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Fiscal Trends: Implications for the Rural South

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Key demographic trends in the rural South over the next decade—the aging of the population as baby boomers enter retirement, continued migration to the South, and rapid increases in shares of Hispanic residents—may have profound consequences for the financing of rural community public services. In this paper, we provide an overview of demographic and economic trends that are expected to influence the ability of rural communities to provide essential public services. In addition, we provide econometric evidence on the impacts that these trends are likely to have on the financing of K–12 education in South Carolina.

Key Words: demographic trends, fiscal trends, government services, rural South

JEL Classifications: R11, R23, R51

Mitch Daniels, Office of Manangement and Budget (OMB) Director, expects federal budget deficits to expand from current levels to about 3% of gross domestic product (GDP)—about $300 billion over the next 2 years (*New York Times*).[1] Others, like Paul Krugman, not only expect deficits to persist over the next decade but risk exploding to 4% or more of GDP after the baby boomers start retiring.[2] States face both cyclical and structural problems (rising demands for education spending, soaring Medicaid budgets, etc.) that will make a return to budget surpluses at the state level highly unlikely over the next several years (e.g., Rivlin).

Headlines trumpeting federal and state fiscal problems are commonplace across the nation. In this paper, our first objective is to take stock of federal and state fiscal trends and to examine how they are likely to affect the fiscal condition of rural counties in the South. Since dramatic demographic shifts are also on the horizon that may exacerbate the fiscal challenges facing local governments, our second objective is to examine demographic trends in the South and to assess the role they will play in the evolving fiscal condition of rural counties. The third objective of the paper is to assess econometric evidence on the impacts that these trends are likely to have on the ability of government in one state to provide K–12 education services to their rural constituents.

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[1] Private economists at Goldman Sachs expect the looming deficits will be on the order of $300 to $375 billion. To pay for promises in homeland security, education reform, farm drought aid, western fires, etc., across-the-board cuts of 1.6% for the current (FY 2003) budget are proposed (*New York Times,* Jan. 16, 2003).

[2] "Independent analysts, who take into account the stuff the administration pretends doesn't exist—the war, the alternative minimum tax, and so on—think we're looking at deficits of 3 or 4 percent of G.D.P., maybe more, for the next decade. . . . The ratios of debt and deficits to G.D.P. won't be all that high by historical standards, but the bond market will look ahead and see that things don't add up: the rich have been promised low tax rates, middle-class baby boomers have been promised pensions and medical care, and the government can't meet all those promises while paying interest on its debt. Fears that the government will solve its problem by inflating away its debt will drive up interest rates, worsening the deficit, and things will spiral out of control" (Krugman, *New York Times*, Feb. 14, 2003).

The paper is organized as follows. A brief introduction to a framework for understanding the determinants of local fiscal burdens is presented in part II. In part III, we focus on demographic changes expected in the rural South as baby boomers enter retirement and the racial and Hispanic makeup of the population continues to evolve. Since federal and state transfers to county[3] government play a key role in determining the extent of local fiscal burdens, we then examine trends in federal and state budgets in the South to identify critical issues confronting rural fiscal health in the South over the next decade in part IV. In part V, we take a careful look, in one state, at the likely impacts of the demographic, federal, and state fiscal trends on the fiscal condition of the most important (as a share of budget) local government service—public K–12 education.

A Framework for Understanding the Determinants of Local Fiscal Burdens

It is given that the impacts of the aging of the population—especially the baby boomers—will be dramatic on financing Social Security, Medicare, and Medicaid. Southern states with substantial shares of the rural poor and large numbers of retirees may be especially concerned with how to finance their share of Medicaid expenses A second critical issue facing rural areas is how demographic trends will affect the demand for and willingness to support local government services—especially public education (K–12).

MaCurdy and Nechyba (MN) provide a framework that illustrates how demographic change is likely to affect the local government "fiscal burden." This framework links demographic characteristics at the local (county) level to local government spending and the composition of revenues between local sources and intergovernmental transfers. The framework allows predictions of what will happen to spending per capita (and shares of spending) across broad categories of local government functions as a county population changes its shares of old, "working-age," and young over time. How local government revenues and spending patterns (fiscal effects) will react to changes in local demographics turn on the "interjurisdictional spillover" effects and cost functions for various types of local government activities.

As shown in Figure 1, demographics are key in determining the local fiscal burden.[4] Hoynes summarizes the interactions in the MN framework as follows. The lower panel shows that demographics affect the choice for and mix of public goods—K–12 education, health care, infrastructure, welfare, and public safety. The upper panel shows that demographics (age distributions) affect the cost of providing a public good as well as the potential for spillovers. Spillovers between jurisdictions arise when those using local services do not pay taxes or fees to support them (suburban free riders use central city public services without paying for them) or between generations within a local area (children who benefit from local education migrate from the local area and do not pay taxes to the local school district overtime). Existence of spillovers justifies use of intergovernmental (IG) transfers from state/federal taxes to compensate local jurisdictions for fiscal burdens (mismatch between value of local public services provided and local taxes paid). IG transfers can ensure that public goods are not underprovided.

In the absence of spillovers, there is Tiebout sorting across counties and taxes can be designed to equate local benefits received to local tax burden. However, spillovers are pervasive and vary by type of public good. For example, public schools are more likely to see spillovers across time as local education spending promotes higher incomes for individuals who reside in communities different from the "home" school district in some future time period. Fire and police protection or roads in the central city provide current ben-

[3] County government in this context includes all jurisdictions in the county—municipal, school district, special purpose districts, and county governments.

[4] See MaCurdy and Nechyba 2001 for a full discussion of the framework and an empirical test of predictions using California counties.

(From Hoynes 2001:151)

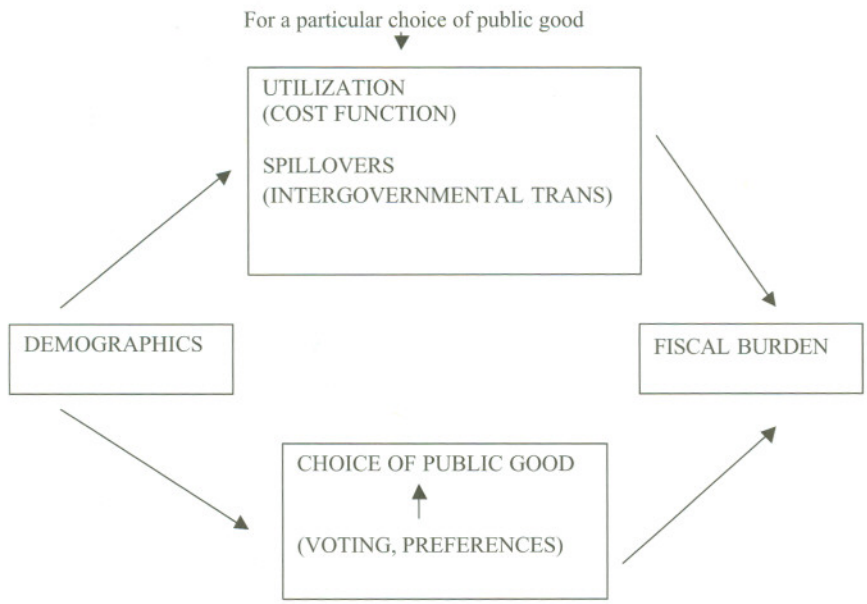

Figure 1. Links Between Demographics and Local Fiscal Burdens

efits to commuters that may pay no local taxes to support them. Thus an important role of federal and state transfers to local governments is to address spillovers across places and time (Hoynes).

While MN develop the model in some detail, for our purposes it suffices to emphasize the importance of demographics in defining local fiscal burdens. We turn next to emerging demographic trends in the South and conjectures on what they mean for the demand for, willingness to pay for, and fiscal burdens expected for counties of the rural South over the next decade.

Table 1. Projections of the Total Population of States: 2000 to 2025

Year	2000	2005	2015	2025
Alabama	4,451	4,631	4,956	5,224
Arkansas	2,631	2,750	2,922	3,055
Florida	15,233	16,279	18,497	20,710
Georgia	7,875	8,413	9,200	9,869
Kentucky	3,995	4,098	4,231	4,314
Louisiana	4,425	4,535	4,840	5,133
Maryland	5,275	5,467	5,862	6,274
Mississippi	2,816	2,908	3,035	3,142
Missouri	5,540	5,718	6,005	6,250
North Carolina	7,777	8,227	8,840	9,349
Oklahoma	3,373	3,491	3,789	4,057
South Carolina	3,858	4,033	4,369	4,645
Tennessee	5,657	5,966	6,365	6,665
Texas	20,119	21,487	24,280	27,183
Virginia	6,997	7,324	7,921	8,466

Source: Campbell.
Note: Numbers in thousands. Resident population.

Demographic Trends

Projections by the Census show dramatic population increases from 2000 to 2025 in Texas (about 7 million) and Florida (about 5 million), with Georgia, North Carolina, and Virginia expected to add 1.5 to 2 million residents (see Table 1). The smaller Southern states all grow at a steady pace, adding from about 0.5 to 1 million to their 2000 populations by 2025. Although population growth means that the demand for county government services will grow steadily over the next two decades, the aging of the population and the racial-ethnic origin of the new residents of the rural South will be critical in shaping the level and mix of demands for local public services. Analysis by

Table 2. Population Change of Regions by Race and Hispanic Origin: 1995 to 2025

		(In thousands) Non-Hispanic				
Region	Total	White	Black	American Indian	Asian	Hispanic Origin
U.S.	72,295	15,594	11,920	812	11,970	31,999
Northeast	5,927	−2,074	1,495	32	2,319	4,155
Midwest	7,306	1,825	1,857	194	1,132	2,298
South	**29,558**	**10,407**	**7,642**	**199**	**1,792**	**9,518**
West	29,504	5,436	926	387	6,727	16,028
	Percent Distribution of Population Gains of Regions by Race and Hispanic Origin					
U.S.	100.0	21.6	16.5	1.1	16.5	44.3
Northeast	X*	X*	25.2	0.5*	39.1*	70.1*
Midwest	100.0	25.0	25.4	2.7	15.5	31.4
South	**100.0**	**35.2**	**25.8**	**0.7**	**6.1**	**32.2**
West	100.0	18.4	3.1	1.3	22.8	54.4

* Means percentages do not add to 100 because of the declining size of the White population in the Northeast. X means not applicable.
Source: U.S. Bureau of the Census, Population Division, PPL-47, Preferred Series, Table 3.

the Census Bureau (Smith, Ahmed, and Sink) concludes that, over the 1990s, the American population became older and more diverse from both a racial and ethnic perspective. These trends were especially pronounced in the South and West. Echoing these trends over the 1990s, Campbell projects that the next two decades promise even more rapid aging and ethnic change in the South. As shown in Table 2, Census expects that the South's gain of about 30 million people by 2025 will be split approximately into one-third white non-Hispanic (10.5 million), one-third Hispanic (9.5 million), one-fourth Black (7.6 million), and about 6% Asian non-Hispanic (1.8 million).

In the fastest growing states, four of the top five growth states in White non-Hispanic population are in the South and all top five states in Black non-Hispanic population growth are Southern. Texas and Florida together are expected to add about 8 million Hispanics by 2025 (see Table 3). In Texas, the Hispanic-origin increase (about 5.1 million) far exceeds the combined White non-Hispanic (1.6 million) and Black non-Hispanic (1.3 million) population increases. In Florida, the Hispanic

Table 3. Top Five States With the Largest Population Gains, Ranked by Race and Hispanic Origin: 1995 to 2025 (in Thousands)

	Non-Hispanic									
	White		Black		American Indian		Asian		Hispanic Origin	
Rank	St.	Pop.	St.	Pop.	St.	Pop.	St.	Pop.	St.	Pop.
1	FL	2,186	GA	1,287	NM	116	CA	5,184	CA	12,025
2	TX	1,610	TX	1,277	OK	106	NY	982	TX	5,056
3	WA	1,323	FL	1,104	AZ	76	NJ	603	FL	2,990
4	NC	1,289	MD	695	WA	48	TX	498	NY	1,766
5	GA	1,052	VA	646	MN	46	HI	475	AZ	1,198

Notes: St. refers to state postal codes. Pop. refers to population in thousands. Persons of Hispanic origin may be of any race. Source: U.S. Bureau of the Census, Population Division, PPL-47, Table 3.

Table 4. Population Growth in the South from 1990 to 2000 By Type of County (Calculated by the Authors from the Census of Population from 1990 and 2000)

State	Metro Pop. Changes	Metro Counties % Pop. Changes	Adjacent Nonmetro Pop. Changes	Adjacent Nonmetro % Pop. Changes	NonAdj Nonmetro Pop. Changes	NonAdj Nonmetro % Pop. Changes
Alabama	284,137	10.5	119,217	11.8	3,159	1.0
Arkansas	198,870	19.1	50,598	10.0	73,207	9.1
Florida	2,814,142	23.4	205,978	25.7	24,332	21.7
Georgia	1,315,102	30.2	246,768	19.6	146,367	16.9
Kentucky	193,341	10.9	69,928	12.0	93,204	7.0
Louisiana	210,670	6.7	51,129	4.1	−6,349	−2.6
Mississippi	136,314	17.6	48,500	12.3	86,628	6.2
North Carolina	1,026,810	23.8	286,833	17.3	72,649	12.3
Oklahoma	228,520	12.2	61,954	7.7	14,595	3.1
South Carolina	384,347	15.9	97,849	11.6	43,113	19.4
Tennessee	548,755	16.6	170,945	17.8	92,398	15.0
Texas	3,526,222	24.9	257,831	14.3	81,257	8.0
Virginia	754,803	15.8	103,194	11.9	40,157	7.4
West Virginia	17,408	2.3	10,117	4.0	−12,658	−1.6
All South	**11,639,441**	**20%**	**1,780,841**	**14%**	**752,059**	**8%**

Notes: Metro is metropolitan. Pop. is population.

increase of about 3 million approaches the 3.2 million combined White and Black population increases expected by 2025.

Murdock's projections for Texas find the Anglo (White non-Hispanic) population declining from a majority of the people (53% in 2000) to a plurality (45.2%) in 2010 to a minority (37.5%) in 2020. By 2040, Anglos make up only about 25% of the residents of Texas. Conversely, Hispanics expand from a 32% population share in 2000 to a plurality position by 2020 (46.4%) and to a majority of the population (53.1%) by 2030. How do these trends play out across the rural–urban continuum? While central city counties lost Anglos in the 1990s, Hispanics grew rapidly, accounting for 78% of central city county population growth. Anglo growth dominated the suburbs (61% of the total), whereas Hispanics accounted for only 23% of suburban county growth. Most interesting is the strength of Hispanic growth in nonmetropolitan (nonmetro) counties. Nearly 55% of the population growth in nonmetro counties adjacent to metro counties was Hispanic. In the most remote nonadjacent nonmetro counties, Hispanics accounted for 82% of the total population growth! Still, the absolute increases in Hispanics in metro counties are far larger than in nonmetro counties. For example, the 23% share of suburban growth by Hispanics translates into 268,000 people (23.32% * 1,147,808), whereas the nonmetro adjacent growth of Hispanics was 149,000 (54.68% * 271,674) (see Murdock). Still, the disparity between Hispanic and non-Hispanic population growth rates in nonmetro counties means that rural Texas will become increasingly non-Anglo.

Is Texas an anomaly? Rural–urban trends in the racial and Hispanic origin population in the South suggest not. Over the 1990s, population growth in nonmetro counties in the South grew by 14% in nonmetro counties adjacent to metro ("urban sprawl") counties and by 8% in more "remote" nonadjacent counties. Both rates were slower than the 20% growth of metro counties—but, except for Louisiana and West Virginia, population expanded both in adjacent and nonadjacent rural counties across the South (see Table 4). Renkow suggests that the more rapid growth of adjacent counties is attributable to the benefits of open space, rural amenities, and lower land cost that more than offset increased commut-

ing costs to proximate urban jobs. Accordingly, in North Carolina at least, growth in rural jobs is not the primary driver of the new rural population growth but rather it is the residential attraction of rural areas for both retirees and commuters to metro counties—suggesting that local fiscal costs will increasingly fall on residents and less of the local tax base will come from growth in industrial property tax bases.

Nonmetro Population Change by Age Group

The data in Table 5 show that population trends by age—especially the young (less than 22 years) and the old (greater than 65 years)—vary greatly across the rural south. Looking first at the "youth" changes, note that in the urban "sprawl" counties adjacent to metro areas, the larger southern states (Georgia, Florida, North Carolina, Tennessee, and Texas) had the youth cohorts that grew by about 10% or more over the 1990s. However, in Louisiana and West Virginia the "sprawl" counties lost youth—by about 3% and 8%, respectively. Meanwhile in the remote nonadjacent rural counties, only Georgia had the youth cohort grow by 10% or more. In six states, Alabama, Kentucky, Louisiana, Mississippi, Virginia, and West Virginia, the youth population declined over the decade in remote rural counties. If these youth trends continue over the next decade, most states will be faced with increased demands for K–12 public schools in their sprawl counties, while states may find excess capacity and the need to close schools in the more remote nonadjacent counties. On the "old age" front, six states, led by Florida (28%) and North Carolina (17%), had robust population growth of more than 10% in the "sprawl" counties. In contrast to the youth movement out of remote rural counties, six states also had rapid (greater than 10%) growth in their "old age" group in these nonadjacent rural counties, led by South Carolina (33%) and Florida (21%). Providing health services promises to be a key issue confronting these counties if these trends continue.[5]

[5] Fuguitt, Beale, and Tordella find that much of the growth from 1970 to 2000 in the South for those younger than 65 was driven by in-migration.

Age and Fiscal Health

Age trends in the rural South over the 1990s are reinforced by Census projections over the next two decades that find reductions in the share of youth in the population and growth of the elderly population (Campbell). The youth bust and old age boom will change the states' *dependency ratios.* This ratio is the number of youth (under age 20) and elderly (ages 65 and over) for every 100 people of working ages (20 to 64 years of age). Census projections show increasing dependency ratios across southern states (see Table 6).

All states have an increase in the dependency ratio over the next two decades despite the smaller shares of young people. This means that each working-age resident in the population will be supporting increasing numbers of other residents using state and local services—especially K–12 education, higher education, and Medicaid. Not "class warfare" but "intergenerational conflict" will become more likely over the next decade. For example, Florida will be faced with health care demands that will be the highest in the South as its old age share grows to over 26%. But in all states in the South—except Mississippi—the dependency ratio increases by more than 10 percentage points. In states like Texas that have fast growth in the rural Hispanic population, strong demand pressures for K–12 education are likely. A bulge in the youth cohorts for Hispanics compared with the middle age bulge for Anglos indicates that the demands for K–12 public education are likely to be increasingly concentrated in counties that have rising shares of Hispanics in the population. On the other hand, one might expect over time that rising per capita incomes in Hispanic households might be associated with reduced average family size. Moreover, slower growth of the youth cohort in the population across much of the South should lead to an overall slowing in demand for K–12 schooling. The National Center for Educational Statistics (NCES) projections of K–12 public school enrollments in the South show a rapid rise in K–12 enrollments in the South from 1994 to 2003 (from almost 15.7 million in

Table 5. Nonmetropolitan Population Change from 1990 to 2000 in the South

State	Pop. Change	For Age Groups: Pop. <22	Pop. 22–65	Pop. >65	Percent Population Change: Pop. <22	Pop. 22–65	Pop. >65
Adjacent Nonmetro							
Alabama	119,217	14,630	91,481	13,106	4.3	17.2	9.4
Arkansas	50,598	6,549	38,639	5,410	4.0	14.9	6.6
Florida	205,978	41,519	118,044	46,415	**18.9**	28.1	**28.6**
Georgia	246,768	67,815	158,199	20,754	**15.8**	23.4	**13.4**
Kentucky	69,928	7,654	56,665	5,609	3.9	18.0	7.6
Louisiana	51,129	**−11,575**	47,722	14,982	**−2.7**	7.2	**10.4**
Mississippi	48,500	6,305	38,810	3,385	4.3	19.6	6.4
North Carolina	286,833	60,452	184,344	42,037	**11.8**	20.3	**17.4**
Oklahoma	61,954	15,149	46,743	62	5.8	11.3	0.0
South Carolina	97,849	6,149	75,376	16,324	2.1	16.9	**14.9**
Tennessee	170,945	33,460	120,755	16,730	**11.2**	23.0	**12.0**
Texas	257,831	59,185	177,126	21,520	**9.8**	19.3	7.6
Virginia	103,194	13,462	69,932	19,800	5.1	14.6	**16.3**
West Virginia	10,117	−6,208	14,059	2,266	**−7.8**	10.4	6.1
South	**1,780,841**	**314,546**	**1,237,895**	**228,400**	**7.4**	**18.0**	**12.2**
Nonadjacent Nonmetro							
Alabama	3,159	**−8,314**	11,231	242	**−7.6**	7.0	0.5
Arkansas	73,207	12,554	56,941	3,712	4.9	13.8	2.7
Florida	24,332	2,627	18,131	3,574	7.3	30.4	**21.2**
Georgia	146,367	30,277	100,638	15,452	**10.3**	22.0	**13.4**
Kentucky	93,204	**−7,354**	89,583	10,975	**−1.7**	12.6	6.1
Louisiana	**−6,349**	**9,488**	2,511	628	**−10.4**	2.1	2.1
Mississippi	86,628	**−1,959**	83,611	4,976	**−0.4**	11.9	2.7
North Carolina	72,649	6,550	49,896	16,203	3.5	15.7	**19.1**
Oklahoma	14,595	142	15,982	**−1,529**	0.1	6.7	**−1.9**
South Carolina	43,113	5,815	27,945	9,353	7.5	24.1	**32.7**
Tennessee	92,398	16,273	61,847	14,278	8.7	18.3	15.5
Texas	81,257	11,523	59,888	9,846	3.4	11.9	5.9
Virginia	40,157	**−591**	31,315	9,433	**−0.4**	10.7	**11.6**
West Virginia	**−12,658**	**−32,962**	19,585	719	**−13.1**	4.7	0.6
South	**752,059**	**25,093**	**629,104**	**97,862**	**0.8**	**13.0**	**7.1**

Note: Pop. is population.

1994 to 17.2 million in 2003). However, this is countered by a flattening of the K–12 enrollment growth curve over the next decade. Overall, the NCES expects K–12 enrollments to rise only slightly from about 17.2 million in 2003 to about 17.3 million in 2006 and then to level off until 2012. However, it is prudent to see this leveling off as an opportunity to reallocate resources to the most pressing areas in the South—the sprawl counties—that are likely to experience strong demands for K–12 public education while the remote rural areas may face school consolidation.

As Murdock finds for Texas, demographic trends that will shape the future needs for local public services in the rural south include increased shares of the non-Anglo population and the general aging of the population associated with the baby boom bubble entering retirement over the next decade. Although demographic trends vary widely across the rural South, the level and composition of the de-

Table 6. Dependency Ratios in the South from 1995 and 2025

State	Population Youth Young (<20) 1995 %	Population Youth Young (<20) 2025 %	Population Old Old (>65) 1995 %	Population Old Old (>65) 2025 %	Dependency Ratio (Young + Old)/ Working Population 1995 %	Dependency Ratio (Young + Old)/ Working Population 2025 %
Alabama	28.3	24.4	13.0	20.5	70.4	81.3
Arkansas	29.1	22.8	14.5	23.9	77.2	87.0
Florida	26.1	21.4	18.6	26.3	80.6	91.2
Georgia	29.5	26.3	10.0	16.9	65.2	76.0
Kentucky	28.2	23.0	12.6	21.3	68.9	79.5
Louisiana	31.7	27.9	11.4	18.4	75.7	86.3
Maryland	27.6	26.0	11.3	16.4	63.8	73.4
Missouri	28.7	25.3	13.9	20.1	74.1	83.2
Mississippi	31.5	26.0	12.3	19.6	77.9	84.1
North Carolina	27.7	23.2	12.5	21.4	67.1	80.6
Oklahoma	29.7	25.4	13.5	21.9	76.1	89.5
South Carolina	28.6	24.3	12.0	20.7	68.3	82.0
Tennessee	27.7	23.8	12.5	20.3	67.2	79.0
Texas	31.8	30.0	10.2	16.1	72.5	85.4
Virginia	27.0	24.6	11.1	17.9	61.7	73.9

Source: Campbell.

mands for local public services will be shaped by these key demographic trends. Low-income rural counties will look increasingly to state and federal governments for financial assistance in providing local education and health care needs. Are higher levels of government likely to increase transfers to local governments? We turn next to federal and state budget trends to assess the potential for added intergovernmental transfers to local governments.

Federal Fiscal Trends

In 2001, it was plausible that large federal budget surpluses projected over the next decade (even with the 2001 tax cuts) might be tapped to help state and local governments comply with new federal mandates for improved schools, etc. However, by early 2003, Gale and Orszag (2002, 2003) provide evidence that there will be deficits across the next decade. The source of the deficits is related both to the business cycle and structural changes. However, the unified budget projections by the Congressional Budget Office mask much more serious deficits if the Social Security and Medicare Trust fund budget surpluses are netted from the Unified budget. Some argue that the trust fund surpluses should be accrued to offset the bulge in future payments to baby boomers in the next decade. As noted in the introduction the OMB director expects unified budget deficits on the order of $300 billion over the near term (next 2 years). Subtracting $150 to $200 billion dollar surplus in the Social Security and Medicare Trust funds from the unified budget suggests that actual deficits in the federal budget available for nonretirement programs (that is, if these current retirement surpluses were accruing in a way to pay future benefits to the baby boomers without increasing tax rates in the future or reducing benefits for the baby boomers) will be even higher. Gale and Orszag (2003) argue that, although the short-term deficits may be useful in stimulation of the lagging economy, both 5 years out and 10 years from now there are likely to be deficits both on a unified budget basis and unfunded retirement payment obligations for the baby boomers. As a consequence, little added federal aid should be expected for both state and local governments any time soon unless Congress addresses the

looming budget deficits. An important implication for rural governments is that federal mandates to improve failing schools, to provide homeland security, etc., without financial support may have little impact.

States' Fiscal Outlook

Midyear budget cuts were made across the South to bring fiscal year (FY) 2003 budgets into balance. Estimates of budget deficits across the South for FY 2004 are displayed in Table 7. They offer little fiscal consolation in the near term—expected deficit estimates as a percent of state budgets range from 5.1% to 24.2% in FY 2004 alone. Although state budgets provide support for three major services: K–12 education, higher education, and Medicaid, Medicaid is growing the fastest and probably will bear a major share of budget cuts. The National Governor's Association (NGA) recounts the state budget woes across the nation, emphasizing that rainy day funds are nearly depleted from FY 2002 and FY 2003 budget shortfalls. Use of "one-time funds" like securitization of tobacco settlement payments offer only short-term assistance. Raising "sin" taxes on tobacco and "spirits" is on the agenda of many states but little enthusiasm exists for more broad-based tax increases in the South.

What happened to state budgets? Rivlin argues that the budget shortfalls are part of a long-term structural problem. Cost of state services tends to rise faster than GDP (a measure of the ability to pay for added services), while state revenues based on sales taxes tend to grow steadily over the business cycle but slower than GDP—especially with the increases in exemptions and the increasing share of nontaxed services in the consumer budget. Rivlin further argues that the move to more reliance on income tax (except in Florida and Tennessee) in the 1990s had the benefit of more responsive revenue growth in expansion but adds to cyclical instability to the revenue steam in downturns. A top priority is to find a way for the federal government to act as a "fiscal stabilizer" for state budget swings (Rivlin). Otherwise, sharp budget cuts in a downturn are most likely to fall on the backs of low-income households—reduced Medicaid and less access to training and childcare for former Temporary Assistance to Needy Families (TANF) recipients. We turn next to a case study of school districts in South Carolina to gauge effects that demographic changes and reduced federal and state transfers to local governments might have on the ability of counties to raise new revenues over the next decade.

Demographic and Fiscal Changes—Implications for School Finances in One State

If rural governments are forced to raise local revenues for key services like K–12 education, are they willing and able to find the needed resources? A look at South Carolina school finances provides some evidence. Over the last 30 years, the local share of school funding has ranged from 33% to 38% in South Carolina. However, districts in nonmetro counties have supplied only 28% to 33% of the total funds, whereas metro districts have received 37% to 43% of their funds from local sources.

Rural school districts have relied more on federal and state aid over the past 3 years than their urban counterparts. This means across-the-board cuts from federal and state aid will affect rural districts more than urban districts. Are rural districts willing and capable of added "own source" revenues? Over time, consolidation has been used to improve "efficiency" in school operations—spreading fixed administrative costs over more students, for example.

Like many states, South Carolina developed accountability initiatives before the "No Child Left Behind" mandates from the federal government. It developed a "School District Report Card" that reflects performance on standardized tests given each year to all students. School districts rated excellent or good are concentrated in urban areas of the I-85 corridor of the South Carolina "upstate," the "midlands" urban areas of Columbia and Aiken, and select districts in the coastal region. Rural districts are, with a few exceptions, rated average or unsatisfactory.

What explains the disparities in school dis-

Table 7. Estimated State Budget Deficits in the South for Fiscal Year (FY) 2004

State	Millions of Dollars*	Deficit as % of State Budget**
Alabama	$1,300	24.2%
Arkansas	223	7.0
Florida	2,000	10.1
Georgia	900	5.8
Kentucky	360	5.1
Louisiana	N/A	N/A
Maryland	1,200	11.0
Mississippi	N/A	N/A
Missouri	1,000	13.1
North Carolina***	2,000	14.6
Oklahoma	800	15.9
South Carolina	700	13.6
Tennessee	N/A	N/A
Texas***	5,000	16.4
Virginia	1,116	9.3
West Virginia	200	7.1

* Estimates drawn from a variety of sources, including statements of policymakers, nonprofit budget organizations, and press reports by Lav and Johnson.
** Budget deficits as a percent of FY 2002 budgets, which are the latest final budgets available. Budgets have increased little since FY02.
*** Rough mid-range estimate from range presented in Lav and Johnson.

trict performance? It appears that it is closely related to the local area's ability to raise property taxes. Small-size school districts in rural locations typically have the disadvantages of both higher operating costs per student and a limited ability to raise local property taxes compared with urban areas. The ability to raise local funds depends on two factors: the size of the local property tax base and the willingness of residents to tax it. The local tax base across South Carolina school districts is summarized in Table 8. One mill generates property taxes that range from $215,857 in good districts to $22,677 in unsatisfactory districts—*about a 10 to 1 ratio.* Again, the vast majority of the good or excellent districts are urban and the vast majority of the average or unsatisfactory ratings are given to rural districts.

Further illustrating the need for state and federal aid to offset the small local tax base in

Table 8. Financial and Geographic Characteristics of Districts and District Performance

District Grade	Mill Value	% Local Budget	Average Teacher Salary	Mean Enrollment	Student Density Students/ Sq. Mile	Transport Per Student	Net Change In Enrollment 1990–2000	% Enrollment Change	% Population Change
Excellent	$175,244	41.00%	$39,408	9,955.00	93.23	138.09	2,501.00	45.22%	38.54
Good	$215,857	39.62%	$38,786	11,065.27	47.06	146.80	1,379.88	13.11%	17.52
Average	$151,743	30.76%	$36,503	8,061.35	22.65	148.28	−148.76	−1.56%	14.21
Below Average	$43,106	31.25%	$36,008	3,183.40	9.64	180.85	−338.05	−9.91%	5.99
Unsatisfactory	$22,677	25.00%	$34,210	2,108.00	7.72	185.11	−254.25	−10.76%	17.65

Source: Miley and Associates, Inc.

rural counties, the share of school funding that comes from local sources ranges from 14% in rural Barnwell County to 80% in urban York County (Miley and Associates, Inc.). As shown in Table 8, that share declines from about 41% in excellent districts to 25% in the unsatisfactory districts. This means that the ability to offset federal or state cuts in local education budgets varies dramatically across the state—with rural areas at a distinct disadvantage. Rurality also matters in how educational dollars are spent. With lower population densities in rural districts, transportation and facilities expenses are higher than in urban districts on a per student basis. As shown in Table 8, school density declines from about 93 students per square mile in excellent districts to almost 8 students per square mile in unsatisfactory districts. This means that rural students spend more time on the bus than urban students—perhaps to their detriment in school achievement (Miley and Associates, Inc.).

There is a wide range in enrollment growth, with better schools attracting substantial numbers of new students (and apparently households), while poorly performing districts lose students at a faster pace than implied by population changes. What these trends suggest is that high-performing urban schools will be contending with school crowding issues while poor performing—mainly rural—schools struggle to keep a critical mass (Miley and Associates, Inc.). They may also reflect flight from poorly performing public schools in rural areas to private schools—with the potential to increase further the resistance to support local taxes for better public schools.

What Do Emerging Demographics and Fiscal Trends Portend for School Finances?

One of the key school finance questions for the next decade is whether or not the elderly in the rural South will support local education. One view (Harris, Evans, and Schwab) concludes they will, if they perceive that better local schools result in increased local property values. A second view is, if taxes used to support education are perceived to benefit education in general but have little direct links to local school quality and local property values, then the elderly will not support added—mainly state and federal—spending for local schools. The irony is that state and federal transfers to local schools are justified on economic grounds as a way to account for interjurisdictional spillovers that result in local "fiscal burdens"—an excess of local taxes (property taxes in particular) over local benefits received (students often migrate out of the local taxing jurisdiction), as emphasized by MN.

School finance is one of the most widely debated public policy issues across all levels of government. Much of this debate, in the post-Serrano era, has focused on ways and needs to revamp funding sources—increasing the state share and reducing local shares of school funding—in attempts to equalize funding per student across rich and poor school districts. Below we provide estimates for one state based on McMahon, who provides an early structural model of the determinants of expenditures on public education. We extend McMahon's model to include the fraction of elderly residents in the profile of community preference and expect that larger shares of the elderly may be associated with less support for the local education. The regression model estimated is for a panel of 46 counties in South Carolina and 3 years: 1971, 1981, and 1991. The dependent variable is K–12 educational spending as a percentage of personal income in the county.

Empirical Results

Findings are presented in Table 9. We focus the discussion on two sets of results—the effects of key demographic characteristics and the role of fiscal trends on local education spending.

Revenue sources. Higher property values are associated with higher expenditures on education as a share of income but the elasticity in the McMahon panel (0.10) is smaller than elasticities for state revenues (0.26) and federal elasticities (0.12). Increases in each source of revenue add to the school expenditures as a share of local income—i.e., there appears to be little evidence of a substitution of say state revenues for local revenue efforts. The bottom line

Table 9. Determinants of School Expenditure across South Carolina Counties

Dependent Variable: Log educational expenditures as a percentage of personal income					
Variable	DF	Parameter Estimate	SE	*t* Value	Pr > |*t*|
Intercept	1	3.222525	2.1704	1.48	0.1416
Demand influences:					
LCHPOP	1	0.40645	0.145	2.79	0.0066
Log children 5–17 as a percentage of total population					
NP	1	−0.00512	0.00248	−2.06	0.0424
Not attending public school as a percentage of total public and private students					
Production Costs:					
LPT	1	−0.51189	0.0947	−5.41	<.0001
Log students per teacher					
LADA	1	0.139776	0.0665	2.10	0.0388
Log average daily attendance					
LCSL	1	0.048408	0.1768	0.27	0.7849
Log annual teacher salary					
Revenue Sources:					
LCAVCI	1	0.103016	0.0316	3.26	0.0016
Log assessed valuation as a percentage of personal income					
LCSTATECI	1	0.26524	0.0655	4.05	0.0001
Log revenue from state as percentage of personal income					
LCFEDCI	1	0.117672	0.0316	3.72	0.0004
Log revenue from federal as a percentage of personal income					
Demographics:					
LCIPC	1	−0.41915	0.1365	−3.07	0.0029
Log personal income per capita in 1982–1984 constant dollars					
LRACE	1	−0.04855	0.1080	−0.45	0.6542
Log nonwhite as a percentage of total population					
LOLDP	1	0.115696	0.0940	1.23	0.2220
Log people 65+ years old as a percentage of total population					

Note: Regression across panel of 46 counties in South Carolina for school years 1971–1972, 1981–1982, and 1991–1992 with fixed effects controls for year and county.

is that local areas will be very hard pressed to replace declining federal and state transfers with added local revenues from property taxes.

Demographics. First, we note that the "old age" variable is not statistically significant. In this regard, our findings of a weak or no "aging" effect on school funding is consistent with both Ladd and Murray and Harris, Evans, and Schwab. Surprisingly perhaps, higher local per capita incomes are associated with *lower* shares of personal incomes going to public education across the panel of counties in South Carolina. This suggests that lower income areas are willing to allocate larger shares of their income to education than households in higher income areas. Race is not an important factor, as shown by the statistically weak parameter estimate on "share of nonwhite in the population."

Demand influences. The school age share of children in the population might be expected to grow over the next decade in some rural counties—especially those with large Hispanic

populations (if the age pyramids presented in Murdock persist). As might be expected, this "demand" side influence is important to levels of education spending. In the McMahon panel, increases in the school age share of children in the population *increases* the *share* that residents spend out of their *incomes* to support public schools. As Ladd and Murray argue, increases in the school age share of children in the population could increase local political support for school funding, but the larger cost burden of more kids may dominate and reduce spending per child. Poor counties with a lot of kids may not spend much per student but it may represent a larger share of their incomes than in rich counties with higher incomes.

Increases in private school enrollment have a small negative impact on public expenditures on education as a share of income. Taken together with the negative effect on public school spending in higher per capita income areas, it suggests that private school growth is strongest in high-income areas, to the fiscal detriment of local public schools (reduced willingness to raise local property taxes for public schools).

Production costs. Not surprising is the finding that increases in the student to teacher ratio yields lower public expenditures on education as a share of income. This is a crude measure of scale effects but shows a strong elasticity of −0.51. Similarly, increases in the number of students increases spending as a share of local income.

Conclusions

Demographic trends over the next two decades indicate that the rural South will be faced with an interesting mix of fiscal challenges. States with large Hispanic-origin populations will likely experience a transformation of some rural counties from Anglo majority to non-Anglo majorities. The significance of this demographic shift is illustrated by the contrasts between the large "middle age bulge" of the Anglo age pyramid with the "youth bulge" in the non-Anglo age pyramid (see Murdock). These imply that the demands for local government services—especially K–12 education—will be strong in these non-Anglo-majority counties.

The aging of the rural population also means that states will be faced with expanding health care costs in lower-income rural counties—in particular, Medicaid. Although Medicaid is a federal/state funding obligation, local health care providers in rural areas should see substantial growth in demand for their services. On the other hand, our empirical evidence, and that of others, suggests that increased shares of the elderly do not translate into a reduction in financial aid from local property taxes for schools. However, the aging effect may adversely affect support for added state taxes for local schools if there is not a clear connection between the added state tax burden and better-quality local schools that are reflected in higher local property values. Meanwhile, rural counties adjacent to metro counties in the South can expect increases in demands from new residents who prefer to commute to urban jobs but live in smaller towns. Nothing new here except perhaps that the pace of "sprawl" may pick up and the need to provide local public services—schools, transportation, public safety, etc.—will accelerate. Alternatively, in more remote rural areas without population pressures from the non-Anglo youth bulge and retirement flows, rural governments face challenges to maintain quality public services, and consolidation (of school districts and other public services) will be a growing concern. Declining state and federal transfers to low-income rural school districts will be very difficult to offset with increases in local property taxes. The will to fund schools out of local income is there as low-income, rural areas are willing to support local education but the means are limited. In South Carolina, rural property tax bases are sometimes 10% or less than those of wealthier districts.

Finally, the federal budget seems to be headed into a prolonged period of substantial deficits and most state governments project deficits in FY 2004 that will require state budget cuts or new taxes or both. The NGA overview of the fiscal condition of states concludes that budget cuts will dominate new tax initiatives. This leaves little hope for added transfers from federal and state governments to rural county governments. How will rural governments,

with limited property tax bases and with added demands for services, respond to mandates to improve schools with little new outside aid? Probably by cutting services and programs below levels that are desired if interjurisdictional spillovers were recognized and state–federal transfers to rural governments were made to reduce fiscal burdens on rural counties.

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