decrease in spending per resident is puzzling. A large component of police protection is compensation of employees. From 1980 to 2003, the number of sworn officers per 100,000 residents rose from 213 to 255 and the number of other employees rose from 87 to 161. That lifted the total number of police employees per 100,000 residents from 300 to 416, a 39% increase, while the real cost per resident rose from \$265 to \$270, or by 2%.

There would seem to be two possible explanations of the anomaly. One is that average real wages fell over the period, which seems unlikely. We have not been able to find complete wage data for all police personnel in Florida for comparing the early 1980s with the year 2000. According to the U.S. Bureau of Labor

**Table 1. Spending on Major Components of Public Safety  
Florida State and Local Governments**  
(constant 2002\$ per resident)

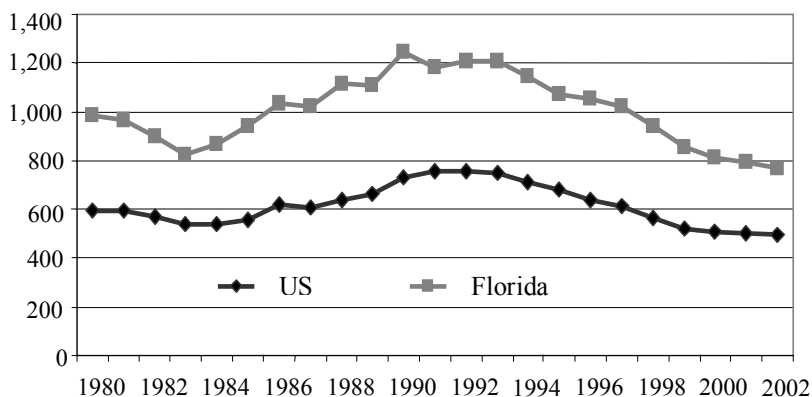
Fiscal Year	Police	Fire	Corrections	Sum
1980-81	265	95	105	465
1981-82	256	91	94	440
1982-83	256	91	107	454
1983-84	254	95	132	481
1984-85	248	97	132	477
1985-86	252	97	142	490
1986-87	269	99	162	530
1987-88	259	98	172	529
1988-89	255	103	183	541
1989-90	255	99	197	551
1990-91	260	99	197	556
1991-92	252	99	207	558
1992-93	261	101	189	552
1993-94	251	100	195	545
1994-95	259	98	221	578
1995-96	257	99	213	569
1996-97	261	101	223	585
1997-98	252	101	221	574
1998-99	259	104	225	588
1999-00	245	107	214	566
2000-01 <sup>a</sup>	256	109	209	575
2001-02 <sup>b</sup>	270	115	207	591

<sup>a</sup> Estimated.

<sup>b</sup> Updated with U.S. Census data.

Statistics, the average pay for the 35,170 “police and sheriffs patrol workers” in Florida in 2000 was \$40,860, which was just slightly above the U.S. average of \$40,590. It seems improbable that this number was higher, in constant dollars, in the early 1980s. In the first quarter of 1983, the average pay for 12,391 local police personnel for counties reporting pay was only \$27,059, again in constant 2000 dollars. The increase in real wages in general also

**Figure 1. Violent Crime Rates in Florida and the U.S.  
1980 to 2002**  
(Rate per 100,000 population)

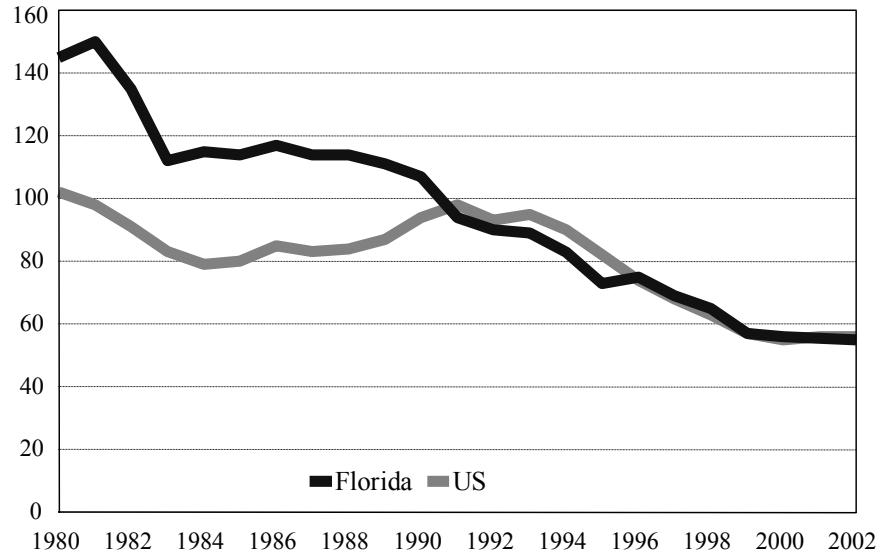


Source: U.S. Bureau of Justice Statistics, <http://www.ojp.usdoj.gov/bjs> makes it seem unlikely that average police pay has fallen. It is possible that the decrease in the ratio of sworn officers to total personnel from 71% to 65% reduced average pay somewhat, but that effect is likely to have been offset and more by an increase in pay for each job classification. The second possibility is that non-personnel police costs have fallen substantially. Given the large share of personnel in police costs, the drop would have to be large.

What is the likely path of spending per resident on police? One potential source of optimism is that Florida's violent crime and murder rates, copying the nation's, trended down in the 1990s, as shown in Figures 1 and 2. Between 1990 and 2003, the state's violent crime rate per 100,000 residents fell from 1,250 to 730 and its murder rate from 10.7 to 5.4. A population that has become markedly less violent may require less spending on police protection. That could be a mistaken conclusion; however, if a major cause of the reduced crime rate was that there were more police on patrol. Some analysts estimate that, other things the same, increasing the number of police by 10% reduces crime by approximately 4% (Levitt, 2004).<sup>1</sup>

<sup>1</sup> See Levitt (2004) for a summary of the literature on these issues. According to Levitt, the four factors that explain the national decline are more police, more incarceration, fewer strongly unwanted births in the 1970s, and the easing of the Tough Choices: Shaping Florida's Future

**Figure 2. Murder Rates in Florida and the U.S.**  
**1980 to 2002**  
 (Rate per 100,000 population)



Source: U.S. Federal Bureau of Investigation, Uniform Crime Reports.

In Florida, the number of sworn officers per 100,000 residents has changed little in the past twenty years: from 213 in 1982 up slightly to 234 in 1991, and then down a little to 229 in 2002. The number of other police personnel, in contrast, has risen per 100,000 residents: from 87 in 1982, to 108 in 1991, to 126 in 2002. Perhaps the increase in non-sworn personnel has allowed officers with the power to arrest to spend more time on patrol, developing community ties and gaining information. It is also likely that the use of private security guards, for shopping malls and gated communities for example, has risen.

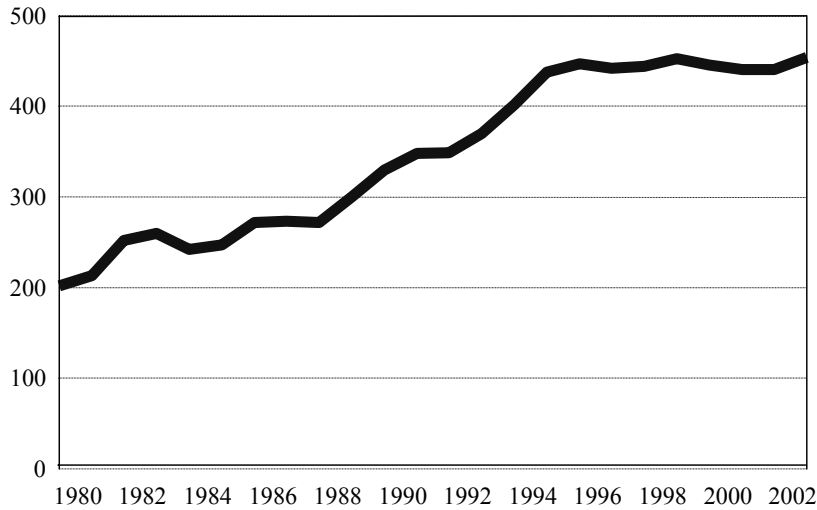
Our projection is that even if the use of private guards rises between now and 2010, the number of public police employees per 100,000 residents will at least remain constant for four reasons. First, the state's more affluent residents will demand a continued

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crack epidemic. The six that do not are the strong economy of the 1990s, changing demographics, better policing strategies, gun control laws, laws allowing the carrying of concealed weapons, and increased use of capital punishment. Levitt does not discuss the possibility that technological advances made apprehending and convicting criminals easier.

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**Figure 3. Florida's Incarceration Rate  
1980 to 2002**



Source: University of Florida, BEBR, *Florida Statistical Abstract*, Table 22.10, various issues.

high level of protection. Though the state has about 20% more than its share of the nation's police, it also has over 50% more than its share of violent crime. Second, the state will continue to want to encourage tourism by developing a reputation for safety. Third, police will be needed to deal with homeland security mandates. Fourth, there will be a rising share of the population in the late teens and early twenties as the baby boom echo generation ages.

In light of these considerations and the expectation that police pay will rise slightly, we project that spending per resident on police protection will rise by 10% between 2000 and 2010, or to \$258 per resident (in constant 2000 dollars). Using similar reasoning (slightly higher real wages, the desire for increased safety and low insurance rates, and homeland security), we project that the cost of fire protection per resident will rise by 5% between 2000 and 2010, from \$103 to \$108.

Inflation-adjusted spending per resident on corrections doubled from 1980 to 2000, rising from \$101 to \$206 in constant 2000 dollars. The reason is clear: the incarceration rate more than doubled, from 202 per 100,000 in 1980 to 446 in 2000. Most of the increase, as shown in Figure 3, occurred between 1985 and 1995, and the rate has leveled off since. The surge occurred first because

of a combination of a rising crime rate and tougher penalties in the late 1980s, followed by a lagged effect as new prisoners kept entering in the early 1990s while, because of the longer sentences, fewer of the older ones left. As that lagged effect played itself out, the incarceration rate leveled off after 1995.

### ***Expenditure Projection: Criminal Justice and Corrections***

Prisons are one component of the state's spending on criminal justice and corrections. In this sub-section, we now leave aside local spending on public safety, and focus on state spending on criminal justice and corrections. The state agencies that account for state spending on criminal justice and corrections are the Department of Corrections, Justice Administration, the Department of Juvenile Justice, the Department of Law Enforcement, Legal Affairs/Attorney General, and the Parole Commission. Table 2 shows the budget for criminal justice and corrections for FY 2004–05.

To project expenditures for the Department of Corrections, we begin by estimating that for FY 2004–05 inmate cost will be \$49 per day or \$17,885 per year. Adjusted for inflation, that is what it was in FY 2002–03 (FDOC, 2004).<sup>2</sup> We assume that in real terms that cost will be the same in 2009–10. It is possible that new technologies will reduce the cost, but the pay of guards and other prison employees is likely to rise with other wages. Moreover, Florida has sharply reduced the ratio of guards to prisoners over the past two decades, and it hard to see much room for further reductions.

Next we use the estimates of the prison population for 2009–10 from the October 2004 Criminal Justice Estimating Conference.<sup>3</sup> The average projected for the fiscal year is 98,369. Next we note that in 2002–03, inmate costs were 74% of the total budget of the Department of Corrections. We assume that ratio will continue. That gives us FY 2009–10 inmate costs of \$1.771 billion and a total budget for the Department of Corrections of \$2.393 billion, in

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<sup>2</sup> The 2002–03 figure is \$47.39.

<sup>3</sup> Economic and Demographic Research.

**Table 2. Budget for Criminal Justice and Corrections  
FY 2005–06<sup>4</sup>  
(billion \$)**

Agency	General Revenue	Other Trust	All Funds
Department of Corrections	2.162	0.059	2.221
Justice Administration	0.598	0.050	0.648
Department of Juvenile Justice	0.472	0.179	0.651
Department of Law Enforcement	0.110	0.177	0.287
Legal Affairs/ATTY General	0.034	0.128	0.162
Parole Commission	0.012		0.012
<b>Total</b>	<b>3.388</b>	<b>0.593</b>	<b>3.981</b>

FY 2004–05 dollars.

To project the expenditures of the Department of Juvenile Justice, we first note that the Florida population age 10 through 17 is expected to be 1,862,479 in 2004–05 and grow 3.8% to 1,932,767 in 2009–10.<sup>5</sup> We assume that real expenditures will rise by the same 3.8%, from \$0.630 billion to \$0.653 billion.

For all other expenditures, we assume that they will, in real terms, rise at the same pace as population, or by 10%. That implies an increase from \$1.090 billion to \$1.199 billion. Pulling it all together, we have (Table 3):

<b>Table 3. Expenditure Projections for 2009–10</b>	
	Expenditure (2004–05 billion\$)
Department of Corrections	2.393
Department of Juvenile Justice	0.653
All Other	1.199
<b>Total</b>	<b>4.245</b>

<sup>4</sup> Florida's E-Budget. Weblink: <http://www.ebudget.state.fl.us/billview/billpage.asp?Hpage=304>

<sup>5</sup> BEBR population projection as of December 2004.



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# Children's Health and Welfare Programs

# 11

## *Overview*

### **Carol Weissert**

Florida's children are less healthy than children in other states; and while the health of the state's children is improving in several indicators, the state remains lower than the national average in many others.

In a recently released assessment of children's health, Florida was ranked 35<sup>th</sup> among the states in ten key indicators of child wellbeing for 2002 (Kids Count, 2005). In five of the ten indicators, the state was below the national average; in three indicators the state average was the same as the national average. The average of teens not attending school and not working were the only areas in which Florida's average was better than the national average.

Table 1 shows Florida's children's standing on five health issues compared to the United States average and compared to three other large Southern states.<sup>1</sup> The health measures that are particularly troublesome are the infant mortality rates and percentage of low-birthweight babies. In infant mortality, Florida was ranked 32nd and in percent of low-birthweight babies it was 36<sup>th</sup>. However, Georgia and North Carolina rank worse in both categories than Florida.

Florida's teen health statistics in two of the three measures shown in Table 1 are better than those of any of the three other large Southern states in 2001. In the other measure—child death rate—Florida beats out all three other large Southern states.

As Figure 1 notes, Florida's infant mortality rates have fallen since 1990 but still remain higher than the national average (except for 1995 and 1997 when Florida's rates are slightly below the

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<sup>1</sup> While clearly Florida is not identical to its Southern neighbors, it is often a useful point of reference to compare Florida to these states and we do so at relevant points in each policy chapter.

**Table 1. Five Health Indicators 2002: Florida, Comparable Southern States, and the United States<sup>1</sup>**

State	Infant Mortality Rate <sup>2</sup>	% Low-Birthweight Babies	Teen Birth Rate <sup>3</sup>	Child Death Rate <sup>4</sup>	Rate of Teen Deaths <sup>5</sup>
Florida	7.5	8.4	23	22	68
Georgia	8.9	8.9	31	23	70
North Carolina	8.2	9.0	29	23	75
Texas	6.4	7.7	38	23	74
U.S.	7.0	7.8	23	21	68

<sup>1</sup> While clearly Florida is not identical to its Southern neighbors, it is often a useful point of reference to compare Florida to these states, and we do so at relevant points in each policy chapter.

<sup>2</sup> Deaths per 1,000 live births.

<sup>3</sup> Births per 100,000 females ages 15-17.

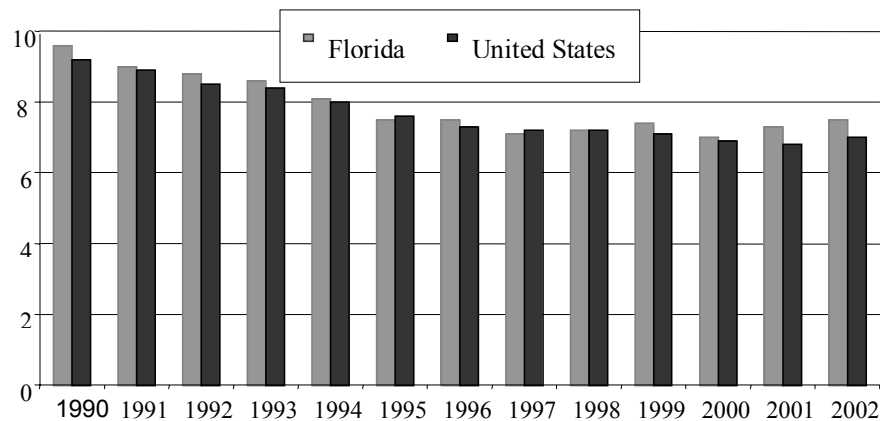
<sup>4</sup> Deaths per 100,000 children ages 1-14.

<sup>5</sup> Rate of teen deaths to accidents, suicide, and homicide per 100,000.

Source: *Kids Count*, 2005.

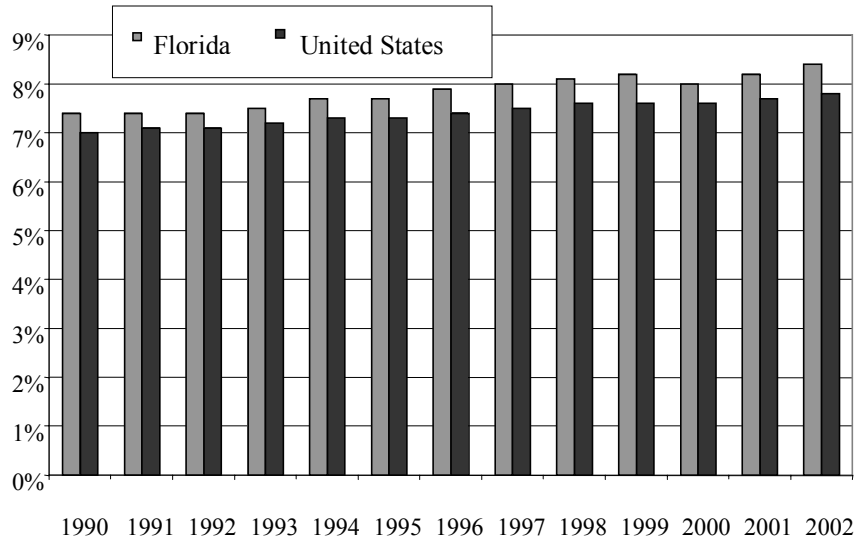
national average). The gaps between Florida and the United States average are greater in the percent of low-birthweight babies (Figure 2). The gap between Florida and the U.S. is larger than that for infant mortality and has remained large over the past decade.

**Figure 1. Infant Mortality Rate: Florida and the United States 1990 to 2002**



Source: *Kids Count*, 2005.

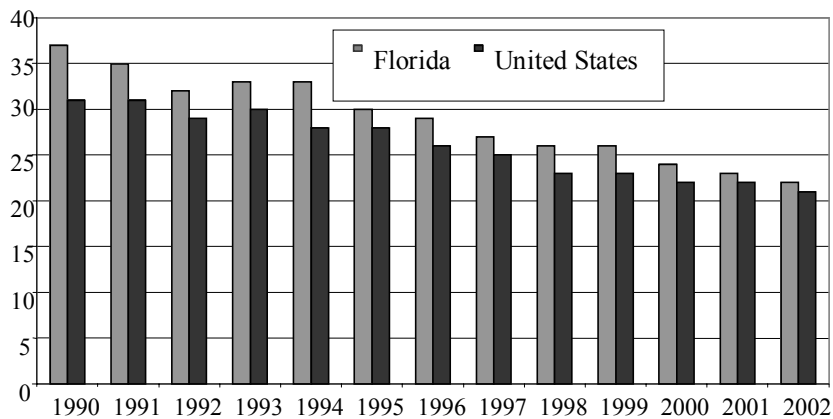
**Figure 2. Percent of Low-Birthweight Babies: Florida and the United States, 1990 to 2002**



Source: *Kids Count*, 2005.

Figure 3 shows change in Florida and the United States in child death rates. Both have fallen steadily over the decade. Florida's child death rates remain higher than the rest of the country, but the gap has narrowed since 1990.

**Figure 3. Child Death Rate: Florida and the United States, 1990 to 2002**



Source: *Kids Count*, 2005. Child death rate is measure by the deaths per 100,000 children age 1-14.

**Table 2. Number of Uninsured Children (0-18) in Aggregate and Percentage of Children in Florida, Other Large Southern States, and the United States**

State	Number Children Uninsured	Percentage of Children Uninsured	Rank
Florida	646,390	16%	47 <sup>th</sup>
Georgia	312,170	13%	38 <sup>th</sup>
North Carolina	276,660	13%	38 <sup>th</sup>
Texas	1,397,210	22%	50 <sup>th</sup>
United States	9,134,360	12%	—

Source: Kaiser Commission Medicaid and the Uninsured, 2003.

Finally, Table 2 provides information on Florida, other large Southern states, and the nation in terms of the number and percentage of uninsured children. Florida ranks 47<sup>th</sup> among the 50 states in the percentage of children who are uninsured. Some 16% of Florida children are uninsured, compared to 12% nationally. Again, the other large southern states are also laggard in this category. In fact Texas is the worst in the entire country with over 22% of its children uninsured.

Overall then, Florida and other large Southern states remain behind most other states in key child health statistics, but Florida child health measures show steady improvement since 1990, except for percentage of low-birthweight babies, where Florida's percentage is rising and the gap increasing between Florida and the rest of the country.

### *Impacts of Lack of Insurance*

There has been a wide variety of research on the impact on children of having no health insurance. Most of the research deals with access—i.e., use of emergency rooms, delay in seeking care, having a physician, and making visits to him or her (see, for example, Szilagyi, et al., 2000). Measures of health outcome are difficult to apply to children, since they are generally healthy and relatively few children suffer from any specific disease. Infant

mortality rates are an important health-status measure and are reflected in research. However, these rates rely heavily on the health of the mother, rather than medical access for the child. Thus, research on impact on health outcomes on children relies on several measures that might be viewed as outputs rather than outcomes, namely: number of days spent in bed due to illness, number of days absent from school due to illness, and the number of days when a child's normal activities are restricted due to illness. These measures are felt to gauge the extent to which illnesses interfere with children's development and quality of life (McGauhey & Starfield, 1993; Newacheck, 1994; Lykens & Jargowsky, 2002).

Lykens and Jargowsky (2002) indirectly looked at the impact of not having insurance by examining the impact of Medicaid and private insurance on children in a large number of households, using the measures listed above. They found that Medicaid significantly improved the health conditions and functional status of Whites, but not necessarily those of Hispanics and Blacks. (The authors point out that the results could be from smaller sample size of minorities or differences in their access to health services.) Several recent evaluations have found that the federal-state State Children's Insurance Program (S-CHIP) coverage for children improved their health status, as well as their access to care (Damiano, Willard, & Momany, 2001).

Research conducted for the Institute of Medicine quantified the cost of the uninsured to the state's economy. The value of a healthier life that an uninsured child (or adult) forgoes is between \$1,645 and \$3,280 each year without coverage (Miller, Vigdor, & Manning, 2004).

### ***The State Children's Health Insurance Program***

While Medicaid has long helped provide health care services to poor children, most states, including Florida, restrict eligibility to very poor children. Children in near-poor families who could not afford health insurance were simply left uninsured and often without adequate medical care for even the most standard of preventative services.

The national State Children's Health Insurance Program,

(widely known as S-CHIP) was enacted in 1997 and is one of the most important federal-state health programs enacted in recent years (second only to Medicaid). The program, which makes up Title XXI of the Social Security Act, provides \$47 billion to the states through FY 2007 for health insurance for children whose families earn too much to qualify for Medicaid but too little to afford private health insurance. Unlike Medicaid, S-CHIP is a block grant, not an entitlement, which means that children eligible for the program may be refused enrollment if funds to care for them are not available. In contrast, children who qualify for Medicaid cannot be denied enrollment to that program. S-CHIP's matching formula is more generous than is Medicaid's. The federal matching rate is 70% of the state's federal match for Medicaid plus 30 percentage points, up to a maximum of 85%.

States had considerable leeway in designing their S-CHIP programs. States could establish a new children's program, fold the new program into their existing Medicaid programs, or do both. Some 23 states elected to expand Medicaid; 15 set up a separate S-CHIP program, and 18 (including Florida) opted for a combination program in which they expanded Medicaid *and* set up a new S-CHIP program (Weissert & Weissert, 2002).

There are some unusual grant provisions in S-CHIP—including one which provides that states have three years to spend their allotted funds. If they do not spend the money in that period, the funds revert to the U.S. Treasury and are available for redistribution to states that have used their full allotment. Florida did not use its full annual allotments until 2001. Over the history of the program, the state had some \$120 million returned to the federal treasury and reallocated to other states (Governor's Task Force on Access to Affordable Health Insurance, 2004).

Another unusual provision is what is known as the S-CHIP Dip. The law provided that appropriations should rise, fall, and then increase again in the final year of the program. For example, in FY 1998, some \$4 billion was available to all states; in FY 2002–04 it fell to a little over \$3 billion, then it will increase to \$5 billion in FY 2007. (Centers for Medicare and Medicaid Services, 2005). For Florida, the allocation in FY 1998 was \$270 million; it dropped to \$164 million in FY 2002 and will increase to \$307 million by FY 2007 (Florida Agency for Health Care

Administration, 2003a). In FY 2004, Florida received \$277 million in federal dollars for S-CHIP.

Florida was the third highest state in the country in growth in S-CHIP enrollment between June 2002 and June 2003, increasing by 34%. The national average was 7% (Kaiser Family Foundation, 2004). However, the Florida legislature froze enrollments in the program in July 2003, and enrollments began to fall. The latest figures on enrollment changes (December 2002 through December 2003) showed Florida falling to 11<sup>th</sup> with enrollment changes of 13% (Kaiser Family Foundation, 2005).

State allocations are based on 50% of the number of low-income uninsured children plus 50% of the number of low-income children and the state cost factor, which is based on annual wages in the health care industry for every state (Governor's Task Force on Access to Affordable Health Insurance, 2004). Florida's federal match is 71.3%. The range is from 65% (13 states including California and New York) to 84% (Mississippi).

### ***Florida's KidCare Program***

S-CHIP and Medicaid provide funding for a five-part program called Florida KidCare. Almost 36% of Florida's 4.2 million children under age 19 are enrolled in Florida KidCare. However, more than 400,000 currently uninsured children are potentially eligible for the program, as well (Florida KidCare Coordinating Council, 2004).

The Florida legislature set up the Florida KidCare Program in 1998. The programs making up KidCare have differing eligibility and benefits and are overseen by three state agencies and a not-for-profit corporation. The programs include:

- Children's Medicaid or KidCare Medicaid (children 0–19 who qualify for Medicaid). There are no co-payments; services are provided by a network of HMOs, MediPass providers and other providers. The Department of Children and Families determines eligibility; the Agency for Health Care Administration provides program administration.
- MediKids (children 1–5). These recipients are provided Medicaid benefits and have no co-payments. Services are provided by a Medicaid network of HMOs and MediPass. The



head agency is the Agency for Health Care Administration.

- Florida's Healthy Kids (children 5–19). There are co-payments and a monthly premium for all enrolled children except those on Medicaid. Services are provided through health plans and health insurers. Services include enhanced mental health and dental health care. The program is administered by the Florida Healthy Kids Corporation.
- Children's Medical Services Network (children 0–19 with special behavioral or physical health needs). These children receive Medicaid benefits plus specialized services and are not charged co-payments. The Department of Health contracts with providers and specialists at Medicaid rates. There is a \$15 or \$20 monthly family premium for all enrolled children except those on Medicaid.
- Behavior Health Network (children ages 5–19 with serious behavioral needs). Services are provided through the CMS network. There are no co-payments; DCF contracts with providers and specialists. (Florida Agency for Health Care Administration, 2003b).

MediKids, Healthy Kids, and part of the Children's Medical Services Network are funded with S-CHIP dollars. Families with incomes below 150% of federal poverty whose children are eligible for KidCare pay a monthly premium of \$15, regardless of the number of children in the family. Families with incomes from 151 to 200% of federal poverty pay a \$20 monthly premium. There are also small co-payments for children enrolled in Healthy Kids (Florida KidCare Coordinating Council, 2004).

Families that earn more than maximum (200% of poverty) may buy into the Healthy Kids insurance at full price. In 2003, those buying into the program paid \$92 a month for medical only and \$109 for medical and dental insurance per child per month (Alvarez, 2004).

In addition to being among the largest in the country, Florida's initial S-CHIP program was recipient-friendly in several respects. Florida allowed self-declaration of income, age, and residency (instead of requiring proof) and did not require children to be uninsured for periods of time prior to the application. Renewal was automatic and did not require new paperwork (Alvarez, 2004). Changes in 2004 made the program less recipient-friendly,

however. As of July 2004, new verification requirements have been imposed when families seek to renew their children's KidCare coverage, including written documentation of income.

Florida set up the public-private Florida Healthy Kids Corporation in 1990. It began as a school enrollment-based family health insurance plan, where the schools played an important role in marketing and outreach. When the federal State Children's Health Insurance Program (S-CHIP) was created in 1997, Florida was one of three pre-existing state programs grandfathered into the national program. This meant that the existing benefit package for Healthy Kids served as the initial benefit package for the new federal-state program. Additionally, the Robert Wood Johnson Foundation funded a Healthy Kids Replication program, which awarded \$3 million in grants to five states (Florida Healthy Kids Corporation, 2004).

The federal law allows states to provide premium assistance to aid employers to purchase group health insurance. Florida submitted an amendment to its state plan in 1998 to implement this program but was deterred when the federal agency overseeing the program demanded that employers contribute 50% of the premium (Governor's Task Force on Access to Affordable Health Insurance, 2004). Three states—Massachusetts, Oregon, and Wisconsin—have implemented premium assistance programs.

Florida Healthy Kids services are delivered through state-licensed managed care plans that meet the requirements of the Department of Insurance and the Agency for Health Care Administration. A child eligible for MediKids can choose between a Medicaid-participating health maintenance association and MediPass, a primary care case management program (Centers for Medicare and Medicaid Services, 2004).

Florida's S-CHIP program was unusual for many years for its local matching requirement. The local match was part of the program in place in Florida before enactment of the federal S-CHIP program. Florida had a three-year Medicaid demonstration program and used local funds to help pay costs. Counties had been required to contribute since 1993. By 1995, match rates for seven counties that participated ranged from 5% to 55% (OPPAGA, 2002a). About half of Florida's counties were required to contribute up to 20% of S-CHIP funding (Finegold et al., 2003).

Several Florida counties failed to match the funds, and, as a result, S-CHIP was not offered in these counties, federal funding was lost, and S-CHIP participation was reduced (Dubay, Kenney, & Haley, 2002). Governor Bush twice vetoed legislation eliminating the county match. In FY 2002, the legislature paid for the local match for one fiscal year.

In FY 2003, a new local-match policy was enacted that includes a specific local match only for those children not eligible for federal financing (primarily but not solely non-native children). Each year the legislature allocates the maximum amount of state funds that may be used to fund these children and sets a minimum amount that counties must contribute. These amounts are intended only to continue coverage for existing enrollees (Florida Healthy Kids Corporation, 2004). Counties may cover additional children by using only local funds. In FY 2004, counties in Florida contributed \$7 million, which with state dollars, provided health insurance for more than 16,000 children who were not eligible to receive federal S-CHIP dollars.

### *Enrollment*

The Florida enrollment in the S-CHIP program can best be characterized as a roller-coaster—going up dramatically but falling almost equally as dramatically. In the early years of the program, the trajectory was decidedly up. In December 1998, there were 56,265 children enrolled in S-CHIP funded programs (Medicaid Kids and Healthy Kids). By December 2003, that had increased over five-fold to 319,477. A study of S-CHIP enrollment increases between December 2002 and December 2003 recognized Florida as having the 11<sup>th</sup> highest percentage in the country during that period. The increase was particularly noteworthy because it reflected only half of the year; in July 2003 the Florida S-CHIP enrollment was frozen and began to decline (Smith, Rousseau, & O'Malley, 2004). Between June 2003 and December 2003, Florida's enrollment dropped by more than 10,000 (Kaiser Commission on Medicaid and the Uninsured, 2004). In April 2004, enrollment increased substantially when some 90,000 children on a waiting list became eligible for S-CHIP. However, enrollment was limited to two times a year and a number of new restrictions were

**Table 3. Enrollment, Waiting Lists for KidCare Programs**

Program	Enrolled	Waiting List
Healthy Kids (XXI)	269,109	68,290
Healthy Kids (not XXI)	22,925	26,607
MediKids	34,405	20,355
Children's Medical Services	9,619	1,635
Medicaid Under Age 1	1,501	20,355

Source: Alvarez, 2004.

put in place in legislation passed in 2004 including requiring four pieces of documentation and new limitations for children whose families have access to an employer's health plan. By July 2005, enrollment had fallen to 202,433 (Florida KidCare, 2005).

Table 3 provides information on the waiting list in early 2004. The total at this time was 116,887. While most of the list was for the Healthy Kids program, large numbers were waiting to be enrolled in other programs. Particularly notable was the waiting list for the Medicaid Under Age 1 program. The Florida KidCare Coordinating Council estimates that \$23 million in state dollars would fund the S-CHIP waiting list in FY 2004.

Since the Florida program existed prior to the national S-CHIP program, a number of enrollees were not eligible for federal funding, including youth over 19, certain non-citizens, children of state employees, or children of over-income families. The Florida legislature has provided limited funding for these groups. In 2003, 15,000 children were receiving benefits in the program without federal match. Most of these were non-citizens who were funded through state funds matched with local dollars. A waiting list has been accumulating since July 2000. Some 10,242 children participate at the non-subsidized rate. (Florida Healthy Kids Corporation, 2003, p. 14), many funded from state and local dollars. Certain children born outside the country have been funded by \$9 million in state dollars matched by \$7 million from counties. As localities encounter fiscal difficulties, the immigrant portion of S-CHIP may be in jeopardy. For example, in August 2004, more than 3,600 foreign-born children in Miami-Dade County were dropped from KidCare because Jackson Memorial Hospital cut

**Table 4. KidCare Funding, FY 2004**

Funding Source	Amount	Percent
State Tobacco	\$87,746,411	19%
State General Revenue	\$29,406,263	6%
Federal Title XXI	\$277,082,136	59%
Family Contributions	\$63,011,550	13%
Local Funds	\$13,100,000	3%
Total Funds	\$470,146,360	100%

Note: Excludes Medicaid (Title XIX).

Source: Agency for Health Care Administration, November 2003.

money for the program. Jackson had been funding the Miami-Dade County match for these children in S-CHIP for years (LaMendola, 2004).

Non-citizens made up only 4% of the total S-CHIP enrollees in 2003. Families who “bought into” the program made up an additional 3% and children over age 19 (another group ineligible for federal dollars) made up less than 1%. The overwhelming percentage of enrollees (92%) were eligible for federal S-CHIP dollars.

### *Funding for Healthy Kids and Medicaid*

Unlike Medicaid, which is an entitlement program that must be available to all those who meet the eligibility requirements, S-CHIP is a block grant, providing federal dollars to be matched with state dollars. There is no requirement for states to enroll all those eligible—thus the waiting lists and freezes on the program. The block grant has the advantage of allowing states to carry forward unspent dollars for no more than three years, and then it reverts back to the U.S. Treasury and is allocated to other states. In 2004, for the first time, Florida was eligible for redistribution from other states and received \$132 million, making possible the program expansion to children on the waiting list.

The federal S-CHIP program funds Healthy Kids, a small group of Medicaid enrollees (children under age 1 with family incomes between 185 and 200% of poverty), and eligible special needs children through CMS, supplemented with state and local

**Table 5. KidCare Enrollment: Budgeted and Actual  
FY 2004**

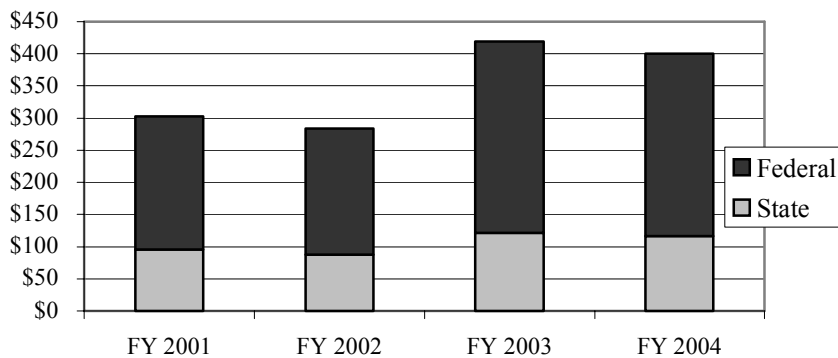
KidCare Program	Budgeted Enrollment Targets	Actual Enrollment 11/2/03
Medicaid Babies <1	1,452	1,534
MediKids	35,870	36,873
CMS Network	9,034	9,642
Behavior Net	370	325
Healthy Kids, Title XXI	271,267	276,355
Healthy Kids, Not Title XXI	0	23,814

Source: Agency for Health Care Administration, November 2003.

funds and participant payments Total funding for these programs in FY 2004 was \$470 million. Most of the funding is from the federal S-CHIP program (Table 4). One concern is with the substantial funding from the tobacco settlement funds, which have decreased since 1998. As noted in Table 5, in 2004, virtually every part of KidCare was oversubscribed.

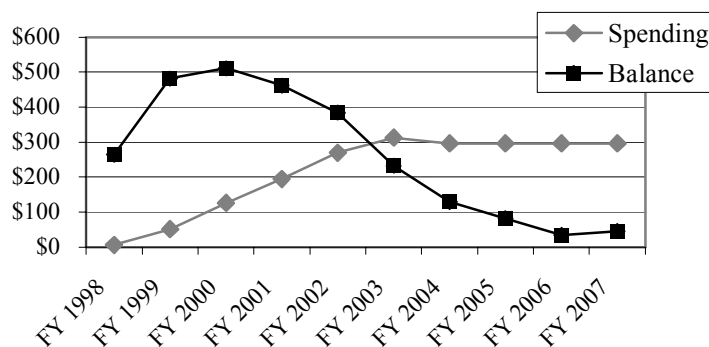
Figure 4 shows the appropriations by federal and state funding for FY 2001 through FY 2004.

**Figure 4. State and Federal S-CHIP  
Appropriations, FY 2001 to 2004  
(million \$)**



Source: Florida Agency for Health Care Administration, November 2003.

**Figure 5. Spending and Remaining Balance in S-CHIP Program, FY 1998 to FY 2007**  
(million \$)



Source: Agency for Health Care Administration, November 2003.

Figure 5 illustrates how the S-CHIP Dip affects Florida. It shows that the federal funding peaked in FY 2000 and then started to fall in FY 2001. State spending peaked later—in FY 2003—and is expected to remain stable through the rest of the program, ending in FY 2007. This stability is a problem, given the likely increased demand on the program. It is also a problem because state expenditures for recent years have been carry-forwards from previous years (states are allowed three years to spend the funds). Without carry-forward dollars and with reduced funds, there may not be enough funding for existing caseloads.

### *Public Policies*

The Florida Legislature has been actively engaged in CHIP oversight and proposed a number of changes over the past dozen years. What follows is an abbreviated timeline for those changes.

- 1990 Florida Healthy Kids Corporation Act signed into law.
- 1998 Florida KidCare Program created.
- 1998 Local-match policy revised to include base enrollment allocations to counties.
- 1998 Tobacco settlement dollars allocated to KidCare (\$75 million).

- 2000 Legislature caps funding for families ineligible for S-CHIP (restriction extended by 2001 and 2002 legislatures).
- 2000 Legislature directed Corporation to fix the amount of local match at 1999–2000 amount and free admission in counties that did not meet local match requirement and limited the local match to \$14 million.
- 2000 Corporation funded study and then changed policy to reallocate base enrollment slots based on population. Local match was to be based on economic factors and each county's prior year enrollment. The total local match requirement was reduced to \$7.1 million for FY 2002.
- 2000 Dental services added to basic package.
- 2001 Comprehensive dental benefits were included as part of base package.
- 2001 Local match requirement was waived for FY 2001–02 but expired July 1, 2002.
- 2002 Local match formula adopted. Local dollars are used to cover those not eligible for S-CHIP (predominantly immigrants). The formula is based on a county's percentage of those using funds, but counties get "credit" for other programs for this population.
- 2002 Funds allocated only for maintenance of enrollment of non-federal eligibles. Counties can fund on their own, and some do.
- July 2003 Enrollment for Healthy Kids was frozen.

The FY 2003-2004 budget made these changes:

- State dollars were reduced by 4.3% over FY 2003, with no funds for additional enrollment ([www.florida.kidcare.org](http://www.florida.kidcare.org)—Florida KidCare Legislative Update.)
- The monthly premium was increased from \$15 to \$20 per family.
- Spending of at least \$15 million (but only \$1.9 million from general revenue) was provided for non-Title XXI eligible children.
- Dental benefits were limited to \$750 per child for Healthy Kids (Legislative Update).
- A minimum co-payment of \$5 was added (Legislative Update).



- Funding for outreach was eliminated.
- KidCare enrollment was closed on July 2003, leading to a growing waiting list.

In February 2004, Florida received \$132 million in federal S-CHIP dollars reallocated from other states. Shortly thereafter, some Democratic legislators raised the issue of using the additional state funding to take children off the waiting list by using a little-known constitutional provision for convening a special session. A special session on a specific issue can be called with three-fifths vote of each chamber. Although it generated considerable press attention, the effort did not succeed in garnering the requisite number of votes.

In the first week of the 2004 session, the legislature voted to spend \$25 million to take 90,000 children off the current waiting list for KidCare through July 1. Another \$120 million was budgeted for these children for FY 2004-05. However, there was no money to add more children in 2004-05, and eligibility rules were tightened. Potential enrollees now have to provide proof of income, a pledge on whether workplace insurance is available and affordable, and the possibility of prosecution if someone ineligible enrolls. In addition, two 30-day periods a year to enroll new clients replaced a rolling enrollment with a waiting list. During those enrollments, new clients will be enrolled only to the point that the enrollment ceiling is reached—the ceiling is set by the funding estimates from the Social Services Estimating Conference. If the Estimating Conference finds that there are insufficient funds to finance the current enrollment, the program will initiate disenrollment procedures to remove enrollees. The 2004 legislature also reduced dental coverage, putting in place a \$600 cap per enrollee per year.

The number of children on the program peaked in April 2004, falling steadily thereafter. In December 2004, in a special session, the Legislature reduced the paperwork and documentation requirements; when enrollments continued to drop in 2005, the legislature again acted—allowing year-round enrollment.

Governor Bush has been cautious about future commitments incurred by putting state dollars into KidCare, saying that the federal dollars may “evaporate in a few years,” leaving Florida with major funding commitments. (Hirth, 2004). Political scientists

support his caution, noting that Congress can easily change its mind about funding S-CHIP (and other programs) and that states do factor these possibilities into their decision-making (Hill & Weissert, 1995; Weissert & Hill, 2002). As an alternative to KidCare, Governor Bush has proposed expanding health coverage in the private market. In 2004, the legislature adopted his proposal requiring insurance companies to offer health savings accounts to small businesses. Under these accounts, employers purchase high-deductible insurance policies with low premiums, and employees deposit money in savings accounts that can be spent tax-free on eligible health care expenses (Mraz, 2004).

### *Problems Ahead?*

Health insurance for children is popular politically and greatly improves access of the young to preventive care and reduces costly visits to emergency rooms. Since most children are not as likely to be ill as adults, especially aging or disabled adults, and since their care is often provided by primary care physicians rather than more expensive specialists, they offer a relative cost-effective public policy choice. However, Florida has a growing population of children, particularly non-native-born children, who may be especially needy of preventive care. Thus, the budgetary costs are not insignificant.

The Governor's Task Force on Access to Affordable Health Insurance (2004) predicted additional state spending of \$37 million in FY 2005; \$50 million in FY 2006 and \$65 million in FY 2007 was needed.

Aware of the potential cost increases, the legislature has been cautious about allocating more dollars to KidCare. For example, Governor Bush and other Republicans have been reluctant to broaden eligibility to KidCare to those families whose breadwinners have access to health insurance, arguing that KidCare was "never intended to serve as cheaper insurance" (Royse, 2004). Indeed, the 2004 law specifies that children are no longer eligible for KidCare if they have access to a family member's group health plan, whether or not the family can afford to enroll in that plan, unless the cost of the child's coverage is more than 5% of the family's income.

Florida is not alone in its efforts to squeeze S-CHIP. Over the past two years, many states have reduced eligibility or benefits to help balance state budgets hobbled by national economic conditions and federal policy actions. The question for Florida and other states is what to do when the economy improves and programs can be restored—but perhaps not without some reallocation of funding or additional revenues.

### *Florida's Children and Welfare Overview*

The U.S. welfare system is geared to benefit children through assistance provided to their parents. The nation's long-standing welfare program—Aid to Families with Dependent Children (AFDC), established in 1935—provided cash assistance to poor families. In 1996, welfare theory was revised from providing “handouts” to providing opportunities for parents to work their way out of poverty. Again the title of the law is instructive: The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA). PRWORA abolished the AFDC entitlement, replacing it with a block grant called Temporary Assistance for Needy Families (TANF). PRWORA's goals included increasing employment and earnings of needy families and decreasing child poverty. TANF provides funds for states to reduce welfare caseloads and decrease child poverty by getting jobs for parents.

In the ensuing seven years, welfare caseloads are down nationwide, poverty rates have declined, and fewer children are being raised by their mother alone (Shields & Behrman, 2002). Poverty rates have fallen from 14% in 1996 to 11% in 2000. In 2001, this number marginally increased to 11.7%. Similarly, child poverty fell from 21% in 1996 to 16% in 2000, but barely rose to 16.3% in 2001 (Shields & Behrman, 2002; National Poverty Center, 2003).

Less attention has been paid to the impact of TANF on children and how it should be measured. Johnson, Gais, and Lawrence (2002) suggested three policy theories about child wellbeing that shaped state responses to TANF:

- 1) *Environmental theory* posits that children gain psychological and sociological benefits from being part of a

family in which the head of household works. State policies under this theory emphasize work. Policies that support this theory include time limits, work requirements, diversion programs (where potential clients are given one-time aid rather than enrollment in the TANF program), mandatory job search, and few exemptions from work.

- 2) *Resource theory* argues that children benefit from increased resources that flow from having a parent or parents in the workforce. State policies supporting this theory would include increased spending on services and benefits such as child care, and enhanced earnings disregards for working families, and transportation assistance.
- 3) *Family structure theory* maintains that children benefit from growing up in a particular kind of family—married and with two parents—and suffer from being raised by a single parent or unmarried parents. State policies to strengthen family structure encourage and sustain marriage and discourage the birth of children out of wedlock. These policies include making it less difficult for two-parent families to receive assistance, providing marriage courses, providing bonuses to women who marry while on welfare, and offering a course on marriage in high school.

Indicators of child welfare vary across the studies and may include cognitive achievement and problem behavior (for young children), academic achievement, psychological health, behavior problems, and perceived health status. Outcomes for measuring TANF's impact differ somewhat based on the age of the child. For pre-school children, health outcomes may be used, although there is less research on this age group. There is more work on school-aged children and adolescents. Key variables are school achievement and behavioral problems, including engaging in risky behaviors such as smoking, drinking, drug use, and delinquent activity.

Research is most supportive of the resource theory notion of welfare and its effect on children. For example, Zaslow et al. (2002) and Clark-Kauffman et al. (2002) found that children in families participating in programs that increased employment and income tend to do better in school and have fewer behavioral problems than children in families not participating in the

programs. The impact was greatest for school-aged children. Impacts were greatest in programs that increased income but did not require mandatory work requirements. Research is less supportive of the family-composition goal. Children in two-parent families on welfare tend to score higher on assessments of cognitive skills but had more reports of cognitive failure than children in families not participating in these programs (Shields & Behrman, 2002).

National studies have found that most states have utilized the environmental approach, particularly when their fiscal budgets are tight, even though additional resources have the greatest effect on pre-adolescent children.

We also know that welfare reform apparently has a differential effect on younger children, school-aged children, and adolescents. Positive effects are most prevalent among school-aged children. Impacts on young children and pre-schoolers differ, based on the quality of day care available. Research has highlighted that adolescents may be most adversely affected by welfare reform (Clark-Kauffman et al., 2002; Morris, Gennetian, & Knox, 2002; Kurtz, 2002).

### ***Florida's Welfare Reform***

Florida's welfare reform program has several parts: (1) cash assistance for those who must then look for employment; (2) help to those on cash assistance who are looking for jobs, including assessment, work experience plus education, a limited job search and job readiness program; (3) transitional benefits for those who exit assistance due to employment, including health, child care, and some education and employment training; (4) diversion for those who might go on cash assistance but for a one-time cash payment; and (5) assistance to those who are not receiving cash but need additional education, job assistance, or child care. Florida has sanctions to assure that recipients follow the rules and a time limit for the number of months recipients can be on the program.

Florida's welfare reform administration has undergone considerable change over the past decade. Florida was an early leader in welfare reform, piloting a program called Family Transition Program in 1994 in Escambia County. Florida adopted

its welfare reform program a few months before the federal law was enacted, thus positioning itself to act quickly. Florida's law established the Work and Gain Economic Self-Sufficiency program (WAGES), which established a tiered time limit on cash receipt, strict participation mandates and sanctions, diversion assistance, family cap and parental responsibility mandates, financial work incentives, transitional services, and one-stop service delivery. The program was overseen by a new WAGES statewide board and was implemented by local WAGES boards (Holcomb et al., 1999). State administrative responsibility belonged to the Department of Labor and Employment Services (DLES), although eligibility was determined by the Department of Children and Families (DCF). The state role was constrained, however, with the public-private WAGES boards given great policy and financial responsibility.

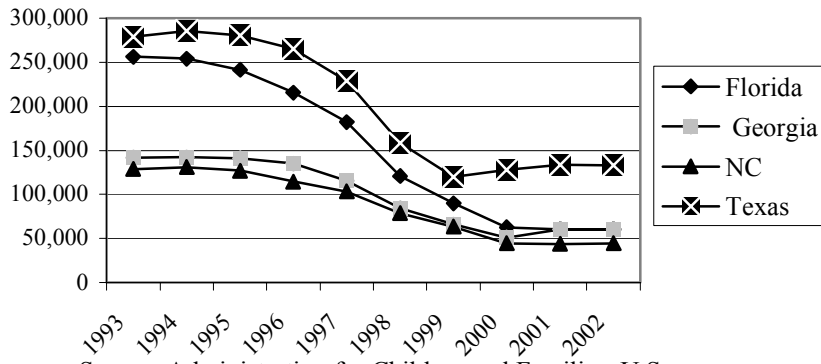
In 1998, legislation was enacted that resulted in all WAGES services being privatized on a statewide basis. In 1999, the legislature amended the WAGES law to allow more participants to use vocational education or training for their work activity, to increase the cash payment allowed for diversion, and to offer more counseling on transitional benefits (OPPAGA, 2000).

In 2000, another major welfare reform measure was enacted, merging the state WAGES board and the state workforce development board into a new entity called Workforce Florida, Inc. (WFI), a private, non-profit corporation. A new Agency for Workforce Innovation (AWI) was created as an administrative and fiscal agent for Workforce Florida, Inc. and was given responsibility for administering Welfare Transition Program, the newly named WAGES program. (Learning Systems Institute, 2001). At the local level, 24 regional workforce boards are responsible for providing welfare transition assistance and operate one-stop service centers. (OPPAGA, 2002b).

The goal of Florida's Welfare Transition program is to emphasize work, self-sufficiency, and personal responsibility as recipients move from welfare to work. (Agency for Workforce Innovation, 2004). Recipients receive assistance in exchange for work. One-stop centers can provide employment information and support services to those who are unemployed.

The 2000 legislature also set up a Better Jobs/Better Wages

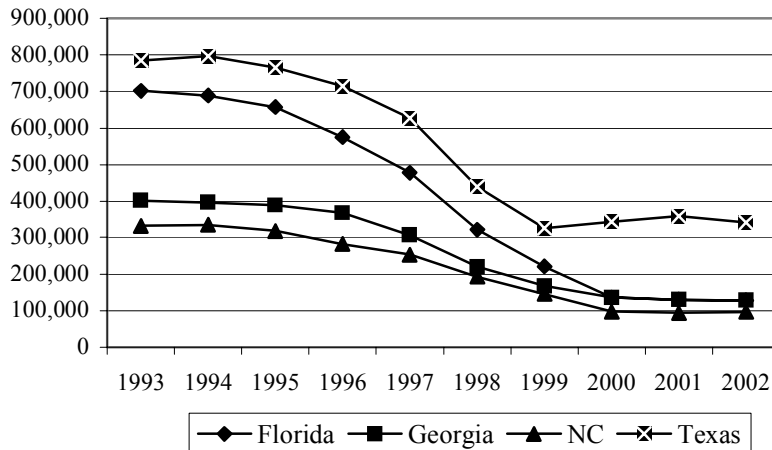
**Figure 6. Families on AFDC/TANF, 1993 to 2002**



Source: Administration for Children and Families, U.S. DHHS.

Council within Workforce Florida, Inc. to help former welfare recipients improve their job-related skills and get higher paying jobs, expanded eligibility for transportation and child care services, and set up a demonstration project to provide wage supplements for full-time workers who leave welfare, called the Passport to Economic Progress.

**Figure 7. TANF Recipients  
January 1992 to January 2002**



Source: Administration for Children and Families, U.S. DHHS.

**Table 6. Percentage Decreases in TANF Families and Recipients 1993 to 2000: Florida, Three Southern States, and the United States**

State	Percentage decrease in TANF families 1993–2000	Percentage decrease in TANF recipients 1993–2000
Florida	75%	81%
Georgia	64%	66%
North Carolina	65%	71%
Texas	54%	56%
United States (average)	56%	59%

Florida recently became the first state to contract out some eligibility services, previously undertaken by the Department of Children and Families, on a trial basis. Figures 6 and 7 show the dramatic drop in caseloads for both Florida and the three other large Southern states. Figure 6 shows the total TANF families in Florida and the other three states as of January for years 1993–2002. Florida's caseload drop was very steep, and in 2002 the state has roughly the same caseload as the other two smaller states. Figure 7 shows the number of recipients. This number is larger and includes child-only cases where family members are not covered. The same patterns apply. Also, interestingly, while Florida has seen a flattening out of the caseload, it has not increased, as it has in the other states. The Social Services Estimating conference expected the caseloads of those who receive cash assistance to continue to fall through FY 2005 (Social Services Estimating Conference, 2004).

Table 6 shows the percentage change between 1993 and 2000 for the four states and the U.S. as a whole. Florida's caseload percentage drop was much greater than its comparable Southern states and the U.S. as a whole. Only five states had larger percentage drop in the percentage of TANF families: Wyoming 91%, Oklahoma 86%, Idaho 82%, and Wisconsin 80%. Mississippi also had a 75% drop in family enrollment over that time period. Florida was also fifth largest in the percentage of recipient caseload drop. Since 2002 the caseloads have continued to fall,



falling to below 60,000 in Florida in FY 2004 (Social Services Estimating Conference, 2005).

As in other states, there were significant intrastate differences in caseload reductions in Florida. Distressed rural and urban areas often do not have sufficient numbers of jobs available to those wishing to depart welfare (OPPAGA, 2000).

Florida's welfare benefits are lower than the national mean. The average AFDC/TANF monthly grant for a family of three with no other income in Florida was \$267 in 1996, compared with the national average of \$374, and Florida was in the bottom third of all states. (Holcomb et al., 1999).

### *TANF Spending*

Under the TANF block grant, Florida and other states enjoyed the benefits of having a lump sum of federal dollars at the same time that caseloads were falling dramatically. As a result, Florida began to devote fewer dollars to cash assistance and more to non-cash assistance which can help families gain economic independence through non-recurrent short-term benefits.

In FY 2002, Florida used 69% of its total expenditures on non-assistance and only 31% on cash payments and other benefits and services for needy families who are participating in work-related requirements. Non-cash assistance can go to provide services to needy parents and families up to 200% of poverty. In FY 2002, Florida spent \$256 million (including both federal and state dollars) on basic assistance. Table 7 shows the major categories of spending for FY 2002.

Florida has used TANF dollars for other programs, particularly child care and the social services block grant. By the end of FY 2002, Florida spent approximately \$552 million in TANF dollars transferred to SSBG. It had transferred \$232 million in TANF funds to SSBG by the end of FY 2000.

TANF has greatly boosted spending in child care. In Florida, between 1991 and 2001, federal spending on child care (from AFDC and CCDBG) increased by 314%. State spending increased by 100%, and total spending increased 250%. Prior to welfare reform, total spending was increasing but at a slower rate of 20% (Carasso & Bess, 2003, p. 60).

**Table 7. Use of TANF and State Match in FY 2002**  
(dollars)

Spending Category	Federal TANF	State	Total
Basic Assistance	28,333,82	227,531,553	255,865,425
Child Care <sup>a</sup>	277,277,826	116,163,720	393,441,546
Transportation	15,696,256	549,901	16,246,157
Work Subsidies	432,580	0	432,580
Education/Training	25,637,157	0	25,637,157
Other work activities	106,435,976	0	106,435,976
Other non-assistance	188,131,492	16,615,121	204,746,613
Pregnancy			
Prevention	16,878,350	0	16,878,350
Two Parent			
Formation	490,491	0	490,491

<sup>a</sup> Includes both TANF dollars spent directly and transferred to the child care block grant.

Source: Center for Law and Social Policy, 2004.

A number of analyses of Florida's welfare reform have been conducted:

- A four-year follow-up of Florida's early program, Family Transition Program, found it increased employment and earnings, reduced welfare receipt, and modestly raised participants' income. However the effects on employment were greatest at years two and three and had largely disappeared in year four. The impacts were greatest for the less disadvantaged recipients (Administration for Children and Families, 2003).
- The impact of the Family Transition Program was notably negative for adolescents whose parents were enrolled in the program, since they showed a decline in school achievement and were more likely to be suspended from school (Bloom et al., 2000; Brooks, Hair, & Zaslow, 2001).
- More than 55% of those who left welfare were employed well over a year after they left welfare. But most of the jobs did not have benefits, and jobs that provide health insurance for children were most rare. (Crew et al., 2000).

- One study of nearly 600 women in Miami who received welfare before welfare reform, were interviewed in 1998 and again in 2001. Most had exited welfare, started working, and increased their income. While only one in four had a job that paid \$7.50 an hour or more and provided health insurance, the women considered themselves better off financially than when they were on welfare. (Brock et al., 2004).
- Families receiving assistance frequently leave the program but subsequently return for more services and cash assistance. OPPAGA (2000) found that 55% left the program and then returned for cash assistance once, and 19% left and returned two or more times.
- Few program recipients make enough money to become financially self-sufficient. Most (53%) of participants were employed in low-paying jobs and earned less than the amount that would be earned for a full-time job paying the minimum wage (OPPAGA, 2000).
- Between two-thirds and three-fourths of successful welfare leavers are making less than the federal poverty level after leaving welfare (Beneckson et al., 2000).
- There are significant differences in employment and income of those who leave welfare by race. Whites were much more likely than Blacks to be currently employed, and Black workers earned significantly less per household than did Whites who left welfare (Clark, Jarmon, & Langley, 1999).
- The overwhelming majority of Floridians polled in 1999 said they would be willing to pay a little more in taxes to be sure that children, the elderly, and the disabled who are unable to support themselves are properly cared for. (W. K. Kellogg Foundation, 1999).

### *Other Issues*

Florida's welfare system is administered largely by public-private boards, and many decisions are made at the local level. The state agencies that administered welfare and job training programs in 1996—Department of Children and Families and Department of

Labor and Employment Services—have seen these responsibilities passed on to state and local boards, which administer contracts with public, nonprofit and for-profit organizations that provide the services. Employment services, transition aids, and child care have had responsibility shifted from the state to these boards. In 2004, a final state responsibility, determination of eligibility, is being shifted to the private sector. It is this change in welfare administration from public to private and non-profit that makes Florida unique in its approach to providing services, according to the Urban Institute (Botsko, Snyder, & Leos-Urbel, 2001).

Florida has greatly increased its spending on child care since 1996. The state provides services for welfare recipients, those transitioning off welfare, and the working poor with incomes between 100 and 150% of poverty. There is a priority ordering for these cases, and there are often waiting lists for the working poor. In part, this flows from the separation of funding for the welfare and non-welfare recipients, which prevents using a surplus of TANF dollars for the non-TANF population. Families moving off welfare are given 24 months of transitional child care. Florida also offers a program that matches state money to contributions by local businesses for child care. These subsidies can be used for families with incomes up to 200% of poverty and generally go to employees of the business (Botsko et al., 2001). Programs are administered by 25 community child care coordinating agencies. Families make co-payments for child care on a sliding scale.

Coverage of immigrants is a major concern in Florida. The state provides coverage for those who came to the United States prior to August 1996 but not those who came after that date until they have resided here for five years (Holcomb et al., 1999). Immigrant children may also be ineligible for Medicaid and S-CHIP. Nearly half of non-citizen children in families with incomes below 200% of poverty (49.7%) are uninsured (Lessard & Ku, 2003). Florida serves recent legal immigrant children in S-CHIP but caps the numbers in this state-funded program.

Child-only cases are a growing part of the welfare rolls, since they are exempt from the time limits and are not expected to take jobs. Nationally, child-only cases make up nearly one-third of the total cases in 1999. Child-only cases are where adults are ineligible to receive benefits, such as when children are not living with their

parents and the caretaker adults are ineligible, when parents are SSI recipients, or when citizen children live with non-citizen parents. Other cases are child-only when parents are sanctioned for non-compliance. (Shields & Behrman, 2002).

### *Future*

Florida's child population is one of the fastest growing in the country, and the state has one of the largest immigrant populations in the country, most of whom reside in Miami-Dade County. Both of these issues are cause for some concern in the welfare program and the upcoming reauthorization of S-CHIP. More immediate concerns are the long-pending reauthorization of TANF in Washington and economic downturns, which can lead poor working families to public assistance or to jobs without health insurance.

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# International Immigration

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# 12

**J. C. Zannis  
with  
David Denslow**

## *Introduction*

Even though international immigrants can be found throughout the United States, they are concentrated in six major metropolitan areas: New York, Los Angeles, San Francisco, Chicago, Miami, and Dallas.<sup>1</sup> These areas host the country's major gateway international airports, and living near these airports gives immigrants easier access to their home countries. The immigrants attracted by the gateway airports create a critical mass making the host cities even more attractive for other immigrants of the same ethnicities, giving them family and friends, thousands of people who speak their native language, and a familiar culture.

Six states with just over a third of the native-born population—California, New York, Texas, Florida, Illinois, and Pennsylvania—are home to three-fourths of all immigrants, who are concentrated in these states' largest cities. These jurisdictions are responsible for meeting the immigrants' needs for education, medical care, housing, roads, and other public services, while the rules governing immigration are set in Washington. States and cities thus claim that equity calls for federal assistance in funding public services for our residents from abroad.

Are immigrants in fact a net fiscal burden on state and local governments? This question is of obvious importance for Florida, which has 5% of the nation's native population and 8.5% of its immigrants. This chapter explores the effects of immigration on Florida's state and local budgets, first focusing on the short run and then on the long run. In the short-run section we estimate that, compared to native households, immigrant households in Florida on average pay \$35 less in property taxes and \$391 less in sales taxes. Assuming their other state and local tax payments are the

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<sup>1</sup> This paragraph and the next are based on Chiswick and Miller (2004).

same, an average immigrant household contributes \$426 less to state and local budgets than a native household. In terms of public expenditure, we estimate they receive \$1,164 more per household in public PK–12 education and \$221 more in state-funded Medicaid. Assuming they receive the same value of other public services as native households, this adds up to \$1,385 more in state and local public services. Compared to a native household, the net effect of an immigrant household on the state and local budget is roughly a \$1,800 loss.

We note that in calculating the Medicaid difference, we have allowed for federal cost sharing. The federal government pays 59% of Medicaid costs in Florida. Were that not true, and benefits did not change, the excess state Medicaid spending on immigrant households would rise to \$539, and the total budget differential between immigrant and native households would be \$2,129. If Medicaid were to change from federal cost sharing to block grants, the \$2,129 would be the better figure at the margin. Block grants would encourage states to cut back on Medicaid, and that incentive would be especially strong in states with large immigrant populations. Florida's immigrants, incidentally, pay an estimated \$1,634 less in federal income tax per household than do Florida's natives. But they pay almost exactly the same in payroll taxes and receive \$1,632 per household less in Social Security payments. The federal government does pick up \$318 (equals \$539 minus \$221) in extra Medicaid spending, but that is probably more than offset by lower Medicare spending (comparable to the lower Social Security spending). The federal government probably gains on net from immigrants while Florida's state and local budgets lose. A switch by Congress to block grants would make the federal government an even larger budget winner from immigrants while imposing, at the margin, an even larger burden on state and local governments. This presents an enticing way for the federal government to reduce its deficit at the expense of state and local budgets.

We emphasize that we do not conclude from our findings about the average effect of immigrant households on the budget that the state should either discourage immigration or limit services to non-native residents. First, immigration is a federal policy. Second, immigrants have actively chosen to join us, and we welcome them.

Third, immigrant households are a diverse group and enrich our culture. Even from a narrow, budgetary perspective, most immigrant households are net contributors. Our point is simply that Florida's state and local governments need to account for the effect of immigration *in their budget planning*. In Florida, 16.7% of the people counted in the 2000 census were non-native, compared to 11.1% nationally. Florida has the fifth-highest non-native population share, after California (26.2%), New York (20.4%), Hawaii (17.5%), and New Jersey (17.5%) (U.S. Department of Commerce, 2003, p. 50). Of these, California, New York, and New Jersey have experienced severe state budget deficits.

Currently, with about one-sixth of Florida's households being non-native, the extra state-and-local budget burden on native households is around \$360, a manageable amount and only \$120 higher than the national average.<sup>2</sup> The non-native share of Florida's population is rising, however: in 1990 it was only 12.9% (Smith, 1995), compared to 16.7% in 2000. In the year from April 2003 through April 2004, Florida's population rose by 445,000, of which about 20% was net immigration. Because of the trend, in a decade the state and local budget impact of immigrants is likely to be even larger than now.

### ***Why We Study Immigrants as Families***

The short run effects of immigration on Florida's public finances have been addressed in a thorough study by Thomas Boswell and others.<sup>3</sup> Published in 2001, the Boswell Report quantifies the contribution of immigrants to taxes and their use of welfare and public education. With respect to revenue, the report concludes "There is no question that immigrants are carrying their fair share of the tax burdens in Florida and Miami."<sup>4</sup> It also finds that per capita spending on public services is about the same for

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<sup>2</sup> This assumes the same \$1,800 per-non-native-household imbalance exists in other states as in Florida. We have not estimated a figure for other states, however.

<sup>3</sup> Thomas D. Boswell (University of Miami), June Nogle (University of Florida), Rob Paral (Roosevelt University), and Richard Langendorf (University of Miami).

<sup>4</sup> *Ibid.*, p. 141.

immigrants as for natives.

Because the Boswell Report is professional and methodical, we wish we could use its results off the rack, with minor updating, for the short-run section of this chapter. But the authors choose the individual immigrant, not the household, as their unit of analysis.<sup>5</sup> They are well aware that most studies focus on households because “the household is a functioning socioeconomic unit.” But they use the individual instead, saying “the basic problem with using households is that they tend to overestimate the costs of providing social services to immigrants because many immigrant households include native U.S. born children.”

The implications of this choice for studying state and local budgets are enormous. By the Boswell Report’s definition, immigrants were 16% of Florida’s population in the 1996–99 data but only 7% of its K–12 students.<sup>6</sup> In view of the high fertility and relative youth of immigrant families, counting children in immigrant households raises the K–12 share above the household share. Using data for the years 2000 through 2004, we find that the immigrant share of households in Florida is 20% and the immigrant share of children is 26%. Since K–12 education takes the largest share of state-and-local spending, the difference matters. Similarly, the Boswell Report finds that immigrants’ use of Medicaid is proportional to their share of the population. For budgetary analysis, the relevant measure is not the share of Medicaid enrollment but the share of Medicaid costs, and while most Medicaid enrollees are children, most of the cost is to pay for seniors. Excluding most of the children in immigrant households from immigrant classification reduces the enrollment share for immigrants. Assuming that costs are proportional to enrollment further biases the estimated immigrant share downward.<sup>7</sup>

Our view is that for budget analysis, the appropriate unit of observation is the household. It is implausible that any substantial number of the U.S. natives 18 and under who were born in immigrant households would be Florida residents had the adults in the household chosen to live elsewhere. For that reason, in our

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<sup>5</sup> Ibid, p. 3.

<sup>6</sup> Ibid, p. 139.

<sup>7</sup> Ibid, p. 146.

short-run section, we perform the critical budget chapters of the Boswell report from scratch. Since we have the very large task of returning to original data in the U.S. Bureau of Labor Statistics' Current Population Survey (CPS), we use more recent surveys. Instead of the four years 1996 through 1999, we use the five years 2000 through 2004. The updating has the additional benefit of incorporating more fully adjustments to the 1996 welfare reform act that restricts non-natives' use of welfare. We use, as did the Boswell report, the March surveys, which contain data on income, taxes, and Medicaid enrollment. Adding together the five years gives us 6,300 observations.

Classifying households in the CPS as immigrant or non-immigrant does leads to a complication vis-à-vis classifying individuals. While we know that a household containing two Cuban-born parents, for example, should be classified as an immigrant household, classifying a household comprised of a Brazilian and an American having three children can be more difficult. As a result, we compromise. We count households in which all adults are native as native, and households in which all adults are non-native as non-native. When at least one adult is native and at least one adult is non-native, which we call blended households, we count the household as half native and half non-native. The breakdown in Florida for the years of our sample was: in 77% of all households all adults were native; in 16% all adults were non-native; and 7% were blended. Consequently we count 80.5% native and 19.5% immigrant, and split taxes and public spending accordingly. For example, half of the taxes paid by blended households are attributed to native households and half to non-native households.<sup>8</sup>

Thus, children of immigrants who were born in the U.S. are

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<sup>8</sup> We first wrote this section to present bounded effects. For the first calculation we required that every adult in the household must be an immigrant in order to classify the household as an immigrant household. This provided an upper bound on the per-household services used and a lower bound on the per-household tax contributions. To bound our estimation in the other direction we classified any household with at least one immigrant as an immigrant household. Presenting the bounds turns out to add a great deal of complexity and very little extra insight. In most respects, averages for blended households are between those for households in which all adults are natives and those for households in which all adults are foreign-born.



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considered part of immigrant households as long as they are living at home. Once they move away they become part of a non-immigrant household. We believe this is the correct approach because children are a net burden on the tax system. Once they are on their own, however, they have the benefit of an education in the U.S. and are presumably paying taxes. Nationally, children of immigrants achieve the same educational attainment as children of natives, or even slightly higher (Card, 2004).

### ***The Labor Market Response to Immigrants***

Besides classifying households, we need to discuss another methodological issue. A major reason immigrants pay less in taxes and receive more in Medicaid services is that a disproportionate number of them are not high school graduates. In Miami in the year 2000, for example, 27.6% of all workers lacked high school diplomas. Of those lacking diplomas, 74% were immigrants.<sup>9</sup> Aside from both immigrant and native non-graduates, the pattern of educational attainment of the two groups is much the same, except that immigrants (conditional on having a high school diploma) are more likely to be college graduates. The major net budget cost of immigrants arises from the large share who are not high school graduates. That is what makes immigrant earnings nationally 20% lower than native earnings.

This means that in assessing the *local* impact of immigrants, we have to look at the effect on natives in the local labor market. The *direct effect* of immigrants on state and local budgets does not take account of how less-skilled native workers respond to the presence of immigrants. The *total effect* does. Consider four possibilities:<sup>10</sup>

- 1) The presence of immigrants without diplomas induces native high-school dropouts to leave for greener pastures. Assuming immigrants and natives without diplomas have the same effects on local budgets, the net impact of immigrants on local budgets is approximately zero. The

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<sup>9</sup> Card (2004) Table 2. Across all cities, the dropout share of the work force was 17.7%.

<sup>10</sup> This paragraph follows the summary of the literature provided by Card (2004).

increase in the burden caused by immigrants is almost exactly offset by the decrease caused by the exodus of less-skilled natives.

- 2) Native drop-outs do not leave, and the competition from immigrants reduces both immigrant and native less-skilled wages. In this case the total immigrant impact on the budget is worse than the direct impact alone.
- 3) Native drop-outs do not leave, but industries that specialize in hiring less-skilled workers move in, with the result that the wages of native high-school dropouts do not fall as a consequence of immigration. The total effect of immigration on the budget is just the direct effect.
- 4) Native drop-outs do not leave and the industrial composition of employment does not change. Instead, local employers use technology that is more intensive in less-skilled labor, probably requiring less capital. In that case the wages of native drop-outs are unchanged. The total effect of immigration on the budget is just the direct effect.

Empirical evidence shows that the fourth effect accounts for 90% of the impact of less-skilled immigrants on local labor markets. The presence of less-skilled immigrants does not send native drop-outs packing, does not reduce the wages of native drop-outs, and does not pull in industries that hire less-skilled workers. Instead, the existing industries change their technologies in the direction of hiring less-skilled workers. That means that the direct budget effect of immigrants we estimate in this chapter closely approximates the total effect.

Before continuing on to estimating the budgetary impact of immigrants, we stress an important implication of the fact that the bulk of the adjustment to an increase in the amount of unskilled labor is absorbed through within-industry changes in the absorption of unskilled workers, not through the creation of new industries or through the exodus of native dropouts.<sup>11</sup> An important implication is that the more effective way to create well-paid jobs

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<sup>11</sup> Ethan Gateway Lewis wrote on this topic for his Ph.D. dissertation at Berkeley, "Local, Open Economies within the U.S.: How Do Industries Respond to Immigration?" in *Essays in Labor and Trade*, 2003. That chapter of his dissertation is also a December 2003 working paper of the Federal Reserve Bank of Philadelphia.

is through improving the skills of the local population rather than through incentives to attract high-value-added industries. For a local or state economy to have high-paying jobs, educating its children is more important than tax breaks for high-tech firms.

### *Immigrants and Taxes*

Going back to the budget impact of immigrants, we turn to sales taxes and property taxes by household type. Table 1 presents our estimates, which are that immigrant households pay roughly \$400 less per year in sales taxes and about \$30 less in property taxes, or nearly \$430 less in total.

Beginning with sales taxes, the CPS March surveys have household income for the preceding year but not sales taxes paid. We assume that sales taxes are paid in proportion to income. This assumption encounters two difficulties. First, sales taxes are regressive, falling as a proportion of income as income rises. Since average incomes are lower for immigrants (\$46,025 in our data) than for natives (\$53,495), we may be under-estimating the share of sales taxes paid by immigrants. We think the error is small, however. Average incomes are not sufficiently different for the effect to be large. Second, sales taxes in Florida are paid by businesses and by visitors as well as by resident households. Since the burden of taxes paid by businesses ultimately falls on households, and visitors would not be here without the services provided them, we simply allocate those taxes proportionately among resident households. We do not know the direction of the

**Table 1. Estimated Annual Taxes Paid per Household  
Florida, 1999–2003**  
(constant 2004\$)

Households	Sales	Property	Sum
Native	\$2,799	\$864	\$3,663
Immigrants	\$2,408	\$829	\$3,237
Difference	\$391	\$35	\$426

**Table 2. Annual Cost per Household of Medicaid  
and K–12 Education in Florida  
1999–2003  
(constant 2004\$)**

Households	Medicaid	K–12	Total
Natives	\$379	\$2,349	\$2,728
Immigrants	\$600	\$3,519	\$4,119
Difference	\$221	\$1,170	\$1,391

resulting bias but are confident it is small.<sup>12</sup>

The CPS does report property taxes paid in the preceding year, and the averages we present are calculated directly from that source. A possible bias is that immigrants are more likely to live in apartments than are natives. As a consequence the total property tax they pay indirectly as a group through rent may be greater than that for natives. On the other hand, if they live in less expensive apartments, on average, this may not be the case. Additionally, immigrants' apartments may be in places with either above- or below-average millage rates. We assume that these offsetting considerations roughly balance each other and use the numbers reported in the CPS as our best estimates.

### *Schooling and Medicaid*

Turning next to the cost per household of K–12 schooling and Medicaid, our estimates are presented in Table 2. We estimate that an average native household annually costs the state and its local governments \$379 for Medicaid and \$2,349 for K–12 education, totaling \$2,728. An average immigrant household, we estimate, annually costs the state and its local governments \$600 for Medicaid and \$3,519 for K–12, which sums to \$4,119. The difference in the totals is \$1,391. We note that the cost of Medicaid

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<sup>12</sup> A third possible bias is that many immigrants send remittances to their families at home, reducing their taxable purchase in Florida. We assume this is offset by such immigrants' being more likely than average to be missed by our source of data, the Current Population Survey, and not to have children living in Florida.

included in Table 2 excludes the 59% paid by the federal government through its match.

To estimate the cost of Medicaid per household, we first calculate from the CPS the average number of Medicaid enrollees per household by age:

**Table 3. Medicaid Enrollees per Household  
by Enrollee Age and Household Type in Florida  
1999 to 2003**

Household	0 to 14	15 to 44	45 to 64	65 and up	Total
Native	0.1052	0.0664	0.0301	0.0330	0.2349
Immigrant	0.1614	0.0808	0.0329	0.0776	0.3527

Immigrants have 50% more Medicaid enrollees per household than do natives. In an absolute sense the major difference is for children. With respect to expenditures, the more important difference is that there are more than twice as many elderly Medicaid enrollees per household, even though there are fewer elderly immigrants per household than there are elderly natives per household.

We estimate the cost per household by using Medicaid administrative data to assign an average cost per enrollee in each of the major age categories, adjusted for inflation (by the GDP deflator, not a medical cost index) to 2004, as shown in Table 4. In the calculations, we assume that the cost within age categories is the same for natives and immigrants. That is for children under 15, we assume that the average cost per enrollee per year is \$1,697, independently of whether that child is in a native or an immigrant household. Similarly, the average Medicaid cost for a senior enrollee is assumed to be \$8,402 independent of the enrollee household's native or immigrant status.

To illustrate the calculations, to obtain the \$179 per native household estimated cost for children under 15, we multiply 0.1052, the average number of enrolled children per native household, by \$1,697, the average cost per child enrollee. To obtain the \$652 per immigrant household estimate cost for seniors,

**Table 4. Cost of Medicaid per Household by Enrollee Age and Household Type in Florida, 1999–2003**  
(in 2004\$)

	0 to 14	15 to 44	45 to 64	65 and up	Total	Florida Share
Cost per Enrollee	\$1,697	\$3,278	\$8,319	\$8,402	100%	41%
Native Household	\$179	\$218	\$250	\$277	\$924	\$379
Immigrant Household	\$274	\$265	\$274	\$652	\$1,464	\$600

we multiply 0.0776, the average number of enrolled seniors per immigrant household, by \$8,402, the average cost per senior enrollee. About 70% of the extra cost of Medicaid per household for immigrants stems from senior enrollees.

At first glance, our finding that an average immigrant household costs the state of Florida more for Medicaid than does an average native household appears to be at odds with a recent comparison of immigrant versus native medical spending based on the 1998 Medical Expenditure Panel Survey and the National Health Interview Survey (Mohanty et al., 2005).<sup>13</sup> The authors conclude that government spending on medical care averages over 20% *less* per person for immigrants than for natives.<sup>14</sup> This contrasts with our estimate that the Florida’s Medicaid spending is 58% more per person on immigrants than on natives.

Their result causes us no concern about the accuracy of our estimate. The principal difference between their data and ours is that the Medical Expenditure Panel Survey they use “excludes costs for ... institutionalized care.” In other words, nursing home expenditures are not included. As can be calculated from our Table 4, two-thirds of our excess spending for immigrant households is

<sup>13</sup> The authors are at the University of Southern California, Harvard Medical School, the University of Pennsylvania, and Columbia University.

<sup>14</sup> They state that “US-born individuals (90% of the population) accounted for 93% of private insurer expenditures and 92% of both government and out-of-pocket payments.”

attributable to people 65 and older, primarily for nursing home care. Much of the remainder of the difference between our result and theirs comes from our basing our study on households and our counting native-born children as belonging to the immigrant households in which they reside. As noted in our earlier discussion of the Boswell Report, we think the household approach better, since we estimate tax contributions by families and parents normally determine where their children live. Other dissimilarities are that we analyze Florida instead of the United States and do not include Medicare.

To calculate the cost of public K–12 education per household, we first note that native children are more likely to attend private schools than are children in immigrant households. We assume that 89% of children in native households and 92% of children in immigrant households attend public schools.<sup>15</sup> With these assumptions and data on school attendance from the CPS, we estimate that the number of children attending public schools per household averaged 0.3566 for native households and 0.5341 for immigrant households. Over the years 1999 through 2003, the average cost of public school per student, including capital costs, we estimate to have been \$6,588 when adjusted to 2004 dollars.<sup>16</sup> That gives an average cost per household of \$2,349 for natives and \$3,519 for immigrants. The cost per household is 50% higher for immigrant households primarily because they have more children ages 5 through 17.

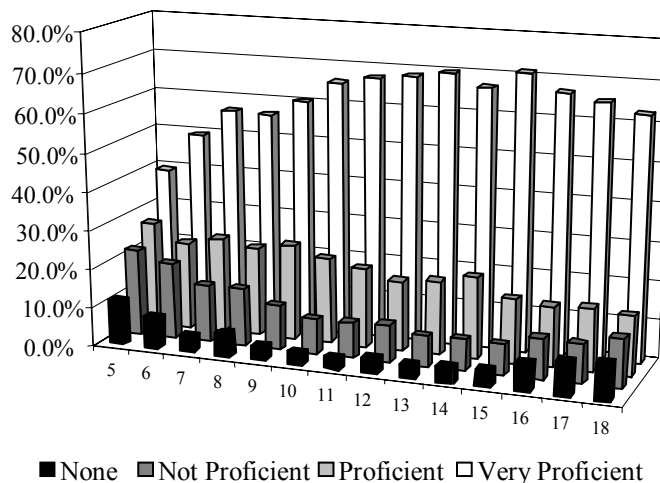
Our numbers may underestimate how much more schooling costs per immigrant household. First, the proportion of children receiving free or reduced school lunches was 29% for children in native households and 40% for children in immigrant households. Though the cost of the lunch is primarily a federal expense, children receiving free lunches are more likely to be receiving special education. Second, children in immigrant households are more likely to need extra language assistance. Figure 1 shows the English proficiency of school aged immigrants. Note that at the age of five, less than 40% report “Very Good” English language skills compared to 92% of

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<sup>15</sup> The Boswell Report (2001) estimates that 92.7% of foreign-born school-age children attend public schools as opposed to 88.5% of native born.

<sup>16</sup> The underlying data are from the Department of Education’s *Digest of Education Statistics*.

**Figure 1. English Proficiency of Immigrants by Age**



natives.

Since supplemental English language programs are more expensive, this suggests that the average immigrant child costs more to educate. Figure 1 overstates the impact since it uses census data that are coded by the nativity of the individual rather than the family. It illustrates, however, a reason that children from immigrant families are often associated with higher educational costs.

### *Summing Up*

We have to point out once again that we have not estimated the differences between native households and immigrant households for all taxes or all expenditures. But by covering the sales tax, the property tax, Medicaid, and K–12 education, we have covered the most important categories of revenue and expenditures and certainly, we think, the ones most likely to show large differences between natives and immigrants. Nor are our estimates perfect. They rely, however, on what we believe to be reasonable assumptions and can be modified by those who think the assumptions too far off. We thus have a reasonably solid finding that in Florida the net burden on state and local governments from immigrants is on the order of \$2,000 per immigrant household. We



emphasize once again our hope that this number will be useful for budget planning and not misused for other purposes.

Our result stands in strong contrast to the only recent similarly thorough study of which we are aware of the impact of immigrants on Florida's state and local budgets. That study found little net impact, whereas we find a substantial cost. This is principally because we: (1) classify children under 18 according to the status of the adults in the household in which they reside; and (2) use a better approximation of actual costs for Medicaid. The first reason is by far the more important.

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# Empty Nesters and Retirees

# 13

## *Introduction*

### **David Denslow**

In this chapter we consider the budgetary implications of Florida's five million residents who are 55 and older, whose households are in a sense the mirror images of those of immigrants.<sup>1</sup> In their impact on state and local budgets, the major distinguishing feature of immigrant households is the large number of children belonging to them, most of whom are enrolled in public schools. A distinguishing feature of older households is their lack of school-age children. There are other distinctions as well—older residents need more nursing care but are less likely to be incarcerated, for example—but the principal difference is public education.

The share of Florida's population 55 and up is 28%, versus 23% nationally. The cultural and racial contrasts between Florida's households with and without children living at home are strong. The overwhelming majority of Florida's older residents are non-Hispanic whites, 79%, compared to 11% Hispanic and 8% black. For adult residents ages 20 through 54 the proportions are 61% non-Hispanic white, 20% Hispanic, and 17% black. Of Floridians under age twenty, 54% are non-Hispanic white, 22% are Hispanic, and 22% are black.

In the next section of this chapter, we first take a long view of age patterns of migration to Florida as background to understand how the recent surge in the state's population growth relates to the interaction of the aging of the baby boomers and the national housing boom. In section III we estimate the state-and-local budget impact of older households. Our estimate is imprecise but, we hope, adequate for the purpose. In section IV we present evidence that the effect of state taxes on the number of older households

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<sup>1</sup> As of August 2005, the Bureau's estimate of the Florida population aged 55 and over is 5,080,000.

**Table 1. Age Distribution of Florida's Interstate Migrants:  
1965–70, 1975–80, 1985–90, and 1995–2000**  
(numbers in thousands)

Age	1965–1970		1975–1980		1985–1990		1995–2000	
	Num- ber	%	Num- ber	%	Num- ber	%	Num- ber	%
<b>In-Migrants</b>								
5–14	219	18	239	13	263	12	236	13
15–24	233	19	337	19	331	16	247	13
25–34	188	15	337	19	465	22	341	18
35–44	130	11	191	10	319	15	304	16
45–54	110	9	158	9	199	9	220	12
55–64	139	12	254	14	239	11	224	12
65+	196	16	287	16	316	15	287	15
Total	1,215	100	1,801	100	2,131	100	1,861	100
<b>Out-Migrants</b>								
5–14	148	23	167	17	153	14	186	15
15–24	163	25	242	25	200	19	206	16
25–34	147	23	273	28	306	29	286	23
35–44	79	12	117	12	168	16	233	19
45–54	43	7	63	6	78	7	130	10
55–64	25	4	46	5	51	5	76	6
65+	37	6	70	7	104	10	137	11
Total	641	100	978	100	1,059	100	1,254	100
<b>Net Migration</b>								
5–14	70	12	72	9	110	10	50	8
15–24	70	12	96	12	132	12	41	7
25–34	41	7	63	8	160	15	56	9
35–44	52	9	74	9	151	14	72	12
45–54	67	12	95	12	120	11	91	15
55–64	115	20	207	25	188	18	148	24
65+	159	28	216	26	212	20	149	25
Total	574	100	823	100	1,072	100	607	100

Sources: 1) U.S. Census Bureau, *1960 Census of Population*, "Mobility for States and State Economic Areas," Subject Reports PC(2)-2B, September 1963; 2) U.S. Census Bureau, *1970 Census of Population*, "Mobility for States and the Nation," Subject Reports PC(2)-2B, June 1973; 3) U.S. Census Bureau, *1980 Census of Population*, "Geographic Mobility for States and the Nation," Subject Reports PC80-2-2A, September 1985; 4) U.S. Census Bureau, *1990 Census of Population*, Public Use Sample tapes; and 5) U.S. Census Bureau, *2000 Census of Population and Housing*, PHC-T-23.

who come to and remain in Florida is weak. In section V we discuss briefly how Florida's tax and revenue system affects intergenerational equity on a national scale. The federal intergenerational balance strongly favors older at the expense of younger residents. Florida, we argue, skews the imbalance even more. Florida should not use tax breaks to attract mature households. An increasingly important phenomenon omitted from the chapter is snowbirds, or winter residents. Accurate data about winter residents are scarce, a deficiency that should be remedied for Florida to understand its demographics.

### *The Age Structure of Net Migration to Florida*

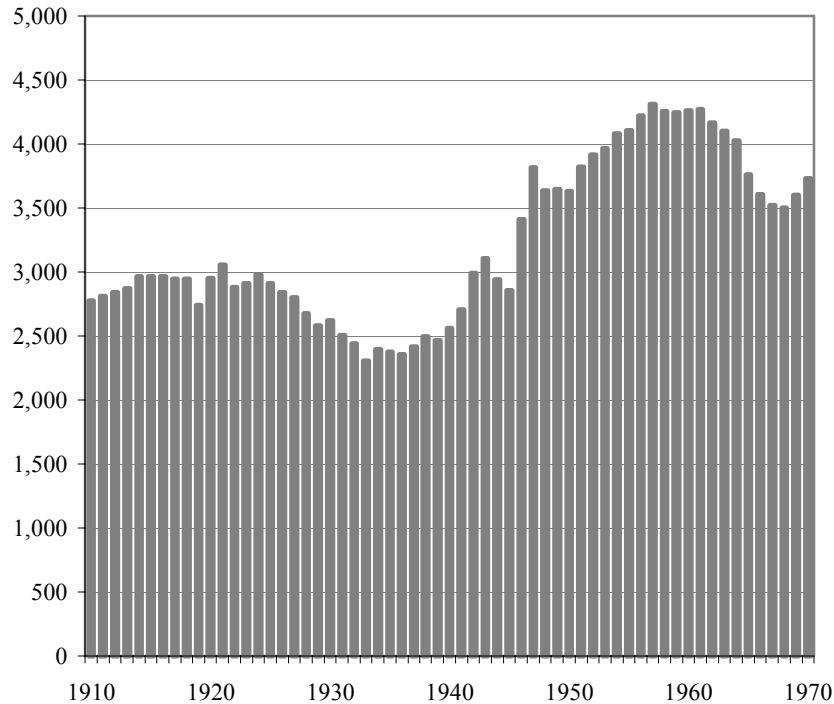
Surprisingly to some, the largest shares of migrants into Florida are not those 55 and older but those 25 through 44. But these younger residents are also more likely to leave, whereas the older ones stay. Almost half the *net* migration into Florida consists of people who are 55 or older. Table 1, summarizes interstate migration to and from Florida during the five years preceding each of the latest four censuses and shows this to have been true for every period except for a dip to 38% in 1985-90.

It is widely anticipated that as the baby boom generation born in the years 1946 through 1964 retires, migration of senior residents into Florida will rise starting in 2008. In that year the leading edge of the boomer wave turns 62; the modal retirement age. Figure 1 shows annual births in the United States. Notice the dip during the depression of the 1930s, the continued low level during the Second World War, followed by the boom after the war, lasting through 1964. The lighter bar marks the year 1942, to show those turning 62 in 2004.

It is interesting to look at the ratio of people moving from Florida to other states to those moving to Florida from other states during different five-year periods, calculated from Table 1:

<u>Period</u>	<u>Out-Migrants/In-Migrants</u>
1965-70	0.53
1975-80	0.54
1985-90	0.50
1995-00	0.67

**Figure 1. U.S. Births, 1910 to 1970**  
(thousands)



Source: U.S. Census Bureau, <http://www.census.gov/statab/his/HS-13.pdf>

Obviously there was something different about the latter half of the 1990s, when the ratio of out- to in-migrants was unusually high. In part, the high ratio reflected the birth dearth of the 1930s. Florida felt the effect of slow growth of the senior population. That fits the resurgence of the state's growth that has occurred from 2000 on now that the state is feeling the early effects of the baby boom. As of July 2005, the demographers at the Bureau of Economic and Business Research estimate that Florida's population rose 11.8% from 2000 to 2005 compared to an increase of 11.5% from 1995 to 2000. They estimate that April 2003 to April 2004 was a very strong year with an increase of 445,000, the largest absolute growth seen since the early 1970s.

But there is a second aspect to the difference between the late

1990s and the first five years of this decade. In the late 1990s, the new economy dominated the national growth of gross domestic product, whereas in the more recent five years a housing boom has sustained it. Florida lacks the human capital and research infrastructure to take strong advantage of the growth of high-tech industries, which characterize the new economy. Construction and the provision of services for visitors and newcomers, in contrast, are among Florida's strengths. In an earlier period, our economy missed out on periods of industrial growth because it was not what we did. For industry, we lacked raw materials, cheap energy, and a central location. But we fared well when construction, tourism, and population growth were strong. Now the role of industry has diminished, and is being replaced by technology-intensive activities. Though our location is fine for high tech, our weak intellectual infrastructure relative to our size keeps our share of those activities small. Southern states having more intellectual assets—Georgia and North Carolina are examples—fare better.

Florida, to be sure, has a choice. The state is not in the situation of South Dakota, say, which has no option of becoming a high-tech state. Our climate gives us the possibility of a high-tech future, provided we are willing to fund an educational system that attracts households headed by skilled workers, one that creates well-trained employees and entrepreneurs, and one that creates and supports innovative technologies. If we do not support education at that level, however, the retiring baby boomers are our future. Missing out on industrialization was not all that costly. As the manufacturing century ebbed and the rest of the country de-industrialized, around 1990 Florida caught up with the rest of the nation by several measures: income per resident, K-12 spending per FTE (though not post-secondary spending), and value-added job structure, for example. The important question is what the implications would be of not participating fully in the nascent century of high technology. Over the past fifteen years we have fallen behind in income, education, and job structure. At first the relative decline was cyclical, as the 1990-91 recession hit Florida hard and lingered. In the second half of the 1990s, Florida continued to slide for structural reasons, as the state failed to compete for its share of the new economy. In the past four or five years, Florida has roughly held its own versus the nation, with the

continued structural decline in job skills masked by a cyclical rise in employment associated with the housing boom. Over the coming five years, the structural decline is likely to continue, and there will be no cyclical boom to camouflage it.

The next five years, as interest rates rise, will see the housing boom end. But after a hiatus the trend will resume, as those born from 1946 to 1964 retire two generations later. Florida will have more and more households with no children present. To be prudent, we should look ahead to see what that implies for the state budget. As it happens, the retiring baby boomers, attracted by the same amenities that could help draw high tech workers, give Florida an opportunity to participate fully in the technology of the 21<sup>st</sup> century. Having so many households without children gives us the chance to provide an outstanding education at relatively low cost per household. At the same time, however, the predominance of older households may increase the political difficulty of doing so.<sup>2</sup> The climate is there to attract both young and old. What we do with our educational system will matter a lot to whether we become more and more a home to high-value-adding young families, natives and newcomers alike, but much less to whether more and more retirees come to Florida.

### ***The Budget Implications of Older Households***

The federal government treats retirees well, especially through Medicare and the largely unfunded social security system: Laurence Kotlikoff, a specialist in generational accounting, has calculated that in 1998 the net present value of federal transfer payments minus tax obligations over the adults' remaining years, for an average household headed by a 65-year-old was \$220,000.<sup>3</sup> In contrast, an average household headed by a 35-year-old faced a net federal burden of \$340,000. State and local governments, in partial compensation, take advantage of retirees. The retirees pay

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<sup>2</sup> James Poterba (NBER, July 1996) of MIT is one of a number of scholars confirming that an influx of retirees reduces spending on education, especially when the ethnic composition of retirees and students differs.

<sup>3</sup> *The Handbook of Public Economics*. Vol. IV, 2004. He calculated the expected present discounted value of OASDI, Medicare, Medicaid, and welfare minus tax payments.

much the same taxes as other adults but are unlikely to have children in school, to commute to work during rush hour, or to be incarcerated. An implicit national contract partially offsets the subsidy retirees enjoy at the federal level by requiring them to subsidize younger families through state and local governments.

Some three million of the nation's 35 million retirees escape part of the state and local burden by living in Florida. The majority of them raise their families in higher tax states, where they send their children to better-funded public schools and universities and enjoy the security of a more generous welfare system. Upon retirement, however, they move to Florida where, compared to the national average in the year 2000, state and local spending per adult was \$614 lower for education and \$390 lower on welfare. Retirees coming to Florida from Michigan or New Jersey save an average of \$700 in combined income and sales taxes per adult per annum; retired New Yorkers save roughly \$2,000 by coming to Florida. Moreover, many coming from these states, all major sources of migration to Florida, until recently found housing cheaper than it was up north.

Here we present a simple framework and suggest plausible parameters for estimating the net benefit to the state of households without children at home and in which no one works. We will call such households retirees. Then we will extend the framework to empty nesters, who head households in which someone works but with no children at home. With respect to either type of household, the question we ask is: "What is the net effect on state and local budgets of having that household in the state, including the indirect effect caused by the employment the retiree generates?" This indirect effect is often called a multiplier effect, reflecting the jobs created by retirees as they shop, use medical services, and play golf. The people filling those jobs and their families also pay taxes and use governmental services.

Before estimating the budget effects of "mature residents," those 55 and up, we find it useful to place our effort in the broader context of what we are trying to accomplish. We want to show that cutting special deals for retirees, as some states are doing, in the belief that attracting more will help out state and local budgets, is not a sensible policy. Suppose, for example, that Florida has 5,000,000 mature residents, and that their location elasticity with



respect to the cost of living is minus three.<sup>4</sup> That is, a 1% lower cost of living in Florida would induce in 3% more mature residents to live here, another 150,000 of them. Suppose further that the average income of a mature resident is \$40,000. To reduce that person's cost of living by 1% would require cutting his or her taxes by \$400.

Suppose Florida does that—by giving mature residents special property tax or sales tax or other exemptions it reduces their average taxes by \$400. If the location elasticity is three, then that will attract another 150,000 mature residents to Florida. Suppose the net budget benefit per mature resident had been \$2,000, a number we think is approximately correct. After the \$400 tax cut, it would be only \$1,600 per mature resident, but there would be another 150,000 of them from whom to extract it. The net result would be a gain of \$1,600 times 150,000, or \$240 million. Offsetting that would be a loss of \$400 times 5 million or \$2 billion, for a net loss of \$1.76 billion. To break even, the \$400 tax cut, by reducing the cost of living by 1%, would have to increase the number of mature residents in Florida by 1.25 million or 25%.

Given how unreasonably high that number is, the next question if our context is the issue of whether to cut taxes to attract more mature residents, why bother to estimate the net benefit of mature residents. There are three reasons. The first is that some analysts may think the elasticity of location for mature residents is far higher than three in magnitude, perhaps twelve. A 1% lower cost of living would result in 12% more mature residents. We think such an absolute elasticity to be much too high, but even if it is correct, as long as the net budget gain per mature resident is less than \$4,000, the tax cut would still be bad policy. Since it is well under \$4,000, a tax break for mature residents results in a net budget loss even if their location sensitivity to taxes is much higher than any plausible value.

The second reason is that it could be argued that we need to

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<sup>4</sup> The number minus three is based on a study by Fournier, Rasmussen, and Charity (1989) on the effect of the cost of living on retirees' choices among Florida counties. The study was commissioned by the Florida Legislature. A cost-of-living elasticity of minus three implies a sales tax elasticity of minus one-tenth, which matches the recent Woo estimate described later in this chapter.

consider the well-being of current mature residents, who will benefit from paying lower taxes. While we think that would be inequitable, violating an intergenerational contract whereby the federal government favors mature residents who in turn partially compensate by helping out at the state and local level, we want to show that even in that context the favorable impact would be small. The third reason is that we show in our chapter on immigration that immigrant households impose a net burden on Florida's state and local budgets. Is the budget disadvantage of Florida's large share of the nation's immigrants more than offset by the budget gain from its large share of mature residents? We think that the answer is that the gain from extra mature residents is approximately equal to the cost from extra immigrants. With rising immigration and medical costs, Florida's budget advantage from its demography has disappeared.

With that context, we turn to estimating the effects of mature residents on Florida's state and local budgets. To make the analysis easier, we divide mature households into two categories: retirees and empty nesters. Retirees have no children at home and nobody works. Empty nesters have no children at home but at least one person works. The direct effect of retirees on the state budget is that they pay state and local taxes personally, generate federal grants to state and local governments, and use services funded by those taxes and federal funds. The taxes they pay, like those of other residents, may be divided into sales, property, and other. Similarly, the services they use may be split into health and human services, education, corrections, transportation, and other.

With respect to taxes, it might appear reasonable, at first, to assume that retirees' share of the state's taxes is roughly proportional to their share of state income. Take, for example, sales tax revenue. Spending on taxable items is roughly proportional to income, so sales tax revenue should be as well. True, retirees might indeed spend a slightly larger share of their incomes because they no longer save for retirement, and they generate disproportionate medical spending paid for by the federal government. Moreover, the composition of their spending differs from that of younger people. Also, Florida's sales tax is widely understood to be regressive, not proportional. These effects somewhat offset each other, however, and the net effect is likely to

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be minor for our purposes.<sup>5</sup>

There is, nonetheless, an important way in which retirees' sales tax payments differ from those of working residents: those who are working pay taxes where they live, where they shop, *and where they work*. To illustrate this point, we use data from a study by Thomas, Warren + Associates (TW+A), "The Impacts of Mature Residents of Florida,"<sup>6</sup> which estimates that in FY 2000 the consumer spending by residents of Florida was \$240 billion, based on population, age, and consumer expenditure surveys. They estimate that this spending, in turn, generated sales tax revenue of \$5.9 billion, or 2.5% of spending, a plausible ratio given the large share of consumer spending exempt from the tax. Total sales tax revenue in that year was much more, \$13.7 billion. Suppose that 15% of the total came from tourists and winter residents, leaving \$11.6 billion. Taxes on consumer spending would account for roughly half of the \$11.6 billion. The other half would come from businesses and, to some degree, from growth-related spending, such as sales taxes on materials used for construction.

Retirees, however, create businesses by shopping—but not by working. Suppose that shopping is credited with 80% of sales taxes generated by business and working with 20%. Assume further that retirees have the same income as other adults. Then the total sales tax they generate directly is 90% ( $= 0.5 \times 100\% + 0.5 \times 80\%$ ) as much as that generated directly by other adults where they live, work, and shop.

The same may be true of property taxes.<sup>7</sup> Floridians also generate property taxes where they live, work, and shop. Table 2 shows how the taxable value of real property in Florida was divided in 2003. Just how

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<sup>5</sup> A study by Kentucky's Long-Term Policy Research Center (Wildasin, et al., 2001) states that, "elderly households tend to have lower expenditures and to spend less on taxed items" (p. xvii). They estimate that Kentucky's senior residents pay 69% of the average direct sales tax per capita for all residents (p. 115).

<sup>6</sup> May 1, 2002. The study was commissioned by WCI Communities, Naples, Florida. TW+A has headquarters in Phoenix, AZ. They have done a similar study of Louisiana.

<sup>7</sup> The incidence of property taxes is much debated. Harvey S. Rosen, *Public Finance*, 6<sup>th</sup> edition, McGraw-Hill Irwin, New York, 2002, pp. 487-495, has an accessible discussion. We think the correct approach for our purpose here is the user-cost approach.

**Table 2. Distribution of Taxable Property Value  
by Category in Florida, 2003**

Category	Distribution
Residential	75.7%
Commercial	16.7%
Industrial	4.1%
Other	3.2%
Total	100.0%

Source: University of Florida, Bureau of Economic and Business Research, *Florida Statistical Abstract 2004* Table 23.90.

these categories should be divided among residence, shopping, and work is a complex issue. We assume that work accounts for 10%, or 40% of the non-residential 25% of all taxable value. Since they do not work, that leaves retirees paying 90% of the property taxes of other adults, or their full share of residential property plus 60% of the value of non-residential property. Although retirees are more likely to be homeowners than younger adults, rental units also generate property taxes.

For a rough approximation, we take that 90% to apply to the combination of all state and local revenues and assume that the per capita contribution of retirees to state and local revenues is 90% of the per capita contribution of other adults.<sup>8</sup> The reason for the 10% shortfall, in summary, is that other adults create tax revenue for the state by working as well as by having homes and by shopping. The ratio of retirees to all adults 18 and over can be approximated by the ratio of adults 62 and over to adults 18 and over. That ratio is approximately 25% (equals 3.2 million divided by 12.3 million in 2000, adjusted for a slight decline since). Applying the appropriate weighting formula yields the result that a retiree's average revenue

<sup>8</sup> This would not have been true in 2000 because of the inheritance tax and the intangibles tax, but we ignore those revenue sources in order to make our results relevant for 2004-05 and 2009-10. In 2001, the per capita sums of estate taxes and intangibles taxes were \$225 for ages 55 and up and only \$14 for younger Floridians (including children). Elder Affairs, State of Florida, *Securing Florida's Place as a Premier Retirement Destination: A Report of the Destination Florida Commission*, February 2003, p. 16.

generation is 92% that of an average adult.

That leaves to be estimated the net benefit to state and local budgets created by the jobs they generate within the state. The workers in those jobs (and their families) also pay taxes and receive services from the state. As a rough approximation, the taxes they pay equal the services they receive. If the retirees create high-paying local jobs, the taxes paid by those workers and their families would exceed the average; if low-paying, they would fall short. We assume that the employment induced by from retirees is of about average pay. The low-paying jobs in retail trade caused by retirees' shopping and their demand for some personal services are offset by jobs in the medical sector, many of which pay well. We think it a reasonable approximation that the jobs created by retirees almost pay their own way, and for simplicity we assume they do so exactly. To represent these thoughts more formally, let

T = taxes paid by a retiree where she lives (property taxes, primarily) and where she shops (property and sales taxes),  
 C = the extra cost to state and local government she causes,  
 m = number of in-state jobs she generates (a multiplier effect),  
 S = net benefit to the state-and-local purse from each generated job, and  
 B = total net benefit to the state-and-local purse from each extra retiree.

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

$$(1) B = T - C + mS$$

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. The TW+A report plausibly assumes that the value of m is 0.8. The precise multiplier does not matter much if the value of B is close to zero, as we think it is, based on the assumption that the households involved in the induced jobs roughly pay their own way.<sup>9</sup>

<sup>9</sup> Conway and Rork (2004) cite M. Lakshminarayan Sastry, "Estimating the Economic Impacts of Elderly Migration: An Input-Output Analysis," *Growth*

Taxes paid by retirees can be expressed as

$$(2) T = T_S + T_P + T_O,$$

where  $T_S$  is sales taxes,  $T_P$  is property taxes, and  $T_O$  is all other taxes. Each tax category can be further subdivided according to where it is generated. For example

$$(3) T_P = T_{PH} + T_{PA} + T_{PW}$$

where  $T_{PH}$  represents the property taxes paid relative to their homes or apartments,  $T_{PA}$  is the property taxes paid by the stores where they shop (acquire goods and services), and  $T_{PW}$  is the property taxes paid by the places where they work. This division is complicated by the fact that where one person works is where another shops, but some reasonable division can be made. Our working assumption for each tax is that housing-related and shopping-related taxes are the same for retirees as for other adults, but that retirees' work-related taxes are zero.

Similarly, the costs of a retiree to state-and-local budgets can be partitioned into

$$(4) C = C_M + C_E + C_J + C_T + C_O$$

where  $C_M$  is the cost of Medicaid,  $C_E$  is the cost of education,  $C_J$  is the cost of the criminal justice system,  $C_T$  is the cost of transportation, and  $C_O$  is the cost of other categories. As with taxes, each cost category could be further subdivided into where the person lives, spends, and works, though this partition is conceptually more difficult. When a retiree drives to a store, for example, should the road cost be allocated to the store or to the home? When a non-retiree commutes to work, should the road cost be allocated to the job or to the residence?

To estimate the costs retirees impose on state-and-local budgets, we will need to make assumptions about each of these components. We will assume that for retirees—and relative to the

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*and Change*, Winter 1992, pp. 54-79.as estimating that each retired newcomer to Florida creates 0.4 new jobs.

population at large—the cost of Medicaid is higher, the cost of education is very low, the cost of the criminal justice system is low, the cost of transportation is a little below average, and the cost of other public services is about average. An issue that arises has been expressed well in the TW+A report:

*It can be argued that because mature residents of the State have almost no school age children, they receive no direct benefits from the State's expenditures on education and, therefore, should not have to pay for it. Generalizing this argument would imply that they should only pay for (incur the public economic costs of) government services in proportion to their direct usage. However, while the mature residents of Florida may have almost no children in the education system, they are clearly enjoying the benefits provided by a better-educated populace (greater productivity, for example). Similarly, although they have a much lower percent of incarceration than do residents under age 50, mature residents are receiving indirect benefits from the absence of crime due to incarceration.<sup>10</sup>*

With respect to who *ought* to pay taxes, this is a useful observation. The issue we are posing is different, however. We are asking, “What is the effect on state-and-local budgets of having one more retiree?” That extra retiree enjoys the *benefit* of the educational and criminal justice systems, but adds almost no extra *costs* to those systems. Table 3 presents shares of state and local governmental spending in Florida in 2000 by area of spending. The large category “Other” includes Fire, Sewerage, Solid Waste, Parks & Recreation, Housing, Administration, Interest on Debt, Utilities, and Employee Retirement.

To get a general order of magnitude, we make the following assumptions about retirees’ demands on state and local spending relative to the total population:

We assume that state and local governments spend almost nothing on education for retiree households because they have few children in school or college and make limited use of educational facilities themselves. In partial compensation, they place

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<sup>10</sup> *The Impact of Florida's Mature Residents*, pp. 22-23.

**Table 3. State and Local Spending in Florida by Type, 2000**

Type of Spending	Share
Education	28.9%
Welfare, Health & Hospitals	11.9%
Police & Corrections	9.8%
Highways	3.7%
All Other Categories	45.7%
Total	100.0%

Note: We have adjusted the percentages to exclude federal sharing of cost, assuming that the federal government pays half the cost of Welfare, Health & Hospitals, half the cost of Highways, and 10% of the cost of Education (which includes post-secondary).

Source: *Statistical Abstract of the United States: 2004-05*, Table 433.

disproportionate demands on Medicaid and other health spending.<sup>11</sup> They themselves are less likely than most to have run-ins with the criminal justice system or to have children run afoul of the law. But they do have occasional problems and also generate some extra spending: watching out for their homes and where they shop. Highway spending attributable to them is less than for other adults because they drive less and, in particular, drive less during rush hours.<sup>12</sup> In other categories we assume their demands are the same as those of average adults.

Based on these assumptions, retirees require 78% as much state and local spending as an average adult (where the average includes retirees).<sup>13</sup> If they pay 92% as much as the average in taxes, the net benefit per retiree is about 14% of what the state spends per average adult (and his or her children). State and local spending per adult resident in Florida in 2000 was \$7,186. Based on these numbers, the net benefit to state and local budgets from having an

<sup>11</sup> The medical spending ratio is based on the Medicaid ratio for residents 65 and up to total, or \$852/\$460, in our chapter on expenditures. That is not quite right, since the \$460 includes children, but children are so close to the overall average that the approximation is close.

<sup>12</sup> Richard Schmalensee and Thomas Stoker (May 1999) find that the gallons of gasoline consumed per year drop off sharply after age fifty.

<sup>13</sup> The calculation is  $78\% = 10\% \times 28.9\% + 185\% \times 11.9\% + 50\% \times 9.8\% + 75\% \times 3.7\% + 100\% \times 45.7\%$ .



**Table 4. Retirees' Assumed Demand for Public Service,  
Relative to Total Population**

Type of Service	Relative Demand for Services
Education	10%
Welfare, hospitals, and health	185%
Police and Corrections	50%
Highways <sup>a</sup>	75%
All other categories	100%

<sup>a</sup> “[O]lder people make roughly 22% fewer trips than those under age 65.” Sandra Rosenbloom, “The Mobility Needs of Older Americans: Implications for Transportation Reauthorization,” The Brookings Institution Series on Transportation Reform, July 2003, p. 5.

extra retiree was approximately \$1,006 a year. Updating that for inflation and extra revenue from rising property values would yield about \$1,200. Obviously this figure is a rough estimate, not a precise calculation.

Turning to our other set of mature residents, the empty nesters, we assume the same parameters as for retirees except:

1. Because they work and because of their higher-than-average incomes, we assume that they pay 108% of the taxes of the average adult (recall that the average includes retirees).
2. We assume that their use of the roads is 106% of the average.
3. We assume that their use of health care is 81% of the average.<sup>14</sup>

With these estimates, an average empty nester's share of total expenditures per capita is 67%. The low share is because empty nesters do not have children in public schools, are relatively healthy, and are unlikely to be arrested. The net benefit per empty nester was (108% - 67%) times \$7,186, or \$2,946. Updating for inflation and rising real tax revenue would yield perhaps \$3,600.

<sup>14</sup> We use the ratio \$372/\$460 from our expenditure chapter, assuming that the dollar amount for empty nesters is that same as that for persons ages 45 to 64.

Again, this is a rough estimate.<sup>15</sup> The net benefit to state and local budgets is three times as high for empty nesters as for retirees because the empty nesters have higher incomes, generate taxes where they work, and are healthier.

We approximate the net gain for all mature residents by assuming that those ages 55 through 64 are empty nesters and those 65 and older are retirees. Clearly that is not an exact correspondence, but we seek only a rough idea of the amount. Of the total age 55 and older, 36% in Florida are under 65 and 64% are 65 and older. That yields an estimate for all mature residents of \$2,064 (equals 0.36 times \$3,600 plus 0.64 times \$1,200). Because \$2,064 gives an unwarranted implication of precision, we will assume that in the FY 2004–05 the net benefit to Florida’s state and local budgets per mature resident is roughly \$2,000, coming very approximately from a net benefit of \$1,200 for retirees and \$3,600 for empty nesters, with retirees being two-thirds of all mature residents and empty nesters a third.

An often-cited earlier estimate of the benefits of retirees to Florida, mentioned several times above, is that by Thomas, Warren + Associates (TW+A). Since this was a well-funded study by respected consultants, we need to explain why we do not simply use their result. We begin by describing their procedure. An unimportant difference in their approach is that TW+A estimates the net gain from residents aged fifty and above, compared to our fifty-five and above. They find a “net public economic benefit” from mature residents of \$1.42 billion for FY 2000, or \$267 per mature resident, a figure much lower than our \$2,000. Their method is as follows: They estimate that mature residents paid \$2.7 billion in sales taxes. Offsetting that, they cost the state \$1.3 billion in Health and Human Service expenditures from general revenue. That leaves a difference in their favor of \$1.4 billion, or, since there were 5.3 million of them, \$267 each. The result was widely quoted by state policy-makers, ironically enough as implying that the state should make strong efforts to attract retirees.

Though the low TW+A net number would strengthen our case

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<sup>15</sup> A similar calculation might apply to young professionals who do not yet have children—they pay high taxes but do not use public education, are law-abiding, and are healthy. When they do have school-age children, those children are great peers for other students in the public schools.

for not giving tax breaks to senior residents, we cannot use it, even as supporting evidence. TW+A assume that the only service mature residents received out of general revenue was through Health and Human Services, leaving out, for example, administration. Further, they assume that mature residents receive exactly the same services out of property taxes as all other Floridians. An obvious problem with this approach is that a large component of K-12 education, for example, is funded out of property taxes, though the K-12 education is not used by mature residents as much as by households with children at home.<sup>16</sup> Offsetting this somewhat is that many mature households contain no working adult, and thus the household generates less commercial property tax revenue. With respect to sales taxes, TW+A give mature residents no credit for the tax revenue they create paid by the businesses they patronize.

More succinctly, in FY 2000 total revenue for all state and local governments in Florida amounted to \$88.4 billion. TW+A very carefully analyze tax revenues of \$5.9 billion and expenditures of \$4.6 billion. Then they assume all other expenditures and all other tax revenues are the same for all adults. Their calculation of the net benefit of mature residents derives from a careful analysis of 7% of total revenue and 5% of total expenditures. For the other 93% of total revenue and 95% of total expenditures, they simply assume equality. It is hard to believe that the result of such an exercise can mean much.

The difference between the TW+A estimate and ours does matter. Both of them are low enough that they imply that the state should not offer tax breaks as a means of attracting retirees. The difference is that the TW+A estimate is so low that it is well within measurement error of zero and implies that the state should not do much of anything else to attract retirees. By our estimate, in contrast, there are genuine fiscal benefits from retirees and especially from empty nesters. If policies that are desirable anyway, such as safer streets or more varied cultural offerings, particularly appeal to retirees or empty nesters, that is a strong

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<sup>16</sup> We have noted their argument that mature residents benefit from the environment resulting from a good educational system and our explanation about why that argument is not relevant to our calculation.

argument in their favor, by our estimate though not by theirs.

Turning from the TW+A study to another topic, we point out that an issue of moderate importance is whether we are correct to assume that retirees pay lower taxes than the average adult because households create property tax and sales tax revenue where they live, where they shop, and where they work—all three. Were it not for that assumption, we would find a current net annual benefit per retiree of perhaps \$1,800, instead of \$1,200. Our assumption is that households with no one working generate less sales tax revenue and, especially, less property tax revenue than households with the same income with someone working. This may strike some people as wrong because without the spending the business would not exist.

As background for tackling that issue, we turn to a study commissioned by a Florida task force on urban growth patterns in the mid-1980s. The purpose of the study was to analyze whether different types of urban form paid their own way for education, infrastructure, and other public expenses through the taxes they paid. Among the forms chosen were a purely residential area and a mixed-use area. The analysis found that the purely residential area did not pay its own way, whereas the mixed-use area did. The authors concluded that the state should not allow purely residential areas to be developed.

This analysis, we think, is wrong. The revenue generated through property taxes was limited strictly *to the geographical area* under study. In the residential area, most households had children in public schools, generating a large cost. Those households paid property tax on their houses. The places where they shopped and where they worked also paid property taxes, but *none of that revenue counted, since it was not in the geographic area under study*. In the mixed-use area, there were no school children counted with the offices and stores that paid property taxes. In the geographic area studied, the ratio of taxable property to area was thus quite a bit higher than in the purely residential area. Consequently, that area was judged to succeed in paying its

own way.<sup>17</sup>

We return to retirees. Suppose a hundred retirees go to restaurants and stores that pay property taxes and that the retirees' spending creates eighty jobs. The people holding those jobs live somewhere and also shop themselves, but unless they are credited with at least part of the property tax paid by where they work, they will not be found to pay their own way. Suppose we allocate 100% of the property tax paid by stores at which only retirees shop to retirees, that leaves nothing to credit to the employees. In that case we must conclude that the retirees create jobs whose workers do not pay their own way. Better is simply to apportion credit for the property tax paid by stores, restaurants, and offices among their customers, owners, and employees. We should not give the customers full credit for the payment of the tax.

We think, therefore, that \$1,200 a year is a better estimate than \$1,600 of the net benefit per retiree. Nothing crucial hinges on the difference, however. Our results do make possible a very rough estimate of Florida's overall demographic advantage or disadvantage relative to the nation with respect to state and local budgets. In the chapter on immigration, we estimate that the net disadvantage per immigrant household is about \$1,800 per year. The average immigrant household size in Florida is close to three, making the disadvantage \$600 per immigrant. We have just estimated the per capita advantage of retirees to be \$1,200 and that of empty nesters to be \$3,600. We estimate that Florida has six percentage points more than its proportional share of the nation's immigrants, six percentage points more than its proportional share of the nation's retirees, and one percentage point less than its proportional share of the nation's empty nesters. That gives a net demographic gain or loss of

$$0.06 \times (-\$600) + 0.06 \times \$1,200 - 0.01 \times \$3,600 = \$0.$$

That is, contrary to the conventional wisdom that Florida has a strong demographic state and local budget advantage, we estimate

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<sup>17</sup> The group carrying out the study (James Duncan and Associates, July 1989), we should note, were following the instructions of the Governor's Task Force on Urban Growth Patterns. It is an impressive study, with remarkable detail.

that, within measurement error, it is a wash.

Is this result at all plausible? Testing whether it serves as a check on our findings about the net costs of immigrants and the net benefits of empty nesters and retirees. The largest state and local expenditures are education and Medicaid. Taking education first, the ratio of children ages 5 to 17 to total population is 17% in Florida versus 18.5% nationally; an 8% education budget advantage for Florida. Turning to Medicaid, we calculate in our expenditure chapter that Florida has a 5% age disadvantage. With respect to immigrants the disadvantage is about 50% per person, which multiplied by six percentage points gives a 3% Medicaid budget disadvantage. That makes the total Medicaid disadvantage 8%. Because of the federal Medicaid cost sharing, that is smaller than the education advantage, even though overall Medicaid spending approaches that of K-12 education. Toss in Florida's revenue disadvantages from having few empty nesters and many retirees, and the estimate that the net demographic impact on Florida's state and local budgets is close to zero becomes plausible. The saving on education is roughly offset by higher Medicaid spending and lower revenue. As the medical share of total spending and the immigrant share of the population have risen, Florida's demographic budget advantage has disappeared.<sup>18</sup> Perhaps that is one source of the state's decline relative to the nation along several measures over the past 15 years.

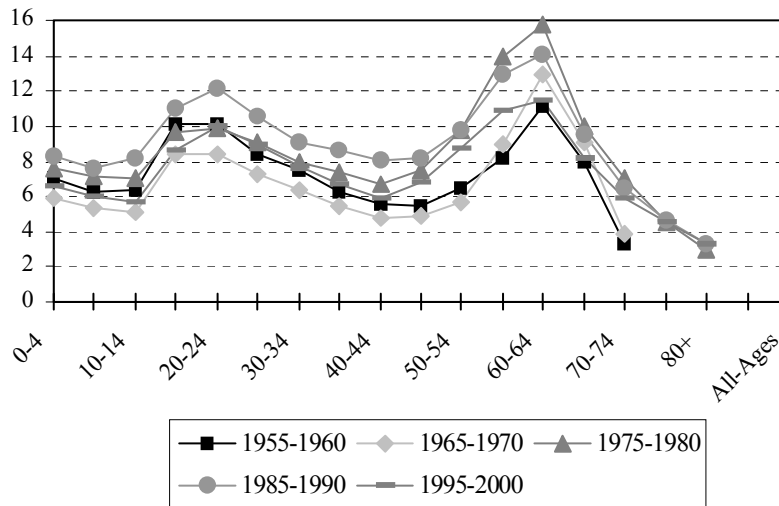
### *The Sensitivity of Senior's Residential Choices to Taxes*

An impressive feature of elderly migration within the United States, or indeed of U.S. migration in general, is its stability. Stan Smith, head of the Bureau of Economic and Business Research at the University of Florida and director of its population program, has published two articles in *The Journal of the American Statistical Association* on the stability of migration across the

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<sup>18</sup> Janet Herndon (2005) of Florida TaxWatch has expressed the demographic challenges eloquently; "Florida is headed for a fiscal storm. Caring for the needs of Florida's large and diverse subpopulations—the elderly, the poor, the limited English proficient—threatens to put the needs of our elderly on a collision course with the needs of our youth. How will Florida weather this storm?" (p. 36).

**Figure 2. Interstate In-Migration Rates by Age per 1,000 Population in Florida**



decades. Smith's view of overall migration to Florida can be illustrated by Figure 2, which normalizes not on age-specific population groups in Florida, but on age-specific population groups in the rest of the country. Naturally, as Florida becomes large, in-migration normalized on the resident population gradually shrinks. Moreover as housing costs rise in parts of Florida, there is a tendency for more retirees to go to other southeastern states. But the main point of the graph is that age-specific migration rates from the rest of the country to Florida and leaving Florida have been stable for decades.<sup>19</sup>

Looking at elderly migration among all the states, the best way to predict the pattern for 2005-10 is to assume that the 1995-2000 pattern will persist. (The decennial census asks a sample of respondents where they lived five years ago.) By itself, the 1985-

<sup>19</sup> Migration rates in these figures are calculated from Census 2000 Summary File 3, 1990 Census STF 3, and 1980 Census STF 3, with 1975, 1985, and 1995 population estimates obtained from the U.S. Census Bureau: <http://eire.census.gov/popest/estimates.php>. Data for 1955 and 1965 migration rates are obtained from *Migration Trends in Florida*, prepared for the Florida Legislature, June 1987 by Bashir Ahmed and Stanley K. Smith.

90 elderly migration pattern, for example, explains 89% of the variance across states in 1995-2000. The 1975-80 pattern explains 89% of the variance in the 1985-90 pattern, and so on. The patterns are so stable that little is left to be explained by anything else, such as changes in state-and-local taxes or public spending.

How does this fact square with a number of papers using cross-sectional evidence that find strong elderly migration into states with low taxes? Are they not evidence that senior citizens move to avoid taxes? The answer is that the cross-sectional studies (based on a single time period, such as 1985-90) have causation reversed. When enough households with no children have moved into a retirement state, and the children there are neither their grandchildren nor the children of their friends and neighbors, many of them add their votes to those of existing residents who want lower taxes to see that taxes are reduced. As the underlying forces of rising incomes and improving transportation continue to propel retirees into the same sunshine states, as the elderly migration patterns persist, it appears that low taxes draw in elderly migrants. We are not claiming that taxes and expenditures do not affect migration. If Florida were to raise its sales tax to 25%, surely in-migration of all age groups would drop sharply. Our claim is merely that if Florida were to raise its sales tax by one or two cents, the reduction of in-migration would be small, probably too small to be of much relevance for policy.

How can we tell whether changes in taxes and spending cause changes in elderly migration, or whether the elderly migration causes changes in taxes and spending? The answer is by looking at timing. Are large net inflows of elderly migrants followed by tax cuts, or are tax cuts followed by increased net inflows of elderly migrants? That question has been answered by Karen Conway and Jonathan Rork (2004), who analyze four decades of elderly migration among the states.<sup>20</sup> Paying close attention to timing, they find that taxes and spending have weak effects on elderly migration but that elderly migration has strong effects on taxes and spending.

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<sup>20</sup> Conway is at the University of New Hampshire and Rork at Vassar College. Their study was presented at the 2004 Winter Meetings of the Econometric Society. We calculated the cross-decade correlations presented earlier in this sub-section using data in their Table 2.



Not wanting to rely on a single study, we also present results from a recent analysis of elderly migration by Seokjin Woo (2002) of the University of Wisconsin. Though it has the disadvantage of being a cross-sectional study, instead of using panel data, there are several reasons that we think Woo's results are worth reporting: (1) he uses the latest advances in econometric methodology and computing power; (2) unlike Conway and Rork, he uses individual data; (3) with a large data set, he is able to estimate elasticities for individual states, including Florida. His most useful result for Florida is, approximately, that the magnitude of the sales tax elasticity of net elderly migration is one-tenth.<sup>21</sup> That is, a 1% increase in the sales tax would reduce net elderly migration by a tenth of a percent. Thus, as Florida's state sales tax is six cents, the Woo elasticity implies raising it to seven cents (an increase of 16%) would reduce net elderly in-migration to Florida by 1.6%. As another illustration, offering a senior-citizen discount of two cents would boost net elderly in-migration by 3.3%.

We are also aware of several studies that look at the impact of taxes on migration that use counties as destinations. They find effects in the right direction—higher taxes deter in-migration—but of extremely small magnitude. Even though these studies support our view that policy-makers should not cut taxes in order to boost elderly in-migration, we cannot use them to strengthen our case because their observations are the three-thousand-plus counties of the United States. The overwhelming majority of those counties receive no elderly in-migrants other than those who grew up there or who move to live near relatives. Over relevant ranges, such

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<sup>21</sup> Actually Woo calculates an elasticity with respect to each pair of states. We are taking a rough average of the six elasticities he presents for Florida on page 30 of his study. For the property tax, Woo finds a perverse sign, that an increase in the property tax *increases* net in-migration. We speculate that he has failed to identify the corresponding coefficient. He calculates the property tax rate as tax paid divided by income. When migrants move into Florida, either they or the people they displace usually move into new houses. Those houses are more valuable than existing houses, bringing up property value per house. In that way, a strong influx of migrants raises the property tax rate as Woo measures it. We think an exogenous increase in millage rates would slightly reduce elderly in-migration. The identification problem does not contaminate Woo's estimated sales tax effect because new residents cause no increase in the ratio of sales tax collections to income.

migrants will be unaffected by differences in taxes. But that fact, which dominates the results of these studies, is of limited relevance to retirement destination states such as Florida.

As a final empirical study, Bakija and Slemrod (NBER, 2004) look at the effects of state taxes on the wealthy. Presumably the official if not the actual state of residence of the wealthy would be sensitive to taxes, especially income or estate taxes, because with houses in more than one location they have some degree of choice of which state they declare to be their residence. Their results are consistent with the others: “[W]e find that high state inheritance and estate taxes and sales taxes have statistically significant, but modest, negative impacts on the number of federal estate tax returns filed in a state.”

The empirical result from the studies showing that elderly migration is only weakly sensitive to taxes is confirmed by surveys. In 1996, the Florida Department of Elder Affairs surveyed older Florida residents.<sup>22</sup> One of the questions asked was, what were the most important attractions that caused them to move to Florida? The most frequent response was warm weather; the second was outdoor activities, and so on down a familiar list. The 14<sup>th</sup> and last item in frequency of mention was low taxes. That accords with the result from the survey conducted in 2003 for this report that only 37% of respondents even realized that taxes are lower in Florida than in other states. Nearly one-fifth (18%) thought they were higher.

In summary, we think the evidence is quite strong that giving Florida’s senior citizens tax breaks would probably attract a few more retirees to the state, but that the effect would be quite weak. Conversely, raising taxes would deter a few potential migrants, but again the numbers would be small.

### ***Policy Implications***

In February 2002, the Georgia legislative leadership proposed phasing out the state income tax for Georgians over 65 over the

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<sup>22</sup> See <http://elderaffairs.state.fl.us/doea/News/PressReleases/2003/JAN-JUNE/32145sj.html>

next three years.<sup>23</sup> Backed by a study by economist Richard Cebula of Armstrong State University in Savannah, the leadership said that the result would be an initial loss of tax revenue \$68 million a year, which would be eventually offset by larger revenue gains resulting from additional retirees attracted to Georgia, rising property values, and multiplier effects boosting sales tax revenue. In Florida, the final report of the Destination Florida Commission had among its recommendations: “Freeze property tax increases for persons 55 or older. Defer increases until death with the estate to pay the deferred amount.”<sup>24</sup> Florida has phased out its intangibles tax, which was paid mainly by older residents. The homestead exemption and Save Our Homes favor older more than younger residents. In 1998 Florida voters approved a constitutional amendment allowing local governments to extend an additional homestead exemption up to \$25,000 for senior residents with an income of less than \$20,000, the limit to be adjusted for inflation (and now \$21,599).

Other states have seen a host of proposals and laws that favor senior citizens, justified by the benefits of attracting retirees. Mississippi, for example, offers property tax exemption for seniors who live in one of 19 designated certified retirements cities. For residents over 65 Mississippi’s average property tax break is 50%.<sup>25</sup> Some 25 states provide special property tax treatment for senior residents (NCSL, 2004). In many cases, income limits on eligibility are quite strict, such as \$12,000 in Alabama and Tennessee. A few states have higher limits, such as \$62,000 in Virginia, while Alaska, Colorado, Connecticut, Delaware Illinois, Kentucky, New York, South Carolina, Texas, and West Virginia have no income limit on at least some of their property tax reductions targeted at seniors. About half of the states offer rental credits to low-income seniors. In addition, a large number offer income tax exemptions or reductions for certain forms or amounts

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<sup>23</sup> Georgia State House and Senate, Joint Republican Caucus, News Release, February 12, 2002.

<sup>24</sup> Department of Elder Affairs, p. 49.

<sup>25</sup> Retrieved July 20, 2005, from <http://www.visitmississippi.org/retire/retirementcities.htm>

of retiree income.<sup>26</sup>

There are instances in which tax cuts for senior residents may be good ways to reduce hardship. The exemption of pharmaceuticals from the sales tax could be an example. But the notion that special tax breaks for seniors will attract enough to the state to cause total revenue to rise is misguided. For that to be the case, the magnitude of the elasticity of senior location with respect to taxes would have to exceed one. For example, reducing the sales tax by 32%, from 6 cents to 4 cents, for seniors would have to induce an increase the number of senior residents greater than 33% for the cut to cause an increase in total tax revenue. That is not going to happen.

Moreover, even if tax revenue did rise slightly, there would be that many more seniors requiring services. Our estimate is that the net gain to the budget per capita for retirees is \$1,200 a year, compared to per capita state and local taxes paid by them of at most \$6,000. That implies that for a tax break for seniors to raise tax revenue, the magnitude of their location elasticity with respect to taxes would have to exceed five, whereas the best estimates are that it is around one-tenth. That is, for such a tax break to boost revenue, the sensitivity of retiree location to taxes would have to be fifty times as large as the current best estimates. At the very least, the state would want to study such a proposal thoroughly before enacting it.

Fiscally, empty nesters are a better deal for the state. Roughly speaking, there would be a net benefit (increased tax revenue exceeding increased costs) from giving them tax breaks if the magnitude of their elasticity of location with respect to taxes exceeded five-thirds. Though their migration has been less studied than that of retirees, it seems quite unlikely that their location is that sensitive to taxes. It is implausible that cutting their sales tax from six cents to four cents would increase their numbers by 55%.

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<sup>26</sup> Retirement Living Information Center, Taxes by State, retrieved July 20, 2005, from <http://retirementliving.com/RLstate1.html>. As an example, in Kentucky, “state income tax is not paid on Social Security income or on the first \$35,000 of private pension income” (Wildasin et al., 2001, p. 129). Many states exempted federal pensions from income tax after Davis vs. Michigan found that, “special treatment of state employees vis-à-vis federal employees regarding the tax exemption of pension funds was unconstitutional.”

Additionally, state and local tax breaks for the elderly would be inequitable. We have mentioned the social contract, according to which older citizens are strongly favored at the federal level by Social Security, Medicare, and Medicaid, but that bias is partially offset at the local level, as retirees with no children living at home pay taxes to support education. Earlier, we cited Kotlikoff's figure that the present value of expected transfer payments minus expected taxes for a household headed by a sixty-five-year-old was \$220,000. With rough-and-ready calculations not worth elaborating, assuming a three-percent real discount rate and taxes and expenditures rising with inflation, the net present value of what an older household might pay in Illinois or Michigan over benefits received might be around \$90,000, leaving a net balance versus all governments of around \$130,000. By moving to Florida, that household can reduce its net state and local burden to perhaps \$60,000. The net surplus versus all governments would be around \$160,000.

Whatever the true numbers, the point is that states such as Florida, Arizona, and Nevada allow the country's senior residents, who are already using their power at the ballot box to transfer resources from their children and grandchildren to themselves, the opportunity to fatten their wallets even more. They can raise their families in states that offer outstanding schools and universities then, when the children have left, retire to Florida, and vote to limit funding for education and health care for other people's children, many of them of a different race or culture, even though their own children were well cared for with the support of the generation that preceded them, the greatest generation.<sup>27</sup> The effect on the nation is not disastrous, but also not helpful and not Florida's highest calling.

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<sup>27</sup> The majority of the nation's retirees stay where they worked and support education just as strongly as do young adults. And, of course, many retirees who move continue to vote for school funding. A University of Florida dissertation by Deborah Fletcher finds evidence from voting patterns, however, that retirees who move tend to be weak supporters of educational spending.

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# The Structure of Employment in Florida

# 14

## *Introduction*

### **David Denslow**

Florida is still a young state, with most of its development occurring after the Second World War. Many military personnel who trained in Florida found it attractive and later, with their families, became visitors or residents. Migration accelerated in the 1960s when inexpensive air conditioning made the state livable year-round. Increasing numbers of visitors came to beaches and to attractions near Orlando. With respect to the migrants, most were workers and their families. Disproportionate shares of those who came and stayed, however, were retirees. As real wages rose, pensions became widespread, social security and Medicare gave senior citizens more independence, and the Interstate highway system and commercial jet travel made it easier to maintain ties back home, the share of Florida's population aged 65 and over reached 18%, compared to 12% nationally.

Florida, like most other states, had been largely agricultural. As the rest of the nation made the transition from farm to factory, industrialization largely passed Florida by. The bypass was not total. Florida had factories that processed food, manufactured construction materials, and made goods for the military and for export. Relative to total employment, however, the state had only half of its share of the nation's industrial jobs. Instead the transition from agriculture was, relative to the nation, predominantly to employment in retail trade, the hospitality sector, finance, medical care, real estate, and construction.

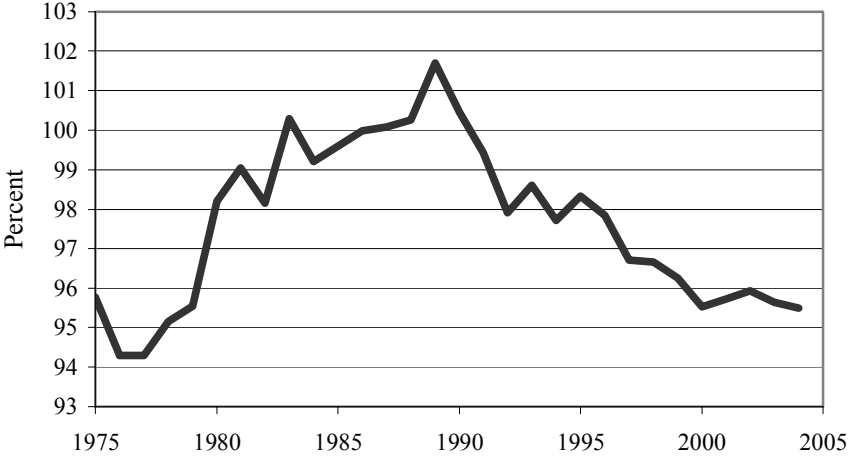
Many of these jobs paid well; many more did not. Nonetheless, from the 1950s through the 1980s, income per resident in Florida rose more rapidly than nationally. The state converged to the national level, reaching parity in 1989. The income convergence was driven by several forces. Most obviously, retiree households



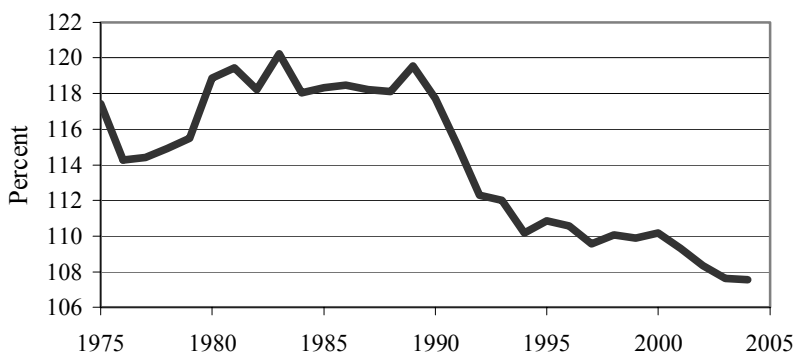
with two adults had approximately the same income as households with children, but fewer people among whom to divide that income. Second, Florida’s rapidly growing work force was not drawn from neighboring southeastern states. It came chiefly from the Northeast and Midwest, areas of the country with high educational attainment. Though Florida’s own K-12 education lagged, the infusion of skilled northern workers enriched the skills of the work force. At the same time, and almost of equal importance, the state’s residents were determined to improve their own educational system. In the 1980s, funding per student reached rough equality with the nation.

During the 1990s, however, Florida’s income per resident fell back below the national average. Income continued to rise, but not as rapidly as in other states. Compared to other southeastern states, Florida remained ahead of their average—the group includes Alabama, Arkansas, Louisiana, and Mississippi—but rose less rapidly. Other southeastern states continued to converge toward the national average while Florida was falling behind. Figures 1 and 2 show Florida’s income per resident compared (1) to the national average, and (2) to the southeastern average

**Figure 1. Florida Income per Resident Compared to the U.S., 1975 to 2005**



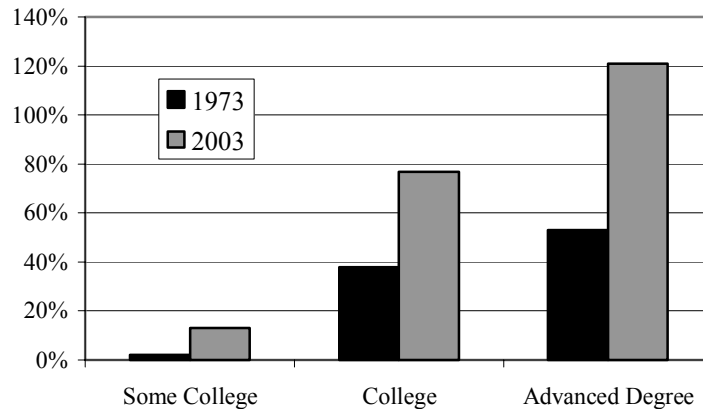
**Figure 2. Florida Income per Resident Compared to the Southeast, 1975 to 2005**



As the figures show, from 1989 through 2004, Florida’s income per resident fell six percentage points relative to the national average. Though Florida remains seven percentage points above the average for the Southeastern states, that ratio too has fallen since 1989, by 12 percentage points.

The causes of Florida’s relative decline are not immediately obvious. During the 1980s and 1990s, individual and household income inequality rose sharply in the United States. As far as the data allow us to know, that was the first sustained period in our history during which income inequality rose. Household income disparities have risen partly for demographic or social reasons, the chief among them being the growing share of households headed by single women. Such households are likely to have only one wage earner and that one earning below-average pay. Just as important, however, has been soaring wage inequality, with the wages of less-skilled workers falling relatively and perhaps even absolutely (Figure 3, Mishel, Bernstein, and Allegretto [2005]). The decline, it is clear, arises not from an increase in the supply of less-skilled workers but primarily from a decrease in the demand for their services. To be sure, there have been structural changes in the labor market, such as reduced union power and a falling inflation-adjusted minimum wage. But the principal cause is the decrease in demand for less-skilled workers.

**Figure 3. Wage Premium over High School Graduates**



A host of studies have attempted to explain the decrease in demand. The emerging consensus is that the most important source is technological progress and the second is international trade. Examples of the effect of technology abound. Computers and software have replaced hundreds of thousands of typists. Onboard computers route trucks more efficiently, reducing the demand for drivers. Automated looms have slashed the need for workers producing yarn and thread. The effects of trade are also all around us, as anyone can verify by checking the origins of nearby consumer electronics, articles of clothing, vehicles, or toys.

The most dramatic evidence of technology and trade has been the de-industrialization of the work force. That effect works in Florida's favor. High school drop-outs and those whose highest attainment is a high school degree tend to earn more in industry than in services. Though Florida has not escaped de-industrialization, a given percentage reduction in the factory work force has a much larger impact nationally because of the larger original share of factory jobs in total employment. In addition to that, the weakening of unions reduced the wage premium for factory workers over service workers. That too worked in Florida's favor. De-industrialization and private sector union weakness contributed to Florida's convergence in the 1980s.

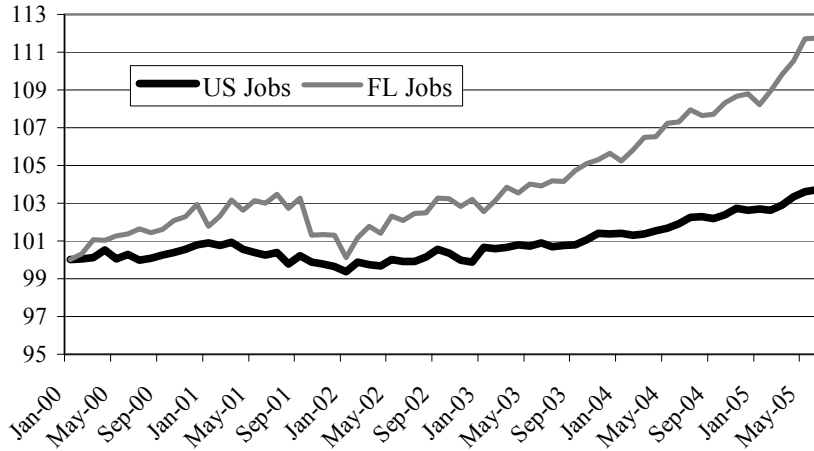
In the 1990s, the effect of de-industrialization and union weakness was still present, but it was weaker. Both nationally and

in Florida, jobs in industry had become so much smaller as a share of the overall work force that whatever happened in the industrial sector simply mattered less. De-industrialization continued but now did little to help Florida's income per resident converge. Moreover, net migration of workers from the Northeast and Midwest came to represent a smaller share of Florida's work force, partly because the net migration was smaller, but more importantly because it was diluted by a larger work force already present.

Another source of Florida's declining relative income is demographic, related to age. During the 1930s the Depression reduced births in the United States 16% from the 1930s, and the number of births stayed almost as low through the war. One result was that in the 1990s there were fewer people entering their sixties and thus, at risk of retiring to Florida. The share of the population over 65 fell by roughly a percentage point, bringing relative income per resident down with it. That change, however, accounts directly for less than a percentage point of Florida's relative income decline. A more important source of decline is overall job structure. Though job creation in Florida continues in hundreds of occupations, relative to the nation the jobs are in occupations that serve retirees and visitors. The occupations are in retail trade, finance, construction, real estate, medicine, and leisure and hospitality, among other sectors. As noted before, many pay well but more do not. If Florida continues on its current economic trajectory, its job structure will remain a negative. And if not overall income per resident, at least average income per household with children will lag, perhaps falling farther and farther behind.

What should be our response to our lagging job structure? Perhaps we should simply relax and accept it. Maybe Florida's place in the sun, blessed as we are by beaches and warmth, is to serve as a destination for temporary visitors and for those who after decades of work wish to spend their golden years away from the cold. If they create low-wage jobs, so be it. That's how the Sunshine State can best serve the nation and the world. Filling that role, Florida is enjoying a sense of prosperity. Over the past five years, the number of jobs in Florida has risen 12%, three times the national 4% (Figure 4, calculated from the U.S. Bureau of Economic Analysis data). The state's unemployment rate is nearly a percentage point below the

**Figure 4. Employment in Florida and U.S.**  
(Index January 2000 = 100)

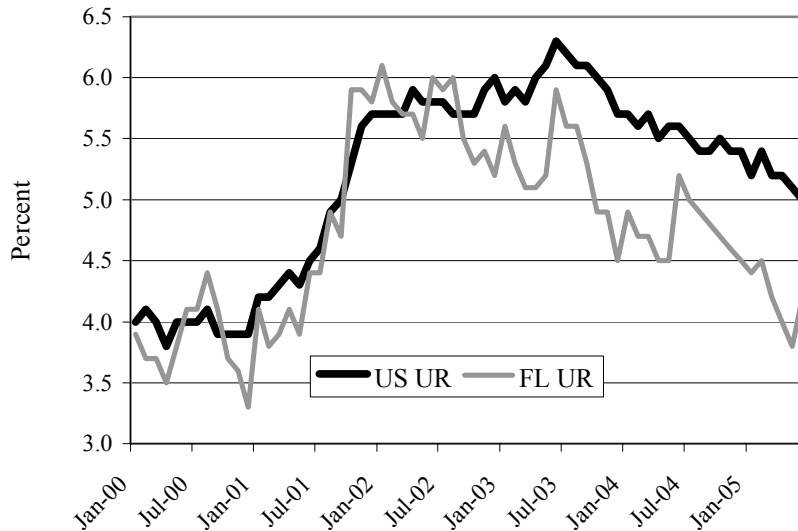


nation's.

There's a problem with accepting the role of serving visitors and retirees, however, which has to do with the subject of this report: its effect on state and local budgets. The nation may be content to have Florida provide low-wage services along with warmth and beaches to its visitors and retirees, but by and large it is going to leave the state to its own resources for funding state and local government. Though the federal government continues to fund education, roads, and welfare, year by year the state and local share is becoming larger and larger. The federal government is passing to state and local governments more responsibility for generating their own revenue. That matters because residents with high-paying jobs pay more in taxes and use less in public services. They require less welfare and impose less strain on the criminal justice system. Children of high-income parents are more likely to be the well-behaved and achievement-oriented students you want as your own children's classmates.

A second consideration is that we want our children to have the option of remaining in Florida and enjoying a wide choice of well-paying careers. Moreover, the same climate and reasonable cost of living that make Florida attractive to visitors and retirees could

**Figure 5. Unemployment Rate**



well make the state just as attractive to export and high-tech industries. Our climate gives us a choice. If we create a low-skilled work force, we will specialize in providing services to visitors and retirees. If we create a high-skilled work force, we can diversify into export and high-tech industries. We need to decide which is the better path; specialized or diversified.

Whichever path we choose, specialized or diversified, tends to become self-sustaining. If we continue to specialize in tourists and retirees, we become less likely to create the skilled, highly educated workforce that will attract export industries and high-tech industries. Neither leisure and hospitality employers nor retirees have strong incentives to push for investment in education. As an example, Florida once (at least once) hired a firm to use formal regional modeling to find out which sectors hold promise because existing Florida firms in the sector are highly profitable (Office of Economic and Demographic Research, 1999). Not surprisingly what they found is that in Florida many profitable industries were so because they required a less-skilled low-wage work force. Wisely, the legislative advisory group Economic and Demographic Research (EDR) concluded from that report not that Florida should continue down the low-wage path, but that

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*“it is difficult to entice people to prepare for jobs that do not yet exist, and those who do undertake training are likely to move out of state to obtain employment. On the other hand, it is difficult to attract high skill industries to a location that does not have an appropriately trained labor force. There is no simple solution to this dilemma other than to ... address both sides of the issue—labor force development and industry recruitment—simultaneously...”* (EDR, 1999, p. 10).

In other chapters of our report, we emphasize labor force development, the supply side of the labor-market equation. We devote this chapter to the demand side, to the state’s efforts to diversify. Indeed, the state’s goal of creating high-value-added jobs has taken on the name “diversification.” It coincides with reducing dependence on traditional sectors such as tourism, boosting R&D and creating high-technology industry clusters, and stimulating exports of technology-intensive goods, especially to non-traditional destinations. Because of the state’s history of tourism and retirement, job diversification is much the same thing as encouraging more trade, creating high-technology clusters, and changing job structure toward higher-paying occupations. These several goals are complementary rather than conflicting.

The underlying theme that relates this chapter to the rest of the volume is this: Florida has the opportunity to become a state with a high-value-added work force. To do so, it must avoid excessive taxation, irrational regulation, and unreasonable tort risks. Beyond that, however, the state must both redirect its schools toward achieving excellence and give them adequate resources to do so. Without both, Florida will be a low-wage state. To think otherwise is whistling Dixie, a tune long abandoned by most of our southern peers.

As a framework, we take a major section of Florida’s 2004–09 Strategic Plan for Economic Development, *Roadmap to Florida’s Future*. The section, titled “Diversifying Florida’s Economy: Priority Recommendations,” is but one example of the importance state leaders place on economic diversification. With that in mind, in this chapter we list some of the meanings of economic diversification, discuss their relation to the well-being of Floridians, and consider how well Florida is meeting goals coming under the rubric diversification. We organize our discussion under

four topics: (1) reducing our dependence on particular sectors such as tourism, services for retirees, and construction and real estate; (2) exporting more, especially to destinations other than Latin America; (3) boosting research and development and creating clusters of high-tech industries; and (4) raising average wages. We consider each in turn.

### ***Reducing our Dependence on Particular Sectors***

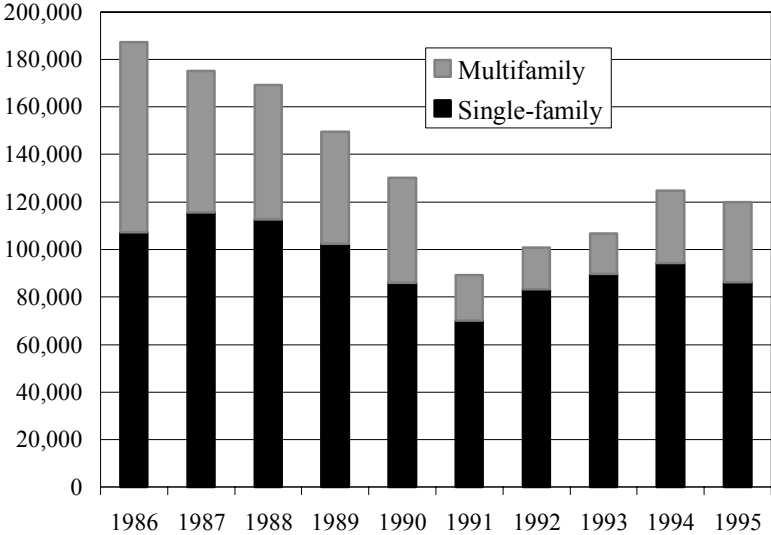
According to the *Roadmap*, “The lesson of 9/11 demonstrates the importance of having multiple engines of growth as a buffer to cyclical impacts” (p. 2 of “Diversifying Florida’s Economy”) This concept is straightforward. If a single sector, such as tourism, accounts for 25% of the state’s economy, then a 20% blow to that sector directly reduces the state’s economic activity by 5%. Moreover, the force of the blow will be amplified through backward and forward linkages and by multiplier effects on spending, with the result that the total impact may be a loss of 10% of the state’s economic activity. If the sector were only 10% of the state’s economy, the consequence of a 20% decline in that sector would be only a 4% decrease in state economy activity.

If the loss occurs when the national economy is in a recession, then the cyclical effects will not be mitigated by the reflection in Florida of national economic growth. An example of a sector that is not positively correlated with the national business cycle is petroleum. When the price of oil rose with the Iraqi invasion of Kuwait, the national economy went into a recession. In Texas, however, the effect was offset by the prosperity of the oil industry. The examples suggest that, other things the same, a state is better off by avoiding heavy reliance on one or a few sectors and by encouraging sectors that do not vary closely with the national business cycle and that, to the extent they do vary in coherence with the national cycle, are stable rather than volatile.

Many states, including Texas, are faced with a trade-off between specializing in industries in which they have a comparative advantage and seeking to diversify their risks by not specializing too heavily in a few sectors. Consider the example of California in the 1980s and early 1990s. California is a high-amenity but expensive area. The climate is excellent, but housing



**Figure 6. Florida Housing Starts, 1986 to 1995**



Source: Bureau of Economic and Business Research, Florida Long-Term Economic Forecast 2001, Volume 2, p. 260.

costs are among the highest in the country. With that combination the state specialized in military production. With most procurement funded on a cost-plus basis, employees could enjoy the amenities of California and receive high salaries in compensation for the high cost of living. That specialization, however, made the state vulnerable when the Berlin Wall and military spending fell. California specialized in a high-valued-added industry but at some risk.

In Florida, the trade-off is different. Our historical comparative advantage is providing services to visitors and retirees. Many, though far from all, of those services are low value added. Consequently, diversifying to reduce risk to a large extent coincides with the goal of creating high-value-added jobs. For Florida, the conflict between the two goals is less than for most states. While the state should not avoid attracting visitors and retirees, it may be advantageous to emphasize ways of doing so that are compatible with creating a high-value-added wage structure.

At business cycle frequencies, the variability of Florida's economy stems largely from fluctuations in its rate of growth. Florida specializes in services, which are not highly cyclical. Severe downturns in the state have arisen less from service-sector plunges than from slowdowns in population growth. Such downturns have been preceded by speculative building in anticipation that strong population growth would continue, followed, when in-migration slowed, by a collapse of construction. One example of this phenomenon is the apartment construction boom of 1971–72, followed by the 1973–75 collapse, coinciding with a severe national recession. A second example is the residential and commercial overbuilding in the late 1980s, resulting in serious overcapacity, followed by a two-year air pocket for residential construction and five years of depressed commercial construction. Figure 6 illustrates the declines in single-family (sfs) and multifamily (mfs) housing starts.

In that decline, contributing factors included the national recession, the lower rate of trend population growth in Florida as the small depression-era cohort born in the 1930s entered its retirement years, and the financing difficulties associated with the restructuring of the nation's financial intermediaries. Some would also blame the state's implementing more serious growth management, though there is doubt about whether that slowed population growth.

A possible way for Florida to stabilize its economy cyclically would be to restrain growth spurts in order to reduce the impact of slowdowns. Growth management could be done in accordance with a long-run plan, but while keeping in harmony with the long-run average set by the plan the pace of development could be purposefully slowed during booms and encouraged during slowdowns through changes in the severity of regulation. Whether this would in fact be a good idea involves other considerations that we have not explored. The idea may be worth looking into, but it would probably be too difficult politically to get the timing right.

Even more important to the state than reducing short-run cyclicity is that all of its cities avoid long-run stagnation. Such long-run stagnation hit some of the nation's northeastern and mid-western cities when local industries lost their comparative advantages. Examples are cities that depended on the steel, motor

vehicle, or consumer electronics industry. Such cities decline gradually, as housing values fall below the cost of their construction. When that happens, the waste of local capital, both private and public, is enormous. Factories and roads become less and less valuable as the cities gradually decline, and neither factories nor roads can be moved to places where they would be more useful.

Long-run stagnation is infrequent in the South, though it has occurred in a few locations. Because of Florida's pleasant climate and access to the coast, stagnation of one of the state's major cities is unlikely. But it is not impossible. Consider the example of Spain, the Florida of Europe, visited by over 50 million tourists a year (McLean, 2004). Occupancy rates at the peak of the 2004 tourist season were only 60%, partly because of high gasoline prices and weak economies in France and Germany. "[B]ut the far more important reason is that there are powerful new competitors—countries where the costs of doing business are much lower than in Spain—like Bulgaria, Croatia, Tunisia, and Turkey." Florida also faces competition for European visitors from these countries, now that they are perceived to be politically stable. More important, however, is the example. If Mexicans, Central Americans, Jamaicans, Cubans, and others improve their foreign language skills, infrastructure, and social conditions, they will attract more and more people, both Americans and others, who now enjoy Florida. That will be particularly true if U.S. travel rules make foreign tourists feel unwelcome (Newland & Fortescue, 2004; Simon, 2004).

The best way to reduce the threat of structural stagnation is to create a well-educated work force, one that can adapt to changing economic circumstances. Research at the Philadelphia Federal Reserve has shown that cities with high levels of human capital are relatively immune to stagnation (Federal Reserve Bank of Philadelphia, 2000 & 2001; Glaeser & Saiz, 2003). Ways to reduce the risk of severe cyclical downturns and of secular urban stagnation are to diminish the state's dependence on growth and to increase the educational attainment of its work force.

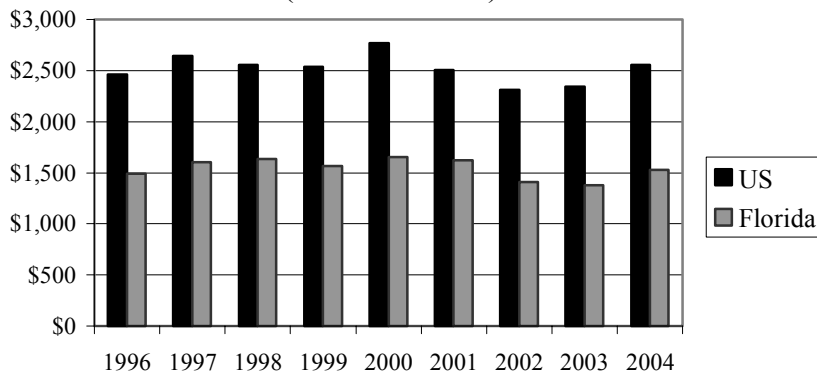
***Exporting More, Emphasizing Asia, Europe, and Africa***

Florida’s exports of goods, in constant 2000 dollars, were about the same per resident, \$1,500, in 2004 as in 1996, compared to \$2,500 nationally. The composition of Florida exports changed, however. The biggest declines were in apparel manufactures, machinery manufacturing, and computers and electronic products. The losses were offset by gains in transportation equipment, fabric mill products, waste and scrap, and other goods. Florida’s exports in the billion-dollar-plus range include a high-tech industry, computers and electronic products; a mixture of standard and high-tech manufacturing; phosphate processed into fertilizer; and processed foods.<sup>1</sup>

High-tech industries provide about 40% of export goods made in Florida. The *New Cornerstone* (Florida Chamber Foundation, 2003) report points out that Florida’s “top five [export] industries are industrial machinery (including computers), electronics, transportation equipment (including aerospace), chemicals (including pharmaceuticals), and scientific instruments.” The goal of boosting exports overlaps with the goal of creating high-tech clusters.

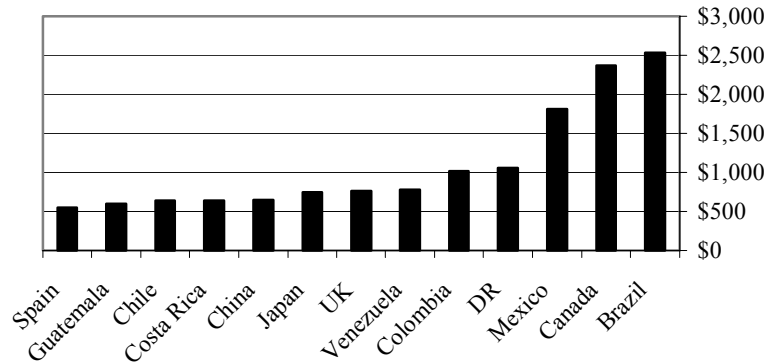
According to data from the U.S. Bureau of Economic Analysis

**Figure 7. Goods Exports per Resident  
1996 to 2004  
(constant 2000\$)**



<sup>1</sup> The data are from WISER Trade.

**Figure 8. Destinations of Florida Exports, 2003**  
(million \$)



(BEA), Florida’s exports of goods as a share of gross state product are 5.5%. There is no reason to think the composition of Floridians’ purchases of goods differs much from the national pattern. Residents of the United States import goods equal to 11% of gross domestic product (GDP). If their share is proportionate, directly and indirectly Floridians annually import goods worth about \$55 billion and export goods worth about \$25 billion.

Brazil, Canada, and Mexico, as shown in Figure 8, are the major destinations of Florida’s exports.

Table 1 compares export destinations in 2002 for Florida and the United States by principal languages and by continents of destination countries. Table 1 shows that 52% of Florida’s exports went to South America, Central America, and the Caribbean. Florida accounted for only 3.5% of total U.S. exports, but for 25% of those to that area. An obvious explanation for the strong exports from Florida to South America, Central America, and the Caribbean is geographic proximity. An interesting question is whether cultural relations, including language, also play a major role. Modest evidence for the importance of cultural proximity is that Florida accounts for 5.8% of U.S. exports to Spain, compared to only 3% to Europe overall. But there is also slight evidence the other direction. Florida accounts for only 2% of U.S. exports to Portugal, 0.8% to the Philippines (compared to 1.8% for Asia), and 0.2% to Mozambique (compared to 3% for Africa). Moreover, Florida provides only 1.5% of U.S. exports to Mexico, compared

**Table 1. Destination of United States and Florida Exports, 2002**

Destination	U.S. Exports (billion\$)	FL Exports (billion\$)	Share of U.S. (%)	Share of FL (%)	Ratio FL/U.S. (%)
English speaking	223	5.4	32	22	2.4
Spanish, or Portuguese speaking	153	12.3	22	50	8.0
North America	258	3.8	37	15	1.5
Asia	178	3.2	26	13	1.8
Europe	115	3.5	17	14	3.0
South America	51	12.7	7	52	25.0
Africa	11	0.3	2	1	3.0
Other	76	1.2	11	5	2.0
Total	693	24.5	100	100	3.5

Note: To illustrate the contents of the table, the first row shows that the United States exported \$223 billion of goods and services to English-language countries in 2002, compared to Florida's \$5.4 billion. The \$223 billion was 32% of total U.S. exports, and the \$5.4 billion was 22% of total Florida exports. Florida accounted for 2.4% of the total U.S. exports to English-speaking countries. The numbers are the author's calculations based on the *Statistical Abstract of the United States: 2003*, Table 1300, for the United States and on <http://www.census.gov/foreign-trade> for Florida. South America is broadly defined to include the Caribbean and Central America (but not Mexico). Middle Eastern countries are included in the continent "Other."

to a nearly identical 1.4% to Canada, where Floridians have no particular language or other cultural advantage.

Such evidence is too slight to resolve whether cultural proximity matters in addition to geographic proximity. There are at least two possible approaches one could use: (1) estimate a gravity model with language or some other measure of cultural affinity such as Florida's immigrants added;<sup>2</sup> or (2) see whether the 50% of Florida's exports that go to Spanish- or Portuguese-speaking nations consist disproportionately of commodities without reference prices. A reference price is "a price that is quoted without mentioning a brand name or other producer identification"

<sup>2</sup> Hutchinson (2005) finds that, controlling for distance and other factors, countries that are closer linguistically trade more with each other. His finding, however, depends on excluding Japan and South Korea from his sample.

(Rauch, 2001, p. 1187). The idea is that standardized goods traded in well-developed markets can be traded without strong personal ties. For more complex goods, however, trade requires knowing well a party who is familiar with local markets and who can be trusted. With complex goods, personal trust substitutes for the difficulty of enforcing contracts across countries. It may be, however, that personal ties are becoming less important to trade in complex goods, as business law becomes more similar across nations.

Over the past 15 years, increasingly Florida's trade has been with geographically closer partners. The average distance of Florida's trade has declined slightly, down from 3,604 miles in the years 1988–93 to 3,440 in 1994–2002 (Coughlin, 2004).<sup>3</sup> For Florida it appears that the most important reason for the declining distance of trade is two changes in transportation costs. First, the cost of air freight has declined substantially relative to ocean freight, and air shipments tend to be over shorter distances than ocean shipments. Second, ocean shipping costs can be divided into dwell costs such as loading and port waiting time, which are fixed costs with respect to distance, and distance costs such as time in transit and fuel consumption, which vary with distance. Over time, dwell costs have declined relative to distance costs. Containerization, for example, reduces both but the effect on dwell costs has been larger. The declining cost of air freight in comparison to ocean freight, incidentally, probably reduces Florida's share of the nation's trade, since our comparative advantage is in seaports, not airports.

The North American Free Trade Agreement (NAFTA) apparently reduced Florida's trade to Mexico by 10% and to Canada by 6%.<sup>4</sup> The combination of Florida's lack of direct highway and rail access to both countries and declining overland versus ocean freight costs interacted with the free trade agreement

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<sup>3</sup> Coughlin, p. 1, illustrates the calculation of the distance of trade as follows: "Assume a state's exports are shipped to two countries and that the value of exports sent to one country, which is 1,000 miles away, is \$800 and the value sent to the other country, which is 3,000 miles away, is \$1,200. Thus, 40% of the state's exports are transported 1,000 miles and 60% are transported 3,000 miles. The distance of trade is 2,200 miles (40% x 1,000 + 60% x 3,000).

<sup>4</sup> Coughlin, Table 4.

to reduce Florida's role.

To return to the argument for diversifying export destinations, it is similar to that for sectoral diversification. Over half of the state's exports go to Latin America. When that region stagnates, so do Florida's exports. There is, however, good reason that Florida specializes in exports to Latin America, the geographic and cultural proximity noted above. We should seek to take advantage of possibilities for exporting to Asian and European markets (also African markets, though they are tiny), but not at the cost of exports to Latin America, especially high-tech exports to Latin America. Consequently, a better measure of progress on this front than the ratio of Asian, European, and African (AEA) exports to total exports is the ratio of AEA exports to state GDP, or perhaps AEA exports per worker.<sup>5</sup>

In recent years, globalization of trade has done more harm than good to Florida's job structure. Though a large share of the goods the state exports create high-wage jobs, the relation between transportation and NAFTA has reduced Florida's exports and rising competition from Asia has reduced others. Moreover, near-term prospects for the Free Trade Area of the Americas (FTAA), which *would* create high-value exports from Florida, are poor. Brazil in particular is unprepared for FTAA. The Dominican Republic Central American Free Trade Area (DR-CAFTA), recently passed by the U.S. Congress in spite of nearly unanimous Democratic opposition and powerful lobbying by unions and sugar interest, is likely to prove quite beneficial to the state; though its economic impact will be small compared to our half-trillion dollar economy. Probably more important is the decline of the dollar against the euro in recent years, which will make us more competitive in Europe and in Latin America, and the potential revaluation of Asian currencies besides the yuan against the dollar, which will also stimulate our exports.

The weakening dollar also strengthens tourism in Florida, as it becomes cheaper for Europeans to visit Florida and more expensive for Americans and Latin Americans to visit Europe.

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<sup>5</sup> Besides the direct economic benefits, trade ties with Latin America enhance the cosmopolitan atmosphere in parts of Florida, making it more attractive to skilled workers. Increasing economic relations with Africa, Asia, and Europe would bring similar indirect benefits from cultural enrichment.



Consequently, it is hard to know the net effect of the depreciating dollar on Florida's job structure. Exports boost high-wage employment while most leisure and hospitality jobs pay low wages. What is clear is that the depreciation of the dollar makes it more important to push for free trade agreements and to bolster export industries. When the dollar is overvalued relative to other currencies, the larger effect of free trade agreements is to boost imports, destroying jobs in import-creating industries. Because of a phenomenon known in the foreign exchange literature as "overshooting," the dollar is likely to become undervalued for several years. Moreover, the world's perception that American households save little and that the federal government is unconcerned about responsible budgeting may extend the period of undervaluation of the dollar even longer. With an undervalued dollar, the stronger effect of free trade agreements will be to stimulate exports. This is highly likely to stimulate tourism. To improve its job structure in the current macroeconomic environment, Florida's congressional delegation was right to offset the tourism effect on the state's job structure by pushing hard for DR-CAFTA. Perhaps in two or three years the time will be right to do the same for FTAA. The goal of increasing exports relative to our total state output is far more important than the desire to reduce the share of our exports going to Latin American countries.

### ***Boosting R&D and Creating High-Tech Clusters***<sup>6</sup>

The reasons for emphasizing R&D and creating high-technology clusters are clear. Both lead to high value-added jobs and dynamic growth of the sort Florida seeks. They entail the risk of downturns when booms slow, as in Silicon Valley, but the rewards are so high that the risks are worth it. One much-publicized measure of how attractive a state is to high-technology industries is the Milken Institute State Science and Technology Index.

The Milken Index is based on 75 indicators (DeVol & Koepp, 2004). Each state is ranked from 1 to 50 on each of the indicators.

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<sup>6</sup> For a complementary perspective, see Cambridge Systematics and Economic Competitiveness Group (funded by the Florida Chamber Foundation), *New Cornerstone*, Tallahassee, 2003, Chapter 4: "Incubating, Growing, and Sustaining Emerging Businesses."

Then it is given a score of 100 for each indicator on which it ranks first, 98 for each second place, down to two for each indicator on which it comes in last. Those scores are summed across all 75 indicators, and then divided by 75. Florida's 2004 score of 44.47, for example, indicates that averaged across all indicators, Florida's average rank was 27<sup>th</sup>. Though there are problems with the Milken<sup>7</sup> index, we use it because it is readily available and widely reported. Moreover, it probably provides an indicator that is sufficiently accurate for the purpose at hand.

In the 2004 Milken Science and Technology Index, Florida's value of 44.5 compares to a national average of 52.6 and places it 32<sup>nd</sup> among the states, down from 29<sup>th</sup> in 2002. Some 15% of the nation's residents now live in states with science and technology indexes lower than Florida's, down from 19% in 2002.

A pessimist, who might prefer to call himself a realist, would conclude from this ranking that Florida should give up on becoming a high tech state. Florida's intellectual infrastructure for high tech, according to the Milken Index, is so weak compared to not only Massachusetts and California but also southeastern states such as Virginia, Georgia, and North Carolina that we should accept our destiny as a low-wage tourist and retiree destination. That conclusion is too pessimistic. Florida, to be sure, has a long way to go to create a first-class intellectual base for attracting its share of the nation's high-tech industries, but its climate and other amenities give it the option to do so, if that is the route it chooses. Wisconsin and Michigan have no choice about their climate. Florida, if it wishes to do so, can choose to create a world-class labor force.

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<sup>7</sup> Actually, this explanation of the Milken is oversimplified, because it implies that each indicator is weighted equally, and they are not, because of an intervening step. The intervening step is to place each of the 75 indicators in to one of five groups: R&D inputs with 18, risk capital and infrastructure with nine, human capital investment with 20, technology and science workforce with 18, and technology concentration 10. That means, for example, that an indicator in the technology concentration group counts twice as heavily as an indicator in the human capital investment group. An indicator in risk capital & infrastructure counts twice as much as an indicator in technology and science workforce.

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***Shifting toward High-Value-Added Jobs***

To most people the simplest and most intuitive measure of whether Florida has a high-value-added job structure or a low one would be the average wage in Florida divided by the average wage nationally. Unfortunately, this simple and commonly used measure is flawed because it fails to account for geographic differences in the cost of living and in amenities.<sup>8</sup>

Before proceeding further, we pause to note that we use the term “amenities” to denote both the advantages and disadvantages of living in a particular place. A warm climate is an obvious amenity. Less obviously, traffic congestion and crime are also amenities, “negative amenities” if you will.<sup>9</sup> Rather than referring constantly to positive and negative amenities, we simply say “amenities.” This usage is similar to the way you refer to the quality of a good, by that meaning both its positive and its negative characteristics, as is implicit in many words when attributes are being compared across people, things, or places.

We propose measuring the “quality” of an occupation by the average national wage of workers in that occupation. Obviously that is an imperfect measure but it is hard to think of another that is practical. Usually ordering a pair of occupations by average wage will give us a ranking that matches our intuition. Nationally in 2003, computer and information systems managers were paid \$95,230; biomedical engineers \$66,980; restaurant cooks \$20,020; and dishwashers \$15,490. While all of us value the services of cooks and dishwashers, we admit that CIS managers and biomedical engineers add more value. Moreover, we would probably agree that, other things the same, a state with more CIS managers and engineers relative to its cooks and dishwashers has a higher value-added job structure.

The 2003 Occupational and Employment Survey of the Bureau

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<sup>8</sup> Larry Kenny has emphasized this point for some time. Examples include his chapters on wages in the 1990 and 1995 editions of *The Economy of Florida*, published by the Bureau of Economic and Business Research at the University of Florida. He quantified the sources of Florida’s wage differential, finding most of it to be due to amenities.

<sup>9</sup> Or, if that usage bothers you, think of free-flowing traffic and low crime rates as amenities.

of Labor Statistics reports estimated annual pay for 711 occupations nationally. For states and cities the number of reported categories varies and is lower. As a measure of the job quality of each state, we have calculated what the average pay would be in each state if its workers were paid the national average wage corresponding to their occupations. For example, in 2003 the 15,000 dental assistants in Florida on average earned \$25,920, or 8% less than the national average of \$28,230. We assume that they accept lower pay because of Florida's amenities, not because they are on average less qualified than dental assistants in other states. To calculate Florida's job structure we credit dental assistants with average pay of \$28,230. After doing that for all of the occupations listed for Florida, we calculate a hypothetical average wage and compare it to the actual national average wage. That is our measure of job structure in Florida.<sup>10</sup> We do that first for 1998, the first year the data are available, and then for 2003.

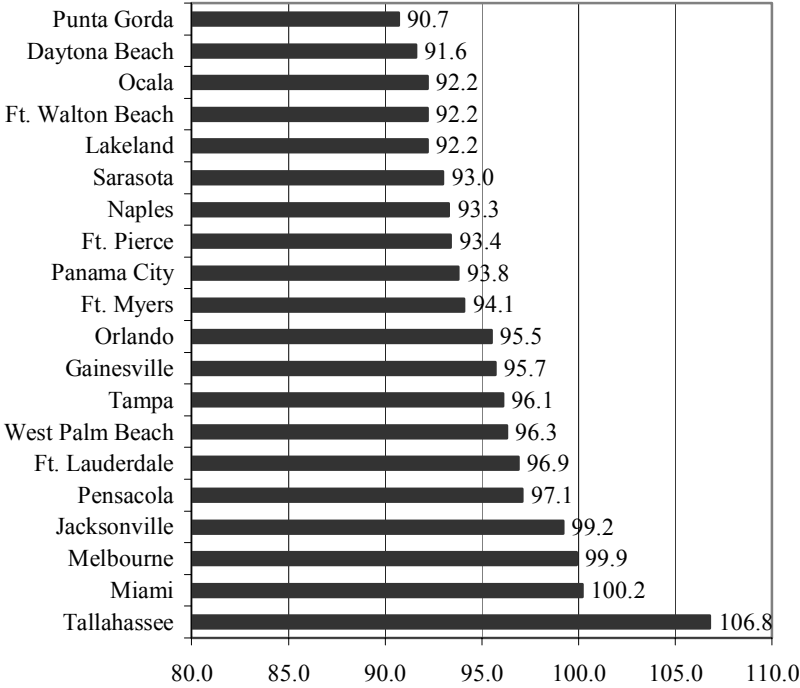
In 1998, Florida's value-added job structure index was 98.9, a percentage point below the nation's 100.0. Florida ranked 26<sup>th</sup> among the states and 28% of the nation's population lived in states with job structures below Florida's. By 2003, Florida's job structure index had fallen to 96.5 (Figure 8). Florida's rank among the states fell to 40<sup>th</sup>. Among the states passing us were Georgia, North Carolina, South Carolina, Kentucky, Tennessee, West Virginia, and Alabama.

Possible reasons for Florida's slipping include: (1) Florida's job structure composition relative to the nation's shifted toward more low-wage jobs; (2) relative wages of less-skilled workers nationally continued their secular decline associated with technology and globalization; (3) relative wages of less-skilled workers nationally declined temporarily because of slack labor

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<sup>10</sup> Actually, there are complications because there are only 705, not 711, occupations listed for Florida. The best way to handle that would be to use a regression in which the dependent variable is the logarithm of the wage and the independent variables are sets of occupational and state dummies. The coefficients from the occupational dummies would be exponentiated to obtain the estimated wage to be used as the national average wage used here. That would avoid the bias from the fact that some occupations are concentrated in either high- or low-wage states. We judged that better method to be unnecessary for our current purpose.

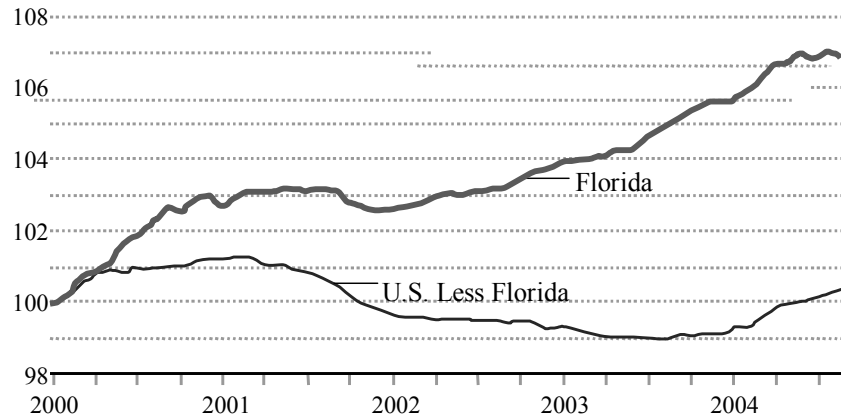
**Figure 9. Job Structure Index, 2003**



markets; and (4) the change in the job classification system between 1998 and 2003 artificially reduced the job structure index for Florida. Though it is possible to determine what combination of these explanations is correct, we have not done so.

Meanwhile, one clue comes from looking at job structure indexes for Florida’s metropolitan areas, shown in Figure 9. Tallahassee is high because it has both a large university and is the seat of state government. Following that, it appears that job structure varies positively with the size of the urban area and negatively with its concentration in tourism and serving retirees. Whether these relations hold up nationally would be possible to study, but we have not done so. The graph is at least suggestive that it may be difficult for Florida to become a high value-added state while focusing on tourism and retirees. Projecting Florida’s industrial employment structure from 2003 to 2011, the Florida Agency for Workforce Innovation expects recent trends to continue. The projected growth in jobs in construction is 16%;

**Figure 10. Payroll Employment in Florida and the U.S., 2000 through 2004**



Source: Bureau of Labor Statistics, Federal Reserve Bank of Atlanta.

manufacturing, 3%; transportation, communication, and public utilities, 12%; wholesale and retail trade, 13%; finance, insurance, and real estate, 14%; services, 24%; and government, 12%. Among more detailed sectors, the largest is the hard-to-interpret “Business Services,” projected to rise from 875,000 workers in 2003 to 1,134,000 in 2011.

In recent years, Florida has enjoyed rapid job growth. The primary engine of job creation, however, has been in-migration of retirees, spurred by rising home prices in the rest of the country, particularly in coastal areas. The influx of retirees has had multiplier effects, creating jobs in construction and services. From April 2003 to April 2004, Florida’s population rose by 445,000, the largest absolute increase since 1973. Florida’s employment growth rate from 1998 to 2003 was third-highest in the nation. The two leading states were also tourist and retiree destinations, Nevada and Arizona. Florida is creating jobs, but most of them are low-paying.

### *Conclusions*

Florida’s economic history has led it down a path toward providing services for visitors and retirees. For decades, that path brought the state prosperity, and its income per resident rose even

more rapidly than the nation's. Since 1989, however, Florida's income per resident has grown more slowly than the nation's and much more slowly than in other southeastern states. That fact gives added impetus to the state's desire to diversify its job structure away from serving visitors and retirees. It is not that Florida wants to abandon the advantages that being able to attract visitors and retirees gives it, but that it seeks to follow a more diversified path, one that includes more exports, more high-tech industry, and, in general, more high-valued-added jobs.

Toward that end, the state will and should continue efforts to be more business-friendly in its tax structure, to support free trade, and to boost its educational structure. One area where we think a change is called for, as we discuss in other chapters of this report, is to ask retirees coming to Florida from elsewhere, our newcomers, to contribute more to caring for and educating our children, to supporting our universities, to keeping our cities safe, uncongested, and attractive, and to caring for those who are poor and need medical care. Newcomers, including retirees, add to the state's prosperity and should be welcomed, because they are our friends and compatriots as well as for economic reasons. It is reasonable, however, to ask them, especially the newcomers and among those the retirees in particular, to contribute the same amount toward the education of the nation's children and toward other national needs typically funded by state and local governments as they would have, on average, had they remained where they worked and raised their families. If that deters some of them from joining us, so be it. The ones kept away by that equitable request will not be much worse off. Apparently they did not want to come all that badly anyway.

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## Carol Weissert

Twenty years ago, Florida's State Comprehensive Plan established a long-range agenda for a vibrant and responsive state. A committee set up to make recommendations for implementing that agenda, known widely as the Zwick Committee, for its chair Charles Zwick, a Miami businessman, evaluated the state of the state and made recommendations for making improvements set out in the comprehensive plan (1987).

This document is in some sense a reaffirmation of the Zwick report and a reminder that the problems identified in 1987 still exist in Florida. The Zwick report noted that the state was not meeting its potential in terms of providing the best for its citizens in relative terms to other states. It also noted that the citizenry supported—even demanded—low taxes. Yet it argued for more:

*“We can no longer compete successfully by relying merely on cheap land, cheap labor, low taxes, and plenty of sunshine. To attract quality growth in the future, Florida must have the new keys to competition among states and nations:*

- *a sound physical infrastructure;*
- *well-managed natural resources;*
- *an educated and motivated work force supported by adequate human services;*
- *quality universities and research and development institutions;*
- *an attractive quality of life;*
- *a regulatory atmosphere that encourages enterprise;*
- *fiscal stability, characterized by reasonable tax rates; and prudent spending policy.”* (Zwick 1987, p. 2)

The commission compared this ideal with what they viewed as substantial problems in 1987:

*“Florida is a state with boundless economic potential—a state we can keep on the competing edge. Florida is also a*

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*state with jammed highways, polluted natural resources, struggling schools, poorly-paid teachers, teeming jails, neglected children, needy senior citizens, inadequate health care, a shortage of affordable housing, and a declining quality of life. Florida is on a collision course with painful realities that must be faced—now.” (Zwick, 1987, p. 3)*

But, 20 years later, Florida is still a state with boundless economic potential; and largely one that did not suffer from the predicted painful realities. In 2005, Florida remains at the bottom or—very near the bottom—of 50-state rankings in both spending and outcomes. Yet, it continues to increase a net of 1,100 people a day, still offers a welcoming climate for businesses and, unlike many of its fellow states in recent years, has weathered a national recession without major spending cuts or tax increases. The Zwick report is a reminder that problems remain in Florida—surprisingly little has been done in Florida to alleviate the problems noted in the report—but also that predictions of a train wreck ahead have to be viewed with some caution. This report highlights the current and future problems for Florida—many a continuation of those recognized in the committee report. Medicaid—a problem even in 1987—has become a much more dominant drain on the state’s budget in 2005. Meanwhile, other policy concerns highlighted in the Zwick report— low teachers’ salaries, poor roads, underfunded universities, and too many children living in poverty—continue to fester.

However, there have been some successes. Quite possibly because Florida is a low-tax, low-spending state, it has often launched innovative approaches to public policy that other states and the national government have copied. In health policy, for example, Florida’s Healthy Kids in the early 1990s, preceded and served as a model for the national State Children’s Health Insurance Program. The states’ activities in controlling costs of prescription drugs in the Medicaid program and the 2005 effort to redesign Medicaid with vouchers and increased privatization are closely watched in Washington and by other states.

Florida is a leader in protection of its natural resources. Two statewide initiatives of \$3 billion each were undertaken at the state level for environmental land acquisition and restoration. These state dollars have been supplemented by regional and local

governments. The statewide dollar total in the area may exceed \$750 million a year. The Everglades restoration alone is estimated at \$8 billion. But, it is not simply the money that is key. Techniques and technologies developed in Florida have been exported to many other jurisdictions including innovative market mechanisms and banking wetland mitigation.

Florida has led the way in new ways of thinking in the criminal justice area. For example, Florida's Department of Corrections has been on the forefront of faith-based initiatives in corrections. It currently operates two faith-based correctional institutions and programs in six other facilities. The initial data show dramatic decreases in disciplinary rates by prisoners (over 90% reduction) and recidivism (less than one-half of the general population).

This report does not call for the imposition of a state income tax. Given political realities and public preferences, this seems impossible. Rather, we view the Florida tax-services tradeoff as a type of marketplace of policy. In this marketplace, policies are considered that seem to be most appropriate for the needs and desires of Florida's citizens and politicians given the trends evident in PK-12 education, higher education, Medicaid, welfare and the state's demographic growth.

This report highlights both the revenue side and the spending side of Florida's policy marketplace. On the revenue side, in the short term, the state is flourishing—with the spring 2005 revenue estimating conference announcing unexpectedly large incoming revenues. Over the long term, the projections rely heavily on the economic engine of real estate prices. These prices have grown and continue to grow in recent years—fueling much of the economic good news to the state. If these prices begin to flag, or tourists—another major source of revenue growth—choose other venues, the state's revenue could fall. Meanwhile, tax cuts have lowered the revenue accumulation—not enough to hurt in boom-market years—but perhaps enough to hurt in less fortunate times.

Florida has long focused its tax incidence to tourists and visitors to the state. For many decades this worked. However, since 1989, Florida's income per resident has grown more slowly than the rest of the nation and much more slowly than its Southern neighbors, suggesting that diversification might be in order. Florida may continue to attract visitors and retirees but also pursue

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other revenue and business sources including more exports, more high-tech industry, and more high-valued jobs. In this report, we encourage such diversification, urging a continuation of a business-friendly approach to tax structure. However, we do argue that retirees and other newcomers to the state might be asked to contribute more for the services they enjoy directly or indirectly. Coming from higher tax states, these new Floridians are not likely to object to additional taxes or fees on their new homes to offset their expected gain in life-style. There is an added bonus to the state in that these citizens do not have children in school, are unlikely to require incarceration for breaking the law, or to need welfare assistance.

This report also provides insight into the role international immigration plays in Florida. Florida has 5% of the nation's native population and over 8% of its immigrants. Indeed, much of Florida's remarkable in-migration is from international immigrants. In the short run, these immigrants cost the state much more than do non-immigrants; they pay fewer taxes and consume more public services per person. In the long term, immigrants—especially those who achieve academic or technical education—can pay back the state by becoming active and productive citizens and taxpayers.

But the primary focus of this report is on spending needs in Florida. Bringing up the bottom does not guarantee that future years will not put more pressure on spending in areas such as PK-12 education, higher education, transportation, children's health and welfare, and of course Medicaid. In summary:

PK-12 Education. Even to keep spending at the current level, costs for PK-12 education are estimated to increase \$3.2 billion—or 42%—over the next eight years. If the state wanted to increase spending to meet the southern state average, it would have to spend \$8,781 per student by FY 2010, an annual average increase of 8.2%. To attain the national average in FY 2010 would mean an increase of 10.4% per year. The recent call for amending the class size amendment so that it applies district-wide instead of in every classroom would alleviate some of the additional burden on PK-12 spending. The governor's proposal to increase starting teachers' salaries may help attract teachers, but the gap between Florida and other states will remain. For the state to catch up with spending for

teacher salaries in other Southern states, Floridians would need to spend an additional \$835 per teacher. To increase teachers' salaries to the national average would cost a whopping \$6,122 per teacher. Even this increase will not address the loss of good teachers due to lack of merit pay under the current system. Performance standards from Tallahassee and Washington, D.C. have apparently helped improve test scores of students, but issues remain about the quality of schools in urban areas, the impact of expanded voucher programs on students who may not be able to leave poor quality schools, and the size of school districts in Florida which can lead to frustrated parents and community leaders who have little local control and difficulty in holding the districts accountable. Finally, the cap on local funding of education adversely affects the possibility of local improvement of schools.

Higher Education. Like its PK-12 system, Florida's funding of higher education is low relative to comparable Southern states and the national average. And like other states, state and local public higher education funding per student has fallen in recent years, largely from recessionary pressure. Unlike many other states, Florida's higher education enrollments are growing and will likely see greater demands over the next decade as its large and growing number of children become ready for college. Yet even as enrollments rise in Florida, aggregate state spending for higher education has stabilized or even fallen in recent years. Tuitions and fees for state universities are among the lowest in the country but are rising at both universities and community colleges. Two popular programs in the state—Bright Futures and the Florida Prepaid Tuition Plan—constrain the increase in tuition since both programs are tied to the level of tuition. In Bright Futures, the state pays the tuition in full or in part for scholarship winners; and in the Prepaid Tuition Plan, the state guarantees parents who participate that the state will cover the tuition for their children when they are ready for university. Institutional changes in university governance are still in flux, and the locus of determination of tuitions is not yet determined (although the legislature continues to set them in 2005). At the very time that state funding has fallen and pressure to hold down tuitions has risen, businesses and economic concerns are calling for more and better university graduates to take the high-level jobs and develop a highly trained workforce in the state.

Medicaid. In 2001-02, Medicaid spending was the largest single item in the state's budget—accounting for over one-fifth of the total spending in the state. Since that time, Medicaid has inched closer to one-fourth of total spending and remains the focus for major overhaul. Unlike PK-12 and higher education, states have an important partner in decisions related to Medicaid—the federal government which pays almost 60% of Florida's Medicaid tab. The requirements set by Washington relating to recipients and services can make reforms difficult. Other major factors in Medicaid's inexorable budget grab are medical inflation (affecting all health-related spending) and enrollment increases in time of economic downturn, along with the growing demand as society ages and the number of elderly in Florida increases. As noted in Chapter 4, Medicaid expenditures are primarily for the elderly and disabled—two populations both politically active and sympathetic to the public and its elected representatives. As this report goes to press, the future of Governor Jeb Bush's ambitious effort to turn Medicaid into a voucher program served by new health entities is not yet certain. For now, the legislature has only approved a limited pilot. The reward for bold experimentation in this area may, at best, be improved control over costs in this rapidly growing program or, at worst, harming an extremely vulnerable population of citizens.

Children's Health and Welfare. In sharp contrast to programs targeted to the elderly and disabled, policies geared to improve the health and welfare of children are relatively undemanding on the state's budget. Nevertheless, Florida's children are less healthy than children in other states and in comparable Southern states. Florida ranks 46<sup>th</sup> among the 50 states in the percentage of children who are insured. Although Florida was an early leader in health care for children, serving as a model for the national State Child Health Insurance Program (S-CHIP) in 1997, recent state efforts to limit enrollment have led to a sharp reduction in the scope of the S-CHIP program. Not surprisingly, projections point out that Florida's child population is one of the fastest growing in the country, and the state has one of the largest immigrant populations in the country—including many children. Florida's welfare program, Work and Gain Economic Self-Sufficiency (WAGES), has successfully reduced the number of families on assistance and

stepped up its work training and employment efforts.

In summation, some 20 years after the Zwick report called for fixing the state and local financing system in Florida, little has transpired. Problems still remain and demographic trends point to their worsening—more crowded schools and universities, unhappy parents, poorer health care, roads in need of repair, and prisons overflowing with inmates—all flowing in large part from the very engine of growth in the state—a vibrant migration into the state. People continue to come to Florida because they want to live here. They grow to like the low taxes and tolerate low-levels of services. The “train-wreck” predicted in 1987 has not occurred thanks in large part to continued strong economic growth. If that economic growth continues—and if citizens continue to accept the low level of services as a trade-off for low taxes—in 20 years another report may update this one, echoing some of the same points. But if that growth does not continue or citizens begin to demand change, things may be very different 20 years hence. A competitive Florida may emerge that begins to move up state rankings on services and outcomes, that encourages business but cares for its poor and needy, and that is compassionate yet careful with the public’s trust. That Florida will recognize the tax-service tradeoff in light of its responsibility to citizens and to its future and may respond in ways recommended in 1987 and 2005.

### *References*

Zwick, C. (1987). Keys to Florida’s future: Winning in a competitive world. The Final Report of the State Comprehensive Plan Committee to the State of Florida. Tallahassee, FL.





# Appendix

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## *Public Opinion on Taxes: Question Wording*

Florida Residents May-June 2004

1. Do you think that state and local taxes in Florida are generally higher or lower than state and local taxes in other states or about the same? 1. Higher; 2. Lower; 3. About the Same.

2. Suppose that despite your own preferences, the state of Florida **must raise** revenue substantially, which of the following do you think is the best way to do it. 1. Adopt a personal income tax; 2. Increase corporate taxes; 3. Increase sales tax rate; 4. Add sales tax on services; 5. Other.

3. And which of these do you think would be the **worst way** to raise new revenues for the state government? 1. Adopt a personal income tax; 2. Increase corporate taxes; 3. Increase sales tax rate; 4. Add sales tax on services; 5. Other.

4-6. From your personal standpoint, please tell me for each tax I read off to you whether you feel it is too high, too low, or about right? 1. Too high; 2. About right; 3. Too low; 4. Do not pay.

- a. Florida state sales tax
- b. Florida state tax on gasoline
- c. Local property tax

7. Now I'm going to ask you some questions about spending by state and local government funded by particular taxes you and other Floridians pay. Let's start with state highways and roads. Florida's state highways and roads are funded in large part by the **state gasoline tax**. Please tell me which you prefer:

Would you prefer that the state of Florida spend **more** on state highways and roads by **increasing** the state gas tax OR would you prefer that the state spend **less** on state highways and roads by **lowering** state gas taxes OR do you

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prefer to maintain the **current** spending levels on state highways and roads and the **current** level of gas taxes?

8. How about health care for the poor and near poor? Florida's programs to provide health care for the poor and near poor are funded in large part by the **state sales tax**.

Would you prefer that the state of Florida spend **more** on programs providing health care for the poor and near poor by **increasing** the state sales tax OR would you prefer that spending for health care for the poor and near poor **be reduced** by **lowering** the sales tax OR would you prefer to maintain the **current** level of spending on health care for the poor and near poor and the **current** level of state sales taxes?

9. How about protecting the environment? Florida's programs to help protect the state's environment are funded in large part by the state sales tax.

Would you prefer that the state of Florida spend **more** on programs protecting the environment by **increasing** the state sales tax OR would you prefer that spending to protect the environment **be reduced** by **lowering** the state sales tax OR would you prefer to maintain the **current** level of spending to protect the environment and the **current** level of state sales taxes?

10. How about public schools? Florida's public schools are primarily funded by the **local property tax**.

Would you prefer that state of Florida and local governments spend **more** on public schools by **increasing** the property tax OR would you prefer that spending for public schools **be reduced** by **lowering** the property tax OR do you prefer to maintain the **current** level of spending on public schools and the **current** level of local property taxes?

11. How about state colleges and universities? Florida's colleges and universities are funded in large part from the state sales tax.

Would you prefer that the state of Florida spend **more** on

its public colleges and universities by **increasing** the state sales tax OR would you prefer that the state spend **less** on its public colleges and universities by **decreasing** the state sales tax OR do you prefer to maintain the **current** level of spending on state colleges and universities and the **current** levels of state sales taxes?

12. Which of the following programs would be your top priority for decreasing state and local funding or ending altogether? a. roads and highways; b. health care for the poor and near poor; c. protecting the environment; d. public schools; e. colleges and universities.

13. For the state and local taxes you pay, how much do you feel you receive in benefits and services from the state and local government in return? Would you say you receive: 1. Much more than you pay; 2. Somewhat more than you pay; 3. About what you pay; 4. Somewhat less than you pay; 5. Much less than you pay; 8. Don't know.

