

12-31-1999

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### Recommended Citation

Beyers, William, and Peter Nelson. 1999. "Service Industries and Employment Growth in the Nonmetro South: A Geographical Perspective." *Journal of Rural Social Sciences*, 15(1): Article 7. Available At: <https://egrove.olemiss.edu/jrss/vol15/iss1/7>

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*Southern Rural Sociology* Vol. 15, 1999, pp. 139-169  
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## **Service Industries and Employment Growth in the Nonmetro South: A Geographical Perspective<sup>1</sup>**

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**ABSTRACT** Service employment has grown rapidly in the nonmetro South in recent years, accounting for 87 percent of overall job growth in the 1985-1995 time period. This pace has been sustained in nonmetro areas that are adjacent to metro areas, as well as in more remote nonmetro areas that are not adjacent to metro areas. Retail, health, and producer services account for the largest share of service employment growth. In contrast to the United States as a whole, which experienced declines in manufacturing employment, the nonmetro South has had increases in manufacturing employment. This growth of manufacturing has stimulated the local service sector through multiplier relationships associated with the expenditure of income earned in manufacturing. Within the nonmetro South there has been more rapid growth east of the Mississippi River than in regions west of it. The role of services in Southern nonmetro job growth must be recognized in economic development programs. Field-based research is needed to document whether job growth in services in the nonmetro South has been stimulated by growing levels of interregional trade in these services, as has been documented in other regions of the United States. There is also a need to document relationships between the growth of nonearnings income and services employment growth in the nonmetro South.

<sup>1</sup> The authors acknowledge the helpful comments of the reviewers of an earlier draft of this paper, as well as the useful comments of the editor.

Service employment growth has fueled the expansion of jobs in the American economy for more than the last three decades. During this period employment in primary and secondary industries has been stagnant or declining in absolute and relative terms, while employment in the tertiary and quaternary service sectors has been expanding<sup>2</sup>. But what about the nonmetro South, the region of the United States that historically has been the poorest in the nation? Has the nonmetro South mirrored structural change in the United States as a whole? Have service industries experienced job growth in the nonmetro South at a similar pace to nonmetro America as a whole? How has the nonmetro South performed in comparison to the metropolitan South? What sectors have led job growth in the nonmetro South? What regions have done well, and where has the South lagged? This paper addresses these questions, providing a badly needed overview of service industry trends in the nonmetro South. In this paper the term services refers to all lines of service industry, including: transportation services, communications, utilities; wholesaling; retailing; financial services; and consumer and producer services.

This paper addresses the questions just posed over the 1985 to 1995 time period. For those with a long-standing interest in the relatively poor performance of southern nonmetro economies, this paper provides some welcome news, as it documents the fact that the nonmetro South over the study period has outperformed the U.S. economy as whole. This paper also describes the tendencies for nonmetropolitan areas in the South to perform in a manner that reflects the performance of metropolitan areas adjacent to them. Nonmetro southern job creation is shown to be dominated by service industry jobs, a trend that must be factored into regional development strategies in an era when services are

<sup>2</sup> Primary industries are defined as agriculture, forestry, fishing, and mining. Secondary industries are defined to include construction and manufacturing. These two industrial groups are also referred to as transformative employment in this paper. Tertiary industry is defined as transportation, communications, and utilities services, as well as wholesaling and retailing. The quaternary sector includes finance, insurance, and real estate, producer services, consumer services, the public sector, and services to agriculture.

to an increasing extent the source of basic or export-industry income to local communities. The paper begins with a brief review of services job trends in the metro and nonmetro South reported in earlier research. Then the paper turns to a description of aggregate employment trends in metro and nonmetro areas in the South, which is followed by an analysis of geographic patterns of employment change in the South. Using shift-share analysis and location-quotients, these analyses provide details on the geography of service industry growth in the nonmetro South. The paper documents the fact that all regions in the South have not benefited equally from this pattern of services-led growth, but strong growth has been spatially widespread. The paper does not try to identify why the nonmetro South has experienced such strong growth in the services; this is a clear research need. Is this growth “catch-up” as real incomes have risen in the nonmetro South? Does it simply mirror trends elsewhere in nonmetro America? These are questions that require more research. This paper sets out the contours of change; the next steps will be to try to understand why these trends have occurred in nonmetro southern service industries.

While the emphasis of this paper is on trends in services employment in the South, the underlying research has tracked selected non-service industries. Manufacturing emerges among these non-service sectors as determinative of services change in many regions. Thus, attention will also be given to trends in manufacturing employment, due to its often export-base leading role, and it will become evident later in this paper that change in manufacturing employment is often related to overall performance in local economies and their service industries.

### **Southern Trends Identified In Earlier Research**

What do we currently know about trends in service industries in the nonmetro South? This brief section provides an overview of existing research. National level studies of trends in employment have documented the relatively rapid growth of the South in recent decades. This work includes the Standard Metropolitan Statistical Area (SMSA)-based research reported by Noyelle and Stanback (1983), the analyses at the level of the U.S. Bureau of Economic Analysis (BEA) economic areas reported by Beyers

(1989, 1992, 1998), and the research of Kirn (1987) that spanned an array of community sizes. These various studies have documented the relatively fast growth of many southern metro areas, particularly Washington, D.C., Atlanta, all of peninsular Florida, and Houston, Dallas-Fort Worth, and Austin.

There has been much less work focused on nonmetropolitan trends in employment in the South, in comparison to research reporting on nonmetropolitan population change or metropolitan employment and population change. The “rebound” in nonmetropolitan population growth in nonmetro America in the 1990s has been the subject of considerable descriptive research (Fuguitt and Beale 1996; Beale 1999; Nord and Cromartie 1999; Johnson and Beale 1998). Related to this documentation of the nonmetro population rebound has been some research reporting on changes in nonmetro employment. Beyers developed a data base for the 1974-1985 time period and reported on aggregate nonmetropolitan employment trends, finding overall job growth lagging metro areas (metro 30 percent versus nonmetro 24 percent), but in the rapidly growing producer services percentage gains were equal in metro and nonmetro areas (60 percent) (Beyers 1989, 1992). Glasmeier and Howland (1995) reworked this database to describe nonmetropolitan trends in much greater detail. Their work also found that counties adjacent to metropolitan areas had slightly lower growth rates than counties that were nonadjacent. However, their work found service employment growth was faster in adjacent counties than in nonadjacent (44 percent vs. 40 percent respectively), and that the producer services also grew quite rapidly in both adjacent and nonadjacent counties (72 percent vs. 67 percent respectively). Glasmeier and Howland’s definition of producer services differed slightly from that utilized by Beyers, leading to slight differences in statistics measured from the same data base. The growth rate for aggregate nonmetro employment was estimated by Glasmeier and Howland to be below the percentage for all services, due to low growth rates in distributive and extractive/transformational industries. Distributive sectors include transportation services, communications, utilities, and wholesaling. Their nonmetro national growth rate between 1974 and 1985 was 24 percent. Extractive/transformational sectors include agricultural services, forestry, fishing, mining, construction, and manufacturing. These sectors

grew by just 1.8 percent over the 1974-1985 time period. Beyers and Glasmeier and Howland's research does not isolate trends in the South, in comparison to the United States as a whole. The current paper focuses explicitly on services employment trends in the U.S. South.

Beyers has also developed a national employment data base for the more recent 1985-1995 time period aggregated into the metropolitan, adjacent nonmetropolitan, and nonadjacent nonmetropolitan components of the 172 BEA economic areas (Johnson 1995). Aggregated employment trends documented in this database reflects the recent nonmetro population rebound; aggregate results from this recent analysis are included in later sections of this paper to highlight metropolitan and nonmetropolitan trends in employment in the nonmetro South (Beyers 1998).

With regard to the South, there have been a few recent analyses of trends in services and manufacturing in nonmetro areas. Warf and Grimes (1997) report on the 1964-1994 time period for the states of Maryland, Virginia, Kentucky, North and South Carolina, Florida, Alabama, Georgia, Mississippi, Tennessee, Arkansas and Louisiana. Their analysis does not present aggregate results for the nonmetro South, but they present county-level maps indicating strong percentage growth in aggregate services employment in metro and nonmetro counties (averaging 336 percent), with service jobs increasing from 4.6 to 20.2 million persons. They find widespread nonmetro gains in banking, health, wholesale, and retail employment, and a mixed pattern of gains and losses in nonmetro business and legal services. Thompson and Hammond (1998) have documented the convergence of industrial structures among southern counties in the retail trade and service sectors, as measured by location quotients. While manufacturing has been documented to be growing in nonmetro America in recent years (Gale 1996; Johnson 1997), some warning signs have been issued by Glasmeier and Leichenko (2000) (as well as by McGranahan (2000)) regarding the competitiveness of southern manufacturing that is based on the relatively low cost of southern labor. This research has provided useful information on trends in southern industries, but is not specifically focused on the role of services in the recent development of jobs in the South. The current paper fills a void by providing this needed

perspective, given the dominant role of services employment in overall job change in the U.S. South in recent years.

While there is some recent research documenting trends in parts of the employment base in the nonmetro South, there has not been a comprehensive documentation of recent job trends. That is the primary goal of this paper. We now turn to an exploration of overall trends in nonmetro employment structure, as well as to a description of the geography associated with these trends.

### **Data Sources and Defining the Region**

The database used for this paper was developed from U.S. County Business Patterns estimates of employment for the years 1985 and 1995 (U.S. Census Bureau). This data series excludes proprietors, as well as employees in the public sector and in agriculture. Nationally, the excluded employment is over one third of the total head count of those in the labor force. The results reported in this paper should be interpreted as partial, recognizing these omissions. Clearly, in the nonmetro South agriculture is an important industry, and nonfarm proprietors employment has also risen strongly in recent years, with the majority of these proprietors being engaged in services work. However, it is unlikely that there would be changes in the broad trends reported in this paper if these other segments of the economy had been included.

The 1985 data were estimated for each county in the United States, using a bi-proportional matrix adjustment technique to estimate employment in sectors subject to suppression codes (Beyers 1989). This procedure involved estimating a matrix of reported values for each industry and county, and calculating the amount of employment in each county and industry that was suppressed to retain confidentiality. These estimates were made on a state-by-state basis. Data flags used by the Census Bureau to bound the magnitude of suppressed employment were replaced with initial values within the range of the given suppression code. Through an iterative balancing process an estimate was developed for each industry and county that added up to the values of the suppressed employment. This file was then merged with the file of known values to yield a matrix of employment

for each state. A similar procedure was used with the 1995 data now available on compact discs (U. S. Census Bureau 1999). The resulting county-level estimates were then grouped into the BEA regions, utilizing the 1995 definitions of BEA Economic Areas (Johnson 1995). The BEA Economic Areas are (primarily) defined as groupings of metro and nonmetro counties, with metro areas as their "core," and nonmetro counties considered to be peripheral territory linked to metro areas by commuting or newspaper readership patterns. The nonmetro components of the BEA economic areas were further subdivided into aggregations of counties located adjacent to metro counties, and aggregations of counties that are not adjacent to metro counties. The U.S. Department of Agriculture Economic Research Service (USDA/ERS) (U.S. Department of Agriculture 1997) developed these definitions.

There are many definitions of the U.S. South, ranging from the Census Division of the U.S. Census Bureau, to the definitions chosen by particular scholars. This paper utilizes a database structured around the BEA Economic Areas, which have a core metro area located in the states considered to be a part of the South Census Division. Because the BEA Economic Area boundaries cross state lines, this definition includes some counties in states located in Census Divisions outside of the South Census Division (see Figure 1). It is recognized that this is a generous geographical definition of the U.S. South.

### **Aggregate Trends: Employment in the South, 1985-1995**

The American South had faster employment growth than the United States as a whole over the 1985-1995 time period<sup>3</sup>. Table 1 summarizes employment trends for these years. The growth of 8 million jobs in the South represents 42 percent of job growth in the entire United States, underscoring the importance of the southern economy to the national economy. While the United States as a whole had growth in employment of 23.4 percent over

<sup>3</sup> These data refer to private nonagricultural employment, thus excluding agriculture and public sector workers. The database also excludes proprietors, who constitute a large and growing share of the American



the 1985-1995 time period, the U.S. South outpaced the nation with employment expansion of 29.9 percent. The metropolitan South had a growth rate well above the national metro growth rate, while growth in the nonmetro South lagged the national nonmetro growth rate by a small margin.

While overall employment growth in the South was relatively strong, within the nonmetro South, there have been divergent trends in several key sectors, as indicated in Table 1. One of the nation's fastest growing service sectors—producer services—has expanded relatively rapidly in the South, in not only metropolitan regions, but also in both adjacent and nonadjacent nonmetropolitan areas. The employment base in nonmetro areas upon which this expansion of producer services has occurred is small, which means that the producer services percentages reported in Table 1 are built upon a relatively small absolute employment base.

The nonmetro South has also experienced relatively rapid growth in manufacturing employment (Table 1). While nationally over the 1985-1995 time period employment declined by 972 thousand or 5 percent in manufacturing, within the nonmetro South it expanded by over 240 thousand jobs, an increase of 12.6 percent. Other employment in Table 1 includes primary activity, construction, and all services employment except producer services. In absolute terms this category constitutes the majority of employment. As with total employment, the South outpaced the nation in this group in metro areas, but it lagged national growth in nonmetro areas by a small margin.

A functional classification of employment trends in the South is presented in Table 2; this table utilizes categories similar to those used by Noyelle and Stanback (1983), and by Beyers (1989). It is based on the Browning-Singelmann (1975) functional classification of service employment. The Browning-Singelmann classification of service industries is based on the nature of the markets served. Hence, the distributive sector includes activities moving products of the extractive-transformative sector to their markets. The retail sector is selling to households goods delivered by the distributive sector. The producer services are sold predominantly to businesses and governments, to be used as inputs in production processes. The not-for-profit

**Table 1. Change in Employment, 1985-1995**

	Total Employment		Manufacturing		Producer Services		Other Employment	
<u>Percent Change</u>	<u>U.S.</u>	<u>South</u>	<u>U.S.</u>	<u>South</u>	<u>U.S.</u>	<u>South</u>	<u>U.S.</u>	<u>South</u>
Total	23.4%	29.9%	-5.0%	3.7%	45.0%	57.8%	28.9%	32.5%
Metro	22.9%	31.0%	-9.0%	-0.2%	45.2%	58.9%	28.4%	32.9%
Nonmetro	26.8%	25.6%	12.3%	12.6%	42.6%	48.2%	31.8%	30.4%
Adjacent	26.9%	25.8%	9.8%	10.5%	48.1%	52.5%	34.1%	32.2%
Nonadjacent	26.8%	25.4%	16.2%	15.6%	39.9%	42.9%	30.8%	28.3%
<u>Absolute Change</u> (thousands)								
Total	19,039	8,063	-972	231	6,117	2,466	13,894	5,366
Metro	15,800	6,691	-1,431	-8	5,628	2,247	11,602	4,452
Nonmetro	3,239	1,373	458	238	489	220	2,292	914
Adjacent	1,740	780	223	119	281	133	1,237	528
Nonadjacent	1,498	593	236	120	207	87	1,055	386

Source: Estimated by the authors from U.S. County Business Patterns (U.S. Census Bureau, various years).

**Table 2. Employment Change in the U.S. South: Metro and Nonmetro Adjacent and Nonadjacent Nonmetro Territory, 1985-1995 (thousands)**

	Metro		Adjacent		Nonadjacent	
	Change	%	Change	%	Change	%
<u>Extractive/Trans.</u>						
Ag Services	76.2	71.0	7.2	35.1	4.6	31.2
Mining	-109.7	-33.7	-57.8	-51.0	-61.8	-45.9
Construction	52.3	3.2	17.9	10.4	24.6	22.1
Manufacturing	-7.9	-0.2	118.6	10.5	119.9	15.6
	10.8	0.2	85.9	6.0	87.3	8.5
<u>Distributive</u>						
T.C.U.	422.7	30.4	38.4	26.3	27.0	23.3
Wholesale	306.2	19.7	22.9	15.9	14.1	11.0
	728.9	24.7	61.3	21.1	41.1	16.8
<u>Retail</u>	1463.0	30.8	218.6	35.2	161.2	32.0
<u>Producer Serv.</u>						
F.I.R.E	296.7	18.6	13.2	10.3	4.3	4.0
Business/Prof.	1626.6	102.8	85.8	131.3	59.1	124.3
Legal	100.7	52.9	4.1	32.4	4.4	38.0
Membership	222.8	50.1	29.5	64.0	19.1	54.0
	2246.8	58.9	132.7	52.5	86.9	42.9
<u>Not-for-Profit</u>						
Health	1498.7	99.5	217.7	117.6	177.2	107.3
Education	150.3	48.1	14.9	53.4	12.5	84.2
Social	245.4	83.0	35.7	90.3	22.2	66.4
	1894.4	89.6	268.4	106.2	211.9	99.3
<u>Consumer Services</u>	603.0	44.8	60.7	50.2	45.4	46.0
<u>Unclassified Establishments</u>	-256.3	-89.9	-48.0	-92.0	-41.0	-93.0
<u>Total</u>	6690.6	31.0	779.7	25.8	592.9	25.4

Source: Estimated by the authors from U.S. County Business Patterns (U.S. Census Bureau).

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and consumer service sectors are primarily serving households, differentiated by the profit and non-profit tendencies in these industries. The authors consider this classification scheme to be useful because it groups industries according to a market-based logic, placing industries with similar types of intermediate or final markets in the broad categories identified in Table 2. Table 2 documents the absolute change in employment in metro, adjacent nonmetro, and nonadjacent nonmetro areas in the South, as well as percentage changes in each of these categories. Employment grew by 6.7 million jobs in the metro South, while expanding by 1.4 million jobs in the nonmetro South. Adjacent territory in the South grew by .8 million jobs, while nonadjacent territory grew by .6 million jobs.

Metropolitan employment growth came entirely from service industries. While manufacturing and mining suffered job losses, jobs gains in agricultural services and construction essentially offset these job losses, resulting in almost no change in extractive/transformational employment levels in metro areas. Metropolitan employment gains within services were led in absolute terms by the producer services, followed closely by the not-for-profit sectors (which posted a very strong percentage employment gain). Distributive, retail, and consumer services expanded at a percentage rate similar to overall metropolitan growth rates for the South.

Within adjacent nonmetro territory, health and retail services were the largest absolute sources of employment gains, although from a percentage standpoint the business and professional services also had explosive growth. While mining experienced a sharp absolute and percentage downturn, manufacturing employment increased by 119 thousand jobs. However, despite this increase in manufacturing employment, almost 90 percent of employment expansion in the adjacent South occurred in various service industries.

The pattern of employment expansion in the nonadjacent South was broadly similar to that found in the adjacent South. The sectors with the largest absolute gain were again health services and retailing, while business and professional services experienced very rapid percentage growth. Over 85 percent of total employment growth was associated with service industries. The absolute level of employment growth in manufacturing was

slightly higher in the nonadjacent South than in the adjacent South, as was also the case in the construction sector.

These data provide clear answers to several of the questions posed at the outset of this paper. First, employment growth in the nonmetro South has been robust, growing just slightly below the national nonmetro employment growth rate over the study time period. Second, the South as a whole, as well as the metro and nonmetro South have outpaced growth in the United States as a whole. Third, the metro South outpaced the nonmetro South, which is the reverse of trends nationally over the study time period. Fourth, services have provided 87 percent of the job growth in the nonmetro South, led by retailing and not-for-profit services. The remaining jobs have been generated in manufacturing, a trend shared by the South and nonmetro America as a whole over the study period.

### **A Shift-Share Model of Employment Change in the Nonmetro South**

In order to describe the geographic pattern of relative growth (or decline) in the adjacent and nonadjacent nonmetro areas in the South, as well as to identify the role of particular industries, a shift-share analysis was undertaken (Stevens and Moore 1980). This analysis used the United States as the benchmark, and included not only the adjacent and nonadjacent portions of the BEA areas in the South, but also their metropolitan components.

Shift-share analysis provides a description of regional performance (growth or decline) as measured against a benchmark. In this case, the national growth rate between 1985 and 1995 has been used as the benchmark (see Table 1). Regions that grow faster than the national average have a positive "shift" (e.g., their growth exceeded expected growth based on the national experience). Logic dictates that if one region grows faster than the national average, then some other region must have lagged the national experience. In the present analysis, Table 1 instructs us that the South as a whole grew faster than the United States. (e.g., as a region it enjoyed a positive shift). Table 1 also documents the fact that this positive shift in the South was shared by both metropolitan and nonmetropolitan territory, as both had aggregate growth rates above the national average. Thus, we can

anticipate that the “net shifts” in the South will be on balance positive: These are the measures of additional jobs created in the South, over and above what would be expected using just the national rate of growth.

It is common in shift-share analysis to adjust the simple national growth rate used to calculate expected “shares” of growth by differences in industry growth rates at the national level. Thus, if we calculate the growth rate nationally of a given industry, such as producer services, and compare it to the overall national growth rate, we will observe a much faster than average growth rate (again note in Table 1 that producer services growth rate was double the U.S. average). If we adjust the expected growth of each industry in the region by the difference between its growth rate and that of the nation as a whole, we will be “correcting” the shares by the magnitude of these industry growth rate differentials. In the case of fast growing sectors (such as producer services), this correction will increase expected employment growth, while in slow growing or declining sectors (such as mining), this adjustment will decrease expected employment growth. This adjustment is referred to as the “industry-mix” factor.

The *difference* between what actually happens in a region in the way of employment change, and the expected growth (e.g. the share plus industry mix factor), is referred to as the “competitive component.” If an industry in a region has a growth rate that outstrips the national growth rate in that industry, then the region has clearly had a positive competitive advantage in job creation in that sector. And, if an industry in a region fails to live up to the national growth rate, then it has suffered a negative competitive shift.

Table 3 provides a summary perspective on the shift-share analysis. The South gained 1.747 million jobs more than its share of national growth between 1985 and 1995 (6.316 million jobs). The bulk of this job gain (1.6 million) was in the metro South. From an industry perspective, the nonmetro South was defined to be at a disadvantage, having a negative industry mix shift in both adjacent and nonadjacent nonmetro territory, largely because of the concentrations of manufacturing and agricultural employment in the region. At the same time, the metro South and the rest of the U.S. economy had a positive industry mix

**Table 3. Shift-Share Summary (thousands of jobs)**

	1985	1995	Change	Industry		Competitive	
				Share	Mix Shift	Shift	Net Shift
Metro South	21,579	28,270	6,691	5,059	154	1,477	1,631
Adjacent	3,026	3,806	780	710	-288	358	70
Nonmetro South							
Nonadjacent	2,334	2,927	593	547	-214	260	46
Nonmetro South							
Other U.S.	54,268	65,244	10,976	12,723	347	-2,094	-1,747
<b>National Change</b>			<b>19,039</b>	<b>19,039</b>			

Source: Estimated by the authors from U.S. County Business Patterns (U.S. Census Bureau).

component. The interpretation of these industry mix shift components are as follows: the composition of industrial sectors found in the nonmetro South in 1985 was dominated by industries that performed below the national average, leading to expected growth at a level less than the national level of performance. Simultaneously, the metro South and the rest of the nation were endowed with relatively rapidly growing industries in 1985, such that growth was expected to outstrip the national growth rate (e.g. the anticipated share). In fact, the negative industry mix shift component in the nonmetro South was more than offset by actual growth, as indicated by the positive competitive shift components for the adjacent and nonadjacent nonmetro South. This result means that the nonmetro South experienced growth in a portfolio of industries that were not well represented in its industrial structure in 1985. The industry sectors related to this growth will be discussed in later sections of this paper.

The competitive shift component in Table 3 is relatively large when compared to the industry mix component for the metro South as well as the balance of the United States. This result is comparable to that obtained in similar analyses (Beyers 1992, 1998), indicating that a substantial proportion of growth was not predicted by the endowment of industries in the benchmark time period (in this case 1985), but that instead redistribution has occurred into regions “not expected.” In addition, in the case of the South the net positive competitive shift was also large

compared to the relatively large net negative industry mix shift. Therefore, it will be useful to focus on the geographic and sectoral patterns related to the competitive shift, especially in the nonmetro South.

How important are the shifts in job creation in comparison to the overall distribution of employment? If we use the measure of competitive shift as a benchmark, 26 percent of employment growth in the South was not in the region "expected." This result is not dissimilar from other analyses for recent time periods using the BEA regionalization (Beyers 1992, 1998). Thus, over one-quarter of job growth was not in the locations anticipated in the South between 1985 and 1995, in the aggregate. However, the relatively strong competitive component in the nonmetro South is related to a much larger competitive shift as a percentage of overall change, amounting to 46 percent for adjacent territory, and 44 percent for nonadjacent territory. These percentages refer to the aggregate of nonmetro territory in the South, not to the performance of individual components of the BEA economic areas.

Figure 1 presents a spatial perspective on the patterns of competitive shifts, differentiating between the performance of adjacent and nonadjacent nonmetro territory. This figure clearly shows that most nonmetro components of the BEA economic areas in the South had either positive or negative competitive shifts in both adjacent and nonadjacent territory. Over most of the eastern BEA economic areas in the South this pattern was positive, indicating that territory near metro areas as well as that which is more peripheral grew faster than the nation. In contrast, in most of the western BEA economic areas in the South, negative competitive shifts prevailed, indicating slower growth than the national average. Figure 1 also indicates the trends for BEA economic areas that contain only adjacent or nonadjacent territory. While there are relatively few of these regions, their trend in the eastern and western portions of the South are similar to the trend just described for BEA economic areas with both adjacent and nonadjacent territory.

*Sectoral Composition of Competitive Shifts.* While the specific magnitude and composition of the competitive shifts is unique for each nonmetropolitan component of the BEA economic areas, there are some generalizations possible regarding



services, and producer services. Second, the labor income injected into the community economy creates through the induced-effects channel of multipliers impacts upon the consumer-related sectors, including retailing, health services, consumer services, and the local public sector (for which data are excluded in this paper). Although at present the type of manufacturing growing during this time period in the adjacent nonmetro South has not been analyzed, it is likely that much of this production was exported from the community economies in which it was produced (Malecki and Poehling 1999).

*Nonadjacent Territory* The pattern of competitive shifts in nonadjacent territory in the South is similar to that described for adjacent territory. While manufacturing again emerges as a leading sector in the regions with positive competitive shifts, health services is more consistently a key contributor to the positive competitive shift in nonadjacent territory than was the case for adjacent territory. In the western segments of the region, with the negative competitive shifts documented in Figure 1, mining emerges as the primary downward force. In contrast to adjacent regions in this western portion of the South with negative competitive shifts, construction was not as strong of a downward factor.

The regions with positive competitive shifts tended to have strong positive shifts in the various services, except for: finance, insurance, and real estate; legal services; and distributive services. In contrast, the regions with negative competitive shifts had much more mixed patterns of service employment competitive shifts with the exception of health services, which experienced strong growth even in regions with an overall negative competitive shift. A similar interpretation can be made of the impacts of the growth in manufacturing employment in nonadjacent territory upon other sectors as was described above for adjacent territory.

*Summary* This section documents the uneven distribution of employment change among the BEA economic areas in the nonmetro South. Clearly, the experience of BEA economic areas in Texas, Oklahoma, and Louisiana differs from the majority of BEA economic areas located elsewhere in the South. The western cluster of nonmetro regions has experienced negative

components of the BEA economic areas have outpaced the nation. While manufacturing has played an important role in this pattern of growth, service employment has nonetheless been the dominant source of growth, and has exhibited a positive competitive component most consistently in health services, retailing, business/professional services, and other forms of consumer services.

### **Changes in the concentration of service employment in the nonmetro South**

The shift-share analysis provides evidence regarding the relative growth of industries in the nonmetro South, when compared to the national growth experience between 1985 and 1995. However, it does not indicate the degree to which industries in the nonmetro South are present in concentrations similar to the national average, or are above or below the national concentration. A straightforward method for displaying such concentrations is through the use of location quotients, measures that compare the importance of an industry in the structure of a region's economy compared to a benchmark (the national average). Table 4 presents such measures for the South, grouped by metro, adjacent, and nonadjacent nonmetro territory. The location quotients presented in Table 4 are for the years 1985 and 1995, and the latter columns indicate changes in the indices between these years. This table also includes a composite measure of location quotients for producer services, formed by aggregating finance, insurance, and real estate with business and professional and legal services, and membership organizations.

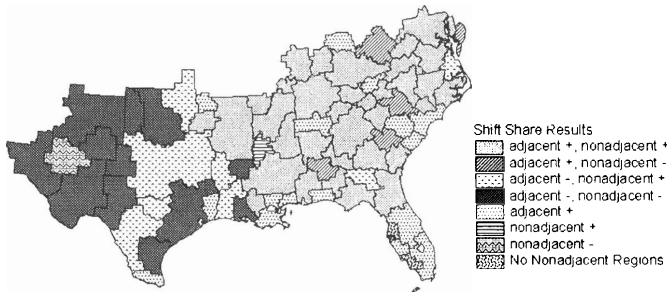
In 1985 the nonmetro South had strong concentrations of mining employment, and moderate concentrations of employment in manufacturing and agricultural services. In 1985 the proportion of employment in manufacturing in the adjacent nonmetro South was 55 percent above the national average, while in nonadjacent areas it was 36 percent above the national average. This concentration in manufacturing increased between 1985 and 1995, by 22 percent in adjacent territory, and 27 percent in nonadjacent territory. In contrast, the nonmetro South

**Table 4. Location Quotients for Metro, Adjacent Nonmetro, and Nonadjacent Nonmetro Territory in the U.S. South**

Sector	1985	1985	1985	1995	1995	1995	Change	Change	Change
	Metro	Adjacent Non-metro	Non-adjacent Nonmetro	Metro	Adjacent Non-metro	Non-adjacent Nonmetro	Metro	Adjacent Non-metro	Non-adjacent Nonmetro
Agricultural Services	1.057	1.439	1.344	1.059	1.186	1.078	0.002	-0.253	-0.266
Mining	1.326	3.297	5.078	1.347	2.581	4.398	0.021	-0.716	-0.680
Construction	1.374	1.029	0.866	1.189	0.993	0.927	-0.184	-0.036	0.061
Manufacturing	0.817	1.549	1.362	0.808	1.767	1.631	-0.008	0.219	0.269
Transportation Services, Communications & Utilities	1.087	0.814	0.836	1.086	0.821	0.826	-0.001	0.007	-0.010
Wholesale	1.041	0.687	0.797	0.999	0.666	0.741	-0.041	-0.021	-0.056
Retail	1.062	0.990	1.039	1.046	1.050	1.079	-0.016	0.060	0.040
Finance, Ins. & Real Estate	1.000	0.574	0.628	0.958	0.534	0.551	-0.041	-0.041	-0.076
Business. & Prof. Services	1.109	0.327	0.309	1.183	0.414	0.380	0.074	0.087	0.072
Legal Services	1.046	0.498	0.588	1.076	0.462	0.570	0.030	-0.036	-0.018
Membership Organizations	1.078	0.797	0.792	1.100	0.926	0.866	0.022	0.128	0.074
Producer Services	1.054	.498	.519	1.089	.515	.503	.035	.016	-.016
Health Services	0.894	0.784	0.907	0.983	0.979	1.081	0.088	0.195	0.174
Educational Services	0.775	0.495	0.341	0.799	0.551	0.457	0.025	0.056	0.116
Social Services	0.862	0.823	0.899	0.848	0.877	0.841	-0.014	0.054	-0.058
Other Services	1.066	0.682	0.721	1.013	0.701	0.723	-0.052	0.019	0.001
Unclassified Establishments	1.031	1.345	1.472	0.973	1.039	0.999	-0.058	-0.306	-0.473

Source: Estimated by the authors from U.S. County Business Patterns (U.S. Census Bureau).

**Figure 1. Shift Share Summary, Adjacent and Nonadjacent Nonmetro South**



Source: Estimated by authors from County Business Patterns (U.S. Bureau of Census).

the composition of the competitive shifts mapped in Figure 1.

*Adjacent Territory* With regard to adjacent territory that had a positive competitive shift, manufacturing was frequently a relatively large component of the overall competitive shift, and there was a strong tendency for competitive shifts to also be positive in the various service sectors. In contrast, in the western portions of the South that exhibited negative competitive shifts in Figure 1, mining or construction usually leads the negative competitive shift. Health services recorded positive competitive shifts in almost all regions, regardless of their overall negative or positive competitive shift. Health services in the adjacent nonmetro south grew by 118 percent, compared to a 71 percent growth rate nationally between 1985 and 1995. This result for health services may suggest “infill” of this sector in the adjacent nonmetro South, a matter explored in the next section of this paper.

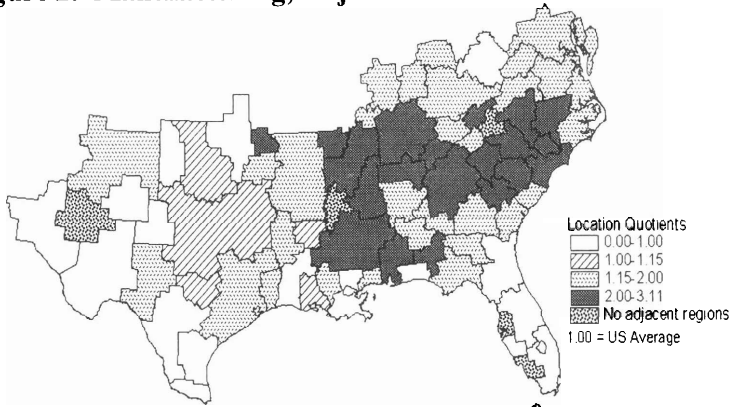
The relatively strong performance of manufacturing in the adjacent nonmetro South has likely provided a stimulus to local service sectors, through multiplier relationships of several types. First, these manufacturers needed to purchase services in the communities in which they are located to produce their product, such as utilities, transportation services, warehousing, financial

services employment. Although this paper is focused on services, trends in service employment are influenced by the localized employment trend in goods production, particularly manufacturing. Therefore, manufacturing trends will be focused upon, along with trends in service industries in this paper.

In contrast to the situation for extractive and transformative employment, the *nonmetro* South had lower than the national average concentrations in service employment except retailing in 1985. Table 4 also indicates that the *metro* South had employment proportions in most services similar to or slightly above the national average in 1985. Over the 1985-1995 time period the *nonmetro* South gained in its concentration of two of the fastest growing sectors in the national economy: health services and producer services. The increases in health services pushed location quotients up to the national average in the adjacent nonmetro South, and to a figure well above the national average in the nonadjacent nonmetro South. The increases in producer services were more complex, with slight reductions in the concentration of legal services and financial services, but at the same time increases in the concentration of business and professional services and membership organizations. In the case of business and professional services, the nonmetro South still has less than *half* of the national proportion of employment in this sector, but this rapidly growing sector has been documented to be unevenly distributed nationally and strongly concentrated in the nation's largest metro regions (Beyers 1991, 1998).

A series of maps are included at this point to document patterns for three sectors that emerge as pivotal to regional trends in overall employment change in the nonmetro South: manufacturing, the business and professional services component of the producer services, and health services. Figures 2-4 depict location quotients for 1995 for adjacent nonmetro territory in the South, while Figures 5-7 depict the same information for nonadjacent nonmetro territory.

*Adjacent Location Quotients.* Figure 2 documents the strong concentration of manufacturing employment in 1995 in the adjacent South outside peninsular Florida, western Texas, and a few other BEA economic areas in the nonmetro adjacent South. There was an increase in the concentration of manufacturing time employment in the adjacent South over the 1985-1995 time period.

**Figure 2. Manufacturing, Adjacent Nonmetro South**

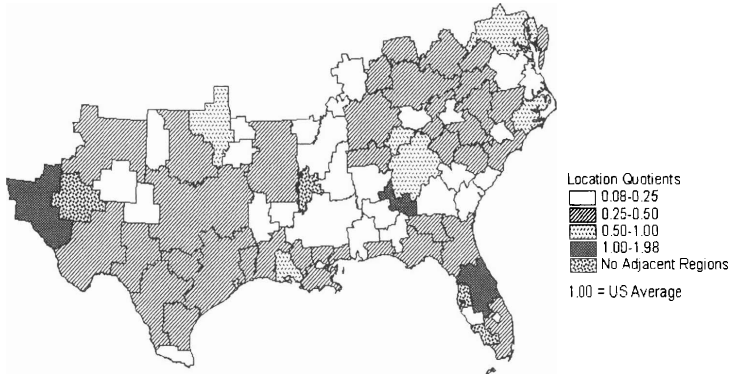
Source: Estimated by the authors from County Business Patterns (U.S. Census Bureau).

Increases in location quotients were much less common than decreases. It is possible that these trends are a reflection of the development of manufacturing industry clusters, as discussed by Henry, Barkley, and Zhang (1997). However, research is needed to evaluate the industrial composition of manufacturing industries increasing their concentration in the adjacent nonmetro South.

In Figure 3 the pattern of location quotients in business and professional services is reported for 1995; in general the indices are low when compared to the nation. These low indices are not unique to the South; they are indicative of the national tendency for this sector to be highly concentrated in large metro areas. Changes in location quotients between 1985 and 1995 were strong in some of the adjacent regions that are part of the largest metro areas—such as Dallas and Atlanta—but they exhibited declines in adjacent territory of other major metro areas—such as Miami and Houston. Beyond these largest of places, there was a general tendency for an upward concentration of business and professional services in a broad band of adjacent nonmetro areas stretching from Washington southwesterly towards New Orleans, in northern Florida, and in central Texas.

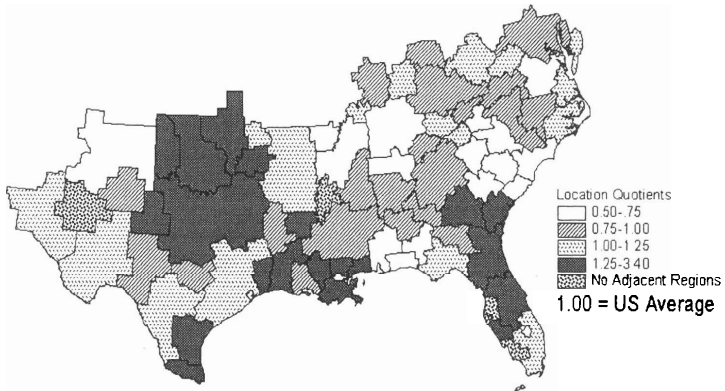
Health services have yet another geography, as indicated in Figure 4. Location quotients in 1995 are strong in much of east

**Figure 3. Business and Professional Services, 1995, Adjacent Nonmetro South**



Source: Estimated by the authors from County Business Patterns (U.S. Census Bureau).

**Figure 4. Health Services, 1995, Adjacent Nonmetro South**



Source: Estimated by the authors from County Business Patterns (U.S. Census Bureau).

Texas, Arkansas, Louisiana, and in Atlantic coastal Florida and Georgia. The concentration is weaker up the Appalachian chain and in BEA economic areas in North and South Carolina. Strong growth in the concentration of health services occurred in adjacent territory (as documented in Tables 1 and 2). With the exception of the northeastern tier of BEA economic areas in Tennessee, Kentucky, West Virginia, and Maryland, health service location quotients showed a consistent rise across the adjacent nonmetro South.

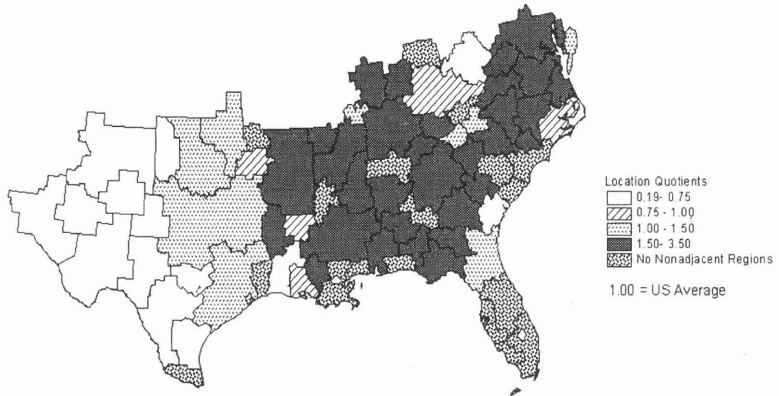
*Nonadjacent Location Quotients* Let us now turn to patterns and trends in location quotients for manufacturing, business and professional services, and health services in the nonadjacent nonmetro South.

Figure 5 documents the strength of manufacturing concentration in the nonadjacent South from Baltimore south to Florida and west to the Mississippi. There were extensive patterns of increases in manufacturing location quotients in the nonadjacent nonmetro South between 1985 and 1995. Absent from this trend was Florida, coastal BEA economic areas in Georgia and South Carolina, and in west Texas. The growth of manufacturing in the nonadjacent nonmetro South was even more important over the 1985-1995 time period than was the case in the adjacent nonmetro South, as indicated in Table 2, and Table 4. One out of five new jobs in the nonadjacent nonmetro South was in manufacturing, and the increase in the concentration of manufacturing in the nonadjacent South was stronger than the increase in the adjacent South. As with the adjacent South, the industrial composition of this growth remains to be determined, as well as the possible contribution of industry clusters to this growth (Henry et al. 1997).

Figure 6 describes the modest concentration of business and professional services in the nonadjacent South; not even one nonadjacent BEA economic area's territory has a concentration of employment in these industries at a level equal to the national average. Most regions have less than half of the national average proportion of employment in the business and professional services. However, the regions with the strongest concentration of producer services employment in 1995 also tended to be the regions that had increases in location quotients from 1985 to 1995. Declines in nonadjacent business and professional services

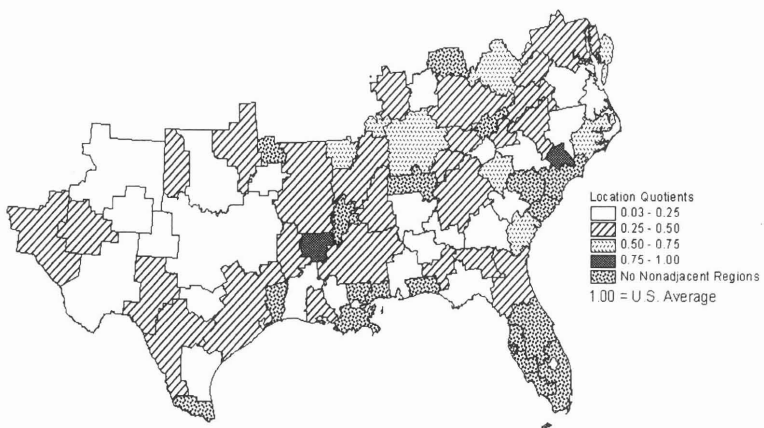


**Figure 5. Location Quotients -- Manufacturing, 1995, Nonadjacent Nonmetro South**



Source: Estimated by the authors from County Business Patterns (U.S. Census Bureau).

**Figure 6. Business and Professional Services, 1995, Nonadjacent Nonmetro South**

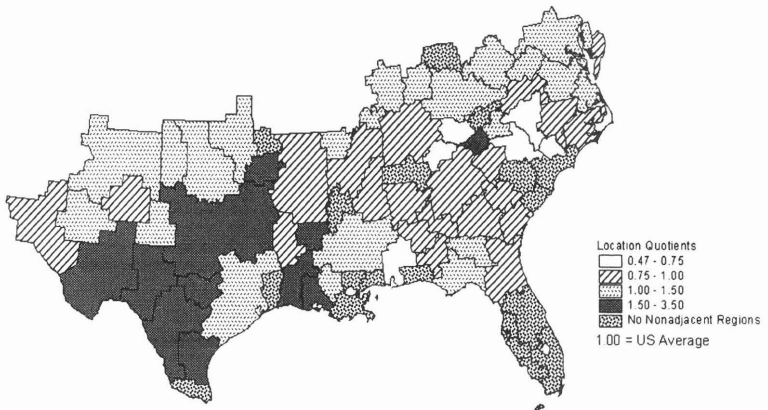


Source: Estimated by the authors from County Business Patterns (U.S. Census Bureau).

location quotients were prevalent in Texas and Oklahoma, as well as in much of the nonadjacent nonmetro South in Mississippi and Alabama.

Health services display another interesting pattern, as depicted in Figure 7. As is the case with adjacent nonmetro territory (See Figure 4), the western part of the nonmetro South and the northern tier of BEA economic areas have relatively high location quotients. The importance of health services employment over the South has increased much more rapidly than in the nation as a whole. This increase in location quotients comes on top of an already relatively strong index in the Western part of the nonadjacent South, and increases the indices in the Piedmont where a number of regions were still below 1.0 in 1995. The reasons for this strong concentration of health services in this part of the South remain to be explained; they could well be related to an influx of retirees who have relatively high demands for health services.

**Figure 7. Health Services, 1995, Nonadjacent Nonmetro South**



Source: Estimated by the authors from County Business Patterns (U.S. Census Bureau).

### **Concluding Reflections: Services Growth in the Nonmetro American South**

As in the United States as a whole, job growth in the nonmetro South in recent years has been dominated by expansion in service employment. Services job gains accounted for 87 percent of nonmetro employment growth from 1985 to 1995. In counties adjacent to metropolitan areas this share was 89 percent, while in nonadjacent counties it was 85 percent. The growth rate of employment in the nonmetro South was higher than the overall national average over this time period, although it was slightly below the growth rate for all nonmetro America over the study time period. This trend in employment is clearly correlated with the nonmetro-rebound in population experienced in the United States in the 1990s.

The relatively strong growth of nonmetro services was distributed broadly across categories of service employment. In the aggregate, the largest numbers of jobs were created in health services and retailing. However, business and professional services also exhibited an extremely rapid growth rate in much of the nonmetro South. Growth rates were almost identical in counties adjacent to metropolitan areas, and in more remote counties not adjacent to metropolitan areas. The leading sectoral contributors to job growth in the nonmetro South were similar in adjacent and nonadjacent territory—service industries.

This paper has documented the uneven geographic pattern of growth across the South in both adjacent and nonadjacent nonmetro territory. It has also reported the general tendency for nonmetropolitan territory growth rates in particular BEA economic areas to mirror the performance of metropolitan territory (or vice-versa). In Texas, Oklahoma and Louisiana the tendency was for performance of metropolitan, adjacent nonmetropolitan, and nonadjacent nonmetropolitan territory to be below the national average, while in the balance of the South the trend was towards above average performance in all three territorial categories. However, even in Texas, Oklahoma, and Louisiana there was a trend of nonadjacent territory outperforming metropolitan and adjacent nonmetropolitan territory.

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The nonmetro South outperformed the nation in its growth rate, even though the mix of industries found in the South in 1985 was “unfavorable” in the sense that many key sectors experienced relatively slow growth nationally. This was particularly the case with the mining, construction, manufacturing, and wholesaling sectors. However, the nonmetro South outpaced the nation in many of these industries, and had a positive competitive shift over this time period. Producer and health services are among the leading growth sectors, along with retailing. This analysis also documented the importance of manufacturing as a source of job growth in the nonmetro South over the study period.

While this paper does not include evidence on the location of the demand for these expanding goods and services producing industries in the nonmetro South, it is likely that a considerable proportion of this growth in employment was supported by exports to metropolitan areas in the South, elsewhere in the United States, and abroad (Beyers and Lindahl 1998; Malecki and Poehling 1999). While there is ample evidence regarding the export of manufactures from nonmetro areas, there is less evidence regarding trade in services. Survey work in other regions on trade in services does indicate within the producer services an export component that is growing over time (Porterfield & Pulver 1991; Beyers & Lindahl 1998). Cogent arguments have been made with regard to the growing importance of trade in other service industries (Williams 1997). For example, sectors such as health care rely to a growing extent on federal payments to hospitals and physicians, which represent export income to a nonmetro community. Tourist trade brings in export dollars to local retailers and accommodations providers. The growth of nonearnings income—the combination of transfer payments and dividends, royalties, pensions, and rents—also acts as export income stimulating the local service economy (Nelson & Beyers 1998). The growth in exports from expanded local manufacturers, producer service specialists, and other service sectors, acts as a stimulus directly and indirectly for other local services. These include the transportation services sector (trucking, rail, as well as air cargo, courier, and passenger air travel & travel services), wholesaling, retailing tied to local household markets, along with other consumer services, education, and the

local government sector (Beyers & Nelson 2000). The mechanisms of job creation in nonmetro areas that favor services employment has been the subject of considerable research in the nonmetro West—where growth has been more rapid than in the nonmetro South (for example Rasker 1995; Power 1996; Booth 1999). The pattern of structural change in the South mirrors that experienced recently in the West; survey research is likely to reach similar conclusions regarding the growing role of services in the economic base of southern communities.

The arguments presented in the preceding paragraph raise questions regarding the basis for the patterns of growth experienced in the nonmetro South in recent years. These include the following: What has been the flow of funds in the health care sector that has expanded so rapidly in the region? Is this growth a reflection of expanded payments through entitlement programs to nonmetro areas previously without health care capacity, leading to “catch-up” in the provision of nonmetro health care? What has been the basis of demand for the growth of nonmetro manufacturing and business/professional services in the nonmetro South? Is it export-oriented trade, or is it the provision of goods and services for local demand in an era of population growth in nonmetro America, or is it both? What has been the growth experience in sectors not included in this analysis in the nonmetro South, particularly in the public sector and of non-farm proprietorships? How has the growth of nonearnings income been linked to the growth of employment in the nonmetro South (Nelson and Beyers 1998)? Developing answers to these questions will require a combination of primary data gathering and the development of enhanced databases from secondary sources. Hopefully both types of research will be undertaken in the near future to help us better understand current trends in the economy of the nonmetro South.

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