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# Rural Infrastructure in the South: Trends and Challenges: Discussion

**Deborah M. Tootle**

Elton Mykerezi, Bradford Mills, and Sonya Gomes. "Education and Socioeconomic Well-Being in Racially Diverse Rural Counties"

Mark S. Henry, David L. Barkley, and Haizhen Li. "Fiscal Trends: Implications for the Rural South"

Eileen S. Stommes. "Rural Roads and Bridges, 1994–2000: How Did the South Fare?"

At first glance, the three papers in this session appear to be diverse and unrelated. In fact, the only paper in the session that seems to fit our traditional concept of infrastructure, is the Stommes (S) paper. The Mykerezi, Mills, and Gomes (MMG) paper focuses on education and social well-being, whereas the Henry, Barkley, and Li (HBL) paper is concerned with fiscal trends, demographic conditions, and their combined effects on public expenditures in rural counties. However, these papers are all concerned with local infrastructures, and they are linked together in ways that provide a more comprehensive understanding of some of the structures that (a) link rural and urban places and (b) enable those who live in rural jurisdictions access to the same types of goods and services available to those who live in urban areas.

As a group, these papers expand on the traditional concept of infrastructure. In a briefing on infrastructure and rural development policy, the U.S. Department of Agriculture Economic Research Service (USDA ERS) defines infrastructure as consisting "primarily of transportation, electric and telecommunications, and water and sewer facilities that pro-

vide services to the public through a network of roads, rails, ports, airports, pipes and lines" (Reeder). The briefing goes on to say that we are more dependent on effective infrastructure today than at any point before. Infrastructure—physical, fiscal, and social—is absolutely critical for rural community vitality.

This session takes us beyond the physical infrastructure we are accustomed to discussing because two of the papers (MMG, HBL) in this session focus on social infrastructure, a concept not unlike social capital. In fact, social capital is frequently conceptualized as a form of social infrastructure. In today's session, the MMG and HBL papers have operationalized social infrastructure as public services. Although the conceptual shift from physical and fiscal to social structures is not exactly a paradigm shift, it does reflect a growing awareness of the importance of how social relationships and organizational structures shape economic activity.

## **Social Infrastructure—Education and Social Well-Being**

The MMG paper conceptualizes education as a form of public infrastructure. MMG use data from the 1990 and 2000 U.S. Census of Population and Housing to analyze the effects of

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recent trends in economic and social well-being on public expenditures in racially diverse rural counties (RDRC), where Black residents constitute at least 30% of the population. They (1) compare socioeconomic conditions and trends in the RDRCs with those in other rural counties throughout the United States, (2) examine county level measures of public expenditures and their relationships to socioeconomic well-being, and (3) examine the relationship of historically Black colleges and universities to postsecondary educational attainment.

MMG find that residents in RDRCs have lower levels of social and economic well-being. These findings are consistent with previous literature and not unexpected. The authors of this paper argue that the chronically high levels of poverty in these areas create barriers to making consistent progress in socioeconomic improvement. Low income levels limit the tax base and subsequently the level and quality of public services that can be provided in these communities. Although we have long recognized that rural areas have limited tax bases, the specific linkage of public expenditures with rural development are not always made.

*In Worlds Apart: Why Poverty Persists in Rural Areas*, Cynthia Duncan tells us that an education is the first step out of rural poverty. Findings from the MMG paper also suggest that local investments in K-12 education and postsecondary educational infrastructure are linked to local educational attainment. This is a very important finding, fraught with policy implications. However, as MMG point out, given the current fiscal crisis of Federal and state governments, the capacity to strengthen the local educational infrastructure is, at best, limited. With devolution, and as Federal and state resources become increasingly scarce, local governments must be able to demonstrate the effectiveness of infrastructure investments to compete successfully for funding.

In addition to expanding the conceptual framework on infrastructure, this paper makes two very important contributions to the research literature. The first is recognition of the linkage between income and rural development with public infrastructure. "Low education levels in RDRCs and poor performance

on other measures of social well-being could stem in part from scarce local public infrastructure in education, health, and police protection" (MMG, p. 256).

The second major contribution is the focus on racially diverse rural counties. These counties constitute some of the poorest counties in the United States. The RDRC counties look very similar to the persistent poverty counties identified by USDA ERS, as well as to what Wimberley and Morris refer to as the Black Belt South. However, I'd like to suggest that MMG search out some of the sociological literature in which there is substantial information on minority concentration and economic outcomes. This literature suggests that, in general, as the minority concentration increases, the socioeconomic position of minorities, relative to that of the majority, deteriorates, although this relationship is not necessarily linear (see Tootle and Tigges). The issue of the effects of minority concentration are complex, and I think this literature might provide some insights into the relationships between public infrastructure and socioeconomic well-being.

### Fiscal Trends and Their Implications

HBL likewise define infrastructure as a form of social infrastructure. In this paper, HBL first discuss state and Federal fiscal and economic trends in the rural South that are expected to affect public services. They examine demographic trends that have the potential to affect the provision of public services. They provide econometric evidence of the effects these conditions are likely to exert on the ability of rural governments in the South to provide public services. They set the stage by citing Mitch Daniels, the Office of Management and Budget Director on the current fiscal crisis. The fiscal situation of the states is reported as the worst since World War II, and Daniels expects this condition to persist for another decade (Rivlin).

This is a well-organized and conceptualized paper. In the first part of the paper, the authors provide a framework for understanding the structural dynamics contributing to the fiscal crisis. The MacCurdy and Nechyba (MN)

Framework demonstrates how demographic changes can affect the fiscal burden of local governments. According to this framework, demographic structures of a county determine level and mix of demands for public services. In introducing demographic trends into their conceptual model, HBL address many of the critiques of economic impact assessment.

In the next part, the authors focus on the consequences of baby boomer retirement and changes in the racial and ethnic composition of rural counties. Given the importance of Federal and state transfers in determining the fiscal burden carried at local levels, they examine trends in Federal and state budgets, identifying potential issues for local governments. They suggest that growth of the aging population and shifts in the youth population from remote to adjacent (or "sprawl") counties might increase the demand for more public services (health services and K-12 education), especially in the adjacent counties. This paper recognizes the diversity of rural areas as well as the significance of uneven development.

The authors of this paper argue that given the current and projected Federal budgets, it is unlikely that Federal governments will provide major assistance to the states. It is also unlikely that states will provide much in the way of transfers to local governments. For rural governments in the South, local taxes are the most likely source of new funding for public expenditures.

In the final section of this paper, HBL examine these relationships in depth by analyzing the effects of fiscal trends and demographic conditions on expenditures in K-12 education in South Carolina. They find that expenditures on K-12 education are largely related to the availability of intergovernmental transfers; age and racial/ethnic composition of the population seem to have little effect.

#### **Physical Infrastructure—Roads and Bridges**

The S paper focuses on whether the legislation embodied in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the

1998 Transportation Efficiency Act for the 21st Century (TEA-21) made differences in the conditions of rural highway and bridge infrastructure in the southern states. ISTE A was breakthrough legislation. It proposed a comprehensive, systematic, and integrated approach to infrastructure development and maintenance, taking into consideration the effects on local economies and the environment. This legislation called for increased participation at the local government level in the planning and decision making process.

The S paper begins by providing an overview of the rural road and bridge system eligible for Federal funding. Although there are over 1.1 million miles of southern roads, only 23%, a relatively small proportion, are eligible for Federal funding. Rural governments in the South are responsible for 67% of the rural mileage. To determine how ISTE A and TEA-21 affected rural roads and bridges, S examined data from the Highway Performance Maintenance System and the National Bridge Inventory on the conditions and financing of roads and bridges in 1994, 1997, and 2000.

Basically, she found that from 1994 to 2000, funding for all highway classes increased, and rural road and bridge conditions did improve. Bridges, in particular, benefited from the legislation, and higher function roads improved more than the lower function, local access roads. Although her findings indicate that increased highway and road funding contributed to significant improvement in the physical infrastructure of our rural counties, her findings are simultaneously troubling because they highlight the precarious conditions of the system of aging roads and bridges. For example, S points out that bridge conditions improved, but 28% of bridges remained deficient by 2000. This is only a slight improvement. In 1994, 32% of bridges were identified as deficient. Another troubling finding is that higher level function roads improved the most. That means that more local roads did not receive the same level of attention as the major arteries in the South. However, traffic increased for all categories of roads, suggesting that road conditions will worsen, especially for those lower function roadways. The implica-

tions of these findings are sobering. The effects on local economies could be significant, suggesting that ISTEA did not fulfill its promise.

### Conclusions

The three papers presented in this session are informative. I learned a great deal about infrastructure from each paper. Each takes a slightly different, but equally important approach to rural infrastructure. All three papers challenge the audience. Two of the papers challenge our conventional perspectives on infrastructure, and all three challenge us to think seriously about the changing socioeconomic conditions and the current fiscal crises facing states and the implications for our southern rural counties. The three papers remind us of the truly serious challenges associated with uneven spatial development.

All three of the papers at least alluded to devolution. I would have liked to have seen more emphasis on this issue, at least in the discussion sections of each paper. Rural infrastructure, whether it is physical or public services, lies largely in the hands of local governments. A few years ago, Lori Garkovich and Jon Irby wrote an article on new governance issues in America's rural communities ("Where the Rubber Meets the Road"). Garkovich and Irby collected information from a diverse audience of rural interests, and what emerged was a real concern for whether or not rural governments were ready to assume the increased responsibilities for decision making and program authority that were being shifted

their way. Rural voices feared "rural governments lack the capacity—human and administrative—to effectively and efficiently discharge a host of new responsibilities" (Garkovich and Irby, p. 2). Garkovich and Irby identified several challenges facing rural communities' capacity to manage public expenditures, but they also identified some new opportunities for communities that could emerge from these new responsibilities, as well as a mandate for land-grant universities to conduct the research necessary to assist these local rural governments. The three papers in this session are a step in that direction.

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