Metropolitan Growth

Boone or Bane to Nearby Rural Areas?

by David L. Barkley, Mark S. Henry, and Shuming Bao

Government statistics chronicle a divergence of the earnings, employment, and population growth rate trends of metropolitan and nonmetropolitan counties in many regions of the country. Dayton Duncan in *Miles From Nowhere* adds literary meat to these dry statistical bones with his anecdotes of life in rural communities declining toward their "irreducible minimum size."

Economists suggest the expanding urban-rural economic gap results from recent changes in industrial structures, organizations, regulations, and markets. For example, the industrial sectors with rapid employment growth (high tech manufacturers, services, and small businesses) exhibit a distinct urban location bias because these sectors need specialized services, skilled labor, and market access. Vertical disintegration, small-batch production runs, and just-in-time inventory requirements encourage the agglomeration of activity in urban areas—even among some firms in the low tech or traditional industries. And, deregulation in the financial, transportation, and communication industries reduces business costs in metropolitan areas relative to that in rural communities.

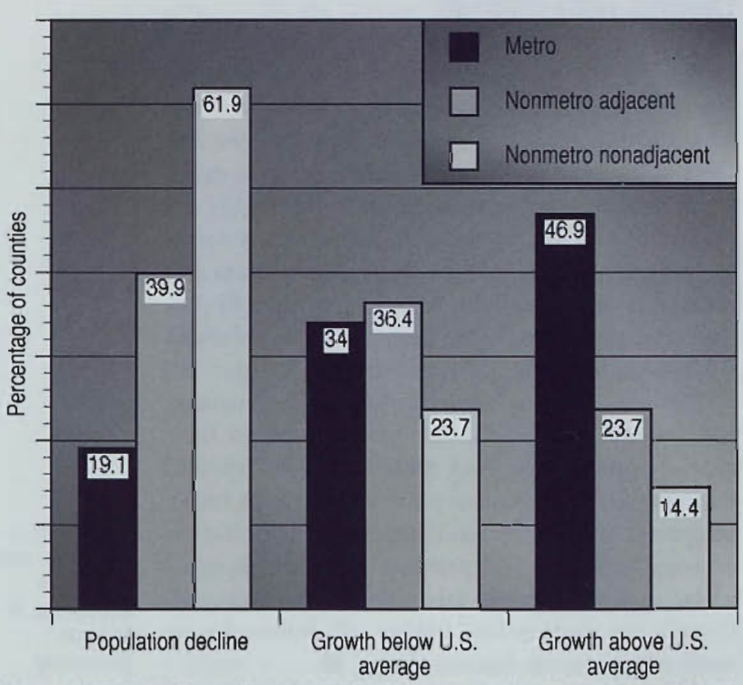

Figure 1. Share of U.S. metro, nonmetro adjacent, and nonmetro nonadjacent counties by population change, 1980-90

Unfortunately for proximate rural areas, the core-periphery relationship is not always beneficial.

The increased importance of skilled labor, agglomeration economies, and market access may impair the economic development prospects of isolated rural areas. Indeed, from 1980 to 1990 approximately 62 percent of the nonmetro counties not adjacent to a metro county lost population while less than 15 percent of those counties grew faster than the national average (figure 1). Rural areas proximate to metropolitan areas will benefit from the new economic environment if a significant decentralization of population and production results from metropolitan growth. Evidence from county-level census data is mixed. Almost 25 percent of the adjacent counties grew faster than the national average; yet, 40 percent of the adjacent counties lost population during the 1980s.

Does metropolitan area growth benefit or harm the economies of nearby rural areas? Economic theory suggests that development in a region's "core" or "nodal center" both benefits and harms the economies of the surrounding "hinterlands." Here we review these spillover effects through changes in residential density patterns for eight economic regions in North Carolina, South Carolina, and Georgia. Our findings for 1980 and 1990 indicate that the residential spread or spillover to rural areas associated with metropolitan growth was limited at

best. Stagnation or decline was the rule for most rural areas.

Spread-Backwash process

Proximity to a rapidly growing metropolitan area (core) insures prosperity for nearby rural communities (periphery), or so conventional wisdom suggests. Unfortunately for proximate rural areas, the core-periphery relationship is not always beneficial. Economic development in the core impacts the surrounding region through complex processes. These processes (see box) include intraregional flows of: private capital, private and public expenditures for goods and services, information and technology, residents and commuters, and political influence and public investments. Each process both benefits and harms the peripheral region, and the net effect differs among communities. For example, development in the metropolitan core may increase the availability of loanable funds for private investments in real estate developments, service and trade establishments, and input suppliers for local businesses. Some of this investment activity may occur in peripheral areas to take advantage of relatively low-cost labor and land. If so, rural communities benefit from metropolitan expansion. Alternatively, nearby rural financial institutions may find lending opportunities in the urban areas increasingly attractive as the core develops. The reduced availability of loanable funds for nonmetropolitan investments will impede development in the periphery.

The net impact of metropolitan growth on rural areas depends on the size of the positive and negative expenditure, information, and population flows. If the processes result in an increase in the absolute level of development in the periphery, the resulting impact is *spread*. A decline in the absolute level of economic activity in the periphery in conjunction with core expansion is evidence of a *backwash* effect.

The net effect of the spread-backwash processes varies among economic regions (and within a specific economic area). For any particular region, the net spread-backwash effect depends on: size and growth rate of the core, industrial structure of the core, distance of peripheral area from the core, existing spatial distribution of development, location

Spread and Backwash from the Metropolitan Core

Flows of Investment Funds

- Urban funds are invested in rural areas to take advantage of relatively low labor and land costs (spread)
- Rural funds are invested in urban areas to take advantage of relatively rapidly growing goods and services markets (backwash)

Flows of Spending for Goods and Services

- Urban growth provides expanding markets for rural producers (spread)
- Spending in rural trade and service markets declines due to increased competition from the more varied and efficient urban producers (backwash)

Flows of People

- Rural labor commutes to the urban area for employment (spread)
- Urban families relocate residences to rural areas because of lower real estate costs and perceived higher quality of life (spread)
- Rural residences migrate to the urban areas for better access to employment and urban lifestyle (backwash)

Flows of Knowledge and Technology

- Urban centers are the generators and diffusers of information and innovation for the surrounding rural areas (spread)
- Social attitudes in rural areas are transformed by the "demonstration effects" of high wages and expanding markets in the urban core (spread)
- Rural to urban migration is selective of the better educated and more highly skilled rural residents (backwash)

Flows of Political Influence and Government Spending

- Urban growth increases socio-political conflict, contributing to a policy promoting decentralization (spread)
- Government expenditures enhance the infrastructure and public service delivery systems of the more heavily populated urban areas (backwash)

and economic functions of small urban places in the periphery, location of transportation and communication networks, and the distribution of sociopolitical power. A consistency across economic areas, however, is that the net impact on the periphery (spread or backwash) decays with distance from the urban center.

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Evidence from the Southeast

Metropolitan areas in the Southeast experienced rapid growth during the decade of the 1980s. We investigated the spillover of this growth into the proximate rural areas by comparing the 1980 and 1990 population densities for metropolitan cores and their surrounding economic regions.

We selected eight metropolitan areas for our analysis: Charlotte in North Carolina; Greenville-Spartanburg, Columbia, Florence, Charleston, and Myrtle Beach in South Carolina; and Augusta and Savannah in Georgia. For each metropolitan area we defined Functional Economic Areas, or FEAs, based on labor commuting patterns. Each FEA is a cluster of several counties containing a metropolitan central city and hinterlands within commuting distance. Figure 2 shows the locations of the FEAs in our study area.

For each of the FEAs, we estimated the 1980 and 1990 population densities for census tracts (homogeneous subcounty areas with approximately 4,000 residents). Comparisons of changes in population density over time indicate which rural locations (with respect to proximity to the metro center) developed or declined.

We found that for both 1980 and 1990, density declines rapidly with distance from the city center, regional subcenters create high density areas outside the core, and population density levels off in the rural areas (see example of the Charlotte FEA density-distance relationship in figure 3). Between 1980 and 1990, a decentralization of metropolitan population was evident; densities at and near the city center declined while densities increased in sub-

urban and fringe rural census tracts.

Changes in the FEAs' population distributions during the 1980s indicate that the urban-rural relationship does not fit neatly into the spread or backwash categorization. Metropolitan growth was neither all boon nor all bane to the proximate economic regions. Instead, we identified four mixed patterns of population change for the eight FEAs.

(1) *Fringe growth through decentralization—hinterland stagnation.* The Augusta and Charlotte FEAs exhibited declining population densities near the center and increasing densities in areas approximately ten to twenty miles from the center. Beyond twenty miles, the average population density of census tracts remained essentially unchanged from 1980 to 1990. Metro area population growth and dispersal had, on average, little or no impact on small cities and rural areas in hinterland regions more than twenty miles from the center.

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(2) *Fringe growth through decentralization—hinterland decline (backwash).* The Columbia, Florence, and Greenville FEAs experienced small declines in population densities near their nodal centers, but increasing residential densities in tracts approximately five to fifteen miles from their centers. On average, population densities in rural tracts more distant from the metro areas exhibited small declines. Growth at the urban fringe appears to be associated with backwash effects in the more geographically isolated rural areas.

(3) *Fringe and hinterland growth through decentralization.* In the two historic cities of Charleston, South Carolina, and Savannah, Georgia, declines in central city densities were accompanied by increased population densities in both fringe and hinterland census tracts. The population growth was concentrated in the fringe areas with the 1980 to 1990 change in density much less pronounced for areas more than thirty-five miles from the cores' centers. The development of retirement and resort communities near Charleston and Savannah contributes to the spread of population to hinterland areas.

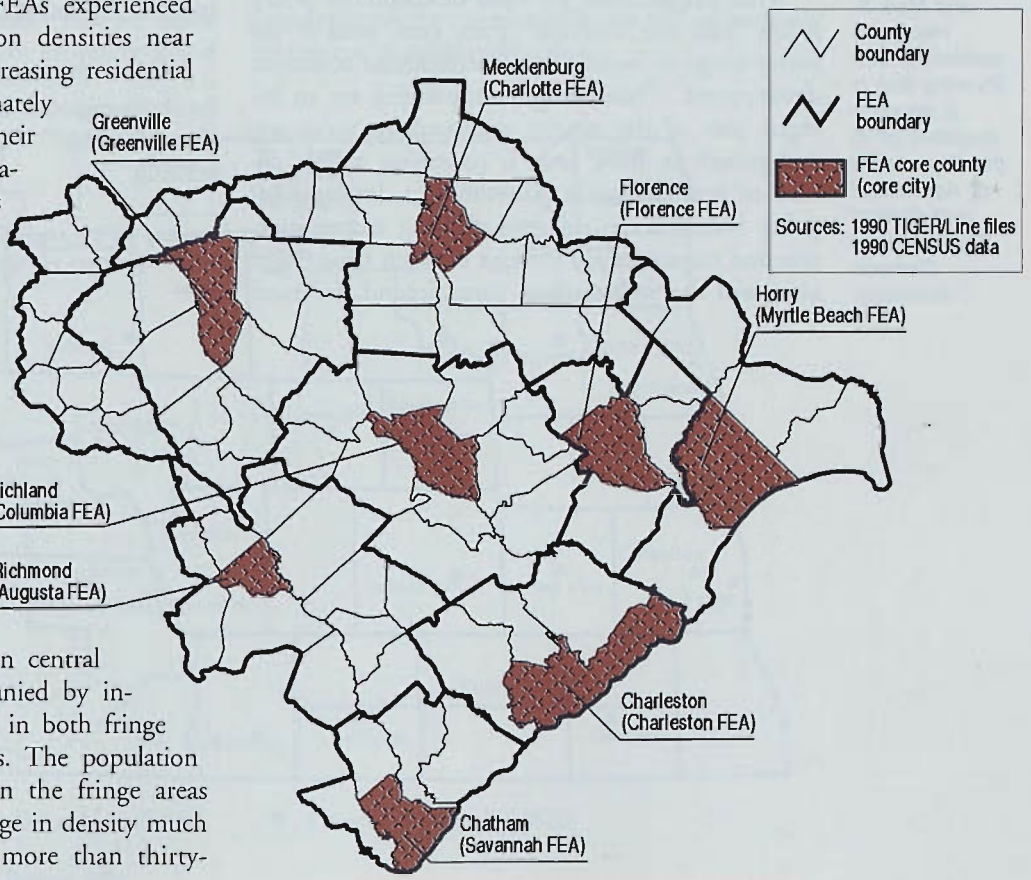
Community development policy should focus on strengthening communication and transportation linkages between these fringe areas and the metropolitan core.

(4) *Core growth—fringe and hinterland growth.* The Myrtle Beach FEA experienced rapid growth in the core (Myrtle Beach) and in rural areas up to fifty miles from the resort city. We attribute these extensive spillovers to limited developable land around the core because of nearby wetlands and the Atlantic Ocean to the east.

Prospects for rural areas

A decentralization of population seems to accompany metropolitan growth. Our findings do not, however, engender much optimism for rural eco-

Figure 2. Mutiple county functional economic areas—South Carolina Region



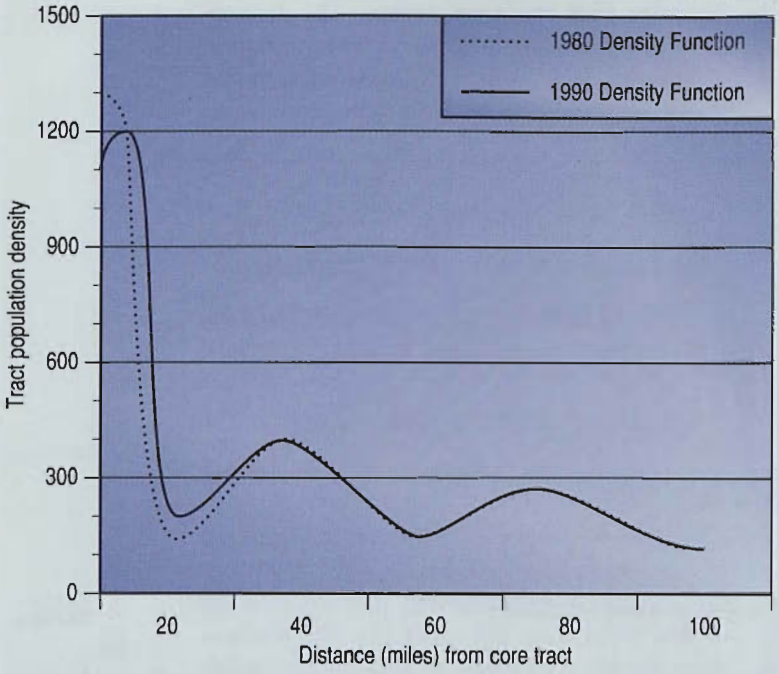


Figure 3. Estimated density function for Charlotte FEA, 1980 and 1990.

nomic development in this period of reurbanization. The spread effects (increases in rural economies) associated with urban expansion appear limited primarily to rural areas at the metro fringe. Rural areas and small towns in the hinterlands generally experienced stagnation at best and backwash effects (declining economies) at worst.

What implications for rural development policy follow from our findings? First, rural areas at the metro fringe do benefit from metropolitan economic development. These fringe communities are an integral part of the nearby metropolitan economy, and growth in these areas is promising in this period of reurbanization. Community development policy should focus on strengthening communication and transportation linkages between these fringe areas and the metropolitan core. Second, for rural communities not at the metro fringe, development programs must be designed with rural areas and problems in mind. Development efforts with a metropolitan or regional focus will provide relatively few rural benefits because spillovers are the exception. Intraregional linkages are too tenuous to insure that prosperity at one location will foster development in nearby communities. Finally, some rural areas in the hinterlands prospered during this period of metropolitan expansion. We need to identify the local characteristics (such as public and private infrastructure, quality of life, housing availability, quality of schools, and economic base) that help these communities grow. Improving these attributes may be critical to the survival of small towns near rapidly growing metropolitan areas. Otherwise, the "giant sucking sound" heard in rural areas will not be emanating from Mexico, but the metropolitan community nearby.

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For more information

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