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ABSTRACT This study documents the regional origins of the college-experienced population in the nonmetro South, using the National Longitudinal Survey of Youth, 1979 Cohort. As of 1994, the nonmetro South had generated over half of its own college-experienced adults between the ages of 30-38, a higher rate than that of any other region. Although the results of logistic regression estimates show that nonmetro southerners were less likely to attend college, those who left the region for college were more likely to return than other regional migrants, especially after age 30. In addition, the relatively low demand for college-trained labor in the nonmetro South made it possible for employers to meet their labor needs using a largely native workforce. College-experienced nonmetro southerners in the early 1990's apparently were willing to work for lower earnings in their home region than they could earn elsewhere, yet they received higher pay on average than did other returnees.

Any assessment of human capital development in the nonmetropolitan South must grapple with its uneven progress. Judged by the standard measure of adult educational attainment, the nonmetro South has never looked better, with a higher percentage of high school and college graduates than ever before in its history. Yet decades after the launch of the southern economic revival, the region lags every other by these same measures. Increasingly, employers place a sizable local pool of highly skilled and educated labor high on the list of factors affecting the decision to locate or expand (Teixeira and McGranahan 1998). The relatively low rate of college attendance and graduation in the nonmetro South is therefore likely to prove a key obstacle to full participation in the "New Economy" of high skill and high wages.

The emphasis on boosting college attendance rates is hardly confined to the nonmetro South. Although southern educational initiatives such as Georgia's Hope Scholarship program have received

national attention, much of the impetus for getting more youth into college now comes from the Federal government. (Perhaps it would be more accurate to say that the impetus *once again* stems from the Federal government. Clearly the Federal role in the growth of the college-educated population has been critical, as evidenced by the GI Bill and the tremendous increase in federally-funded university research between the end of World War II and the 1970s.)

The Clinton Administration in particular has made education a consistent priority, as evidenced by initiatives to replicate the Georgia scholarship experience nationwide. Certainly a reasonable argument can be made for the benefits of this type of program. For the individual, college experience, especially the completion of a 4-year degree, greatly expands career possibilities, promotes employment stability, and raises expected lifetime earnings. For communities, the benefits can also be substantial. The local pool of college-experienced labor (which includes all workers who have enrolled in college, whether or not they completed a degree program) not only presents a productive and adaptable workforce to employers, but is instrumental in building community capital as well. There is practically nothing bad to be said about it.

Nonetheless, policies aimed at increasing education levels surely have their limits when confronted with low demand for college-experienced workers. The dilemma for the nonmetro South is that adult educational attainment is constrained by what firms in the region require, and firms requiring a large pool of college-experienced workers are hesitant to enter or expand in a region where such workers are often hard to come by. In addition, local decision-makers may be reluctant to invest heavily in educational strategies that reduce dropout rates and encourage college attendance when the returns to the community appear to be small (Hobbs 1995).

There is also a less-often recognized complication. The local generation of college-trained workers, that is, local youth who attend college and then stay in or return to the area, is a primary determinant of the area's overall supply of well-educated labor. Individual education decisions, however, are contingent in part on signals in the local environment, including perceived financial gain from a college degree, and community attitudes and expectations about college attendance. A local labor market dominated by low-wage/low-skill employment often provides insufficient or even discouraging information about the economic and social benefits of college (Gibbs 1998).

In this article, I explore the geographic origins of the current education mix in the nonmetro South, focusing on the college-experienced population, and compare the labor market outcomes for college-educated nonmetro southerners with similar adults in other regions. With its combination of low attainment, low-skill industry mix, and relatively rapid economic and social change, the region provides an ideal case with which to study the links among college attendance, migration patterns, and local labor markets. The analysis is based on a cohort between the ages of 30 and 38, a group that has entered a long period of relative stability and is thus at an appropriate point for a retrospective look at career and residence paths (Gibbs and Cromartie 1994; Markey and Parks 1989).

Issues examined in this study include the importance of the nonmetro southern education system in generating the current college-experienced population, and factors associated with nonmetro southerners' decision to attend college. Regional differences in labor market outcomes for college-experienced adults, especially differences in earnings, are explored in detail. The causes of low nonmetro southern earnings compared with those of metro areas are evaluated, as is the relative earnings position of native and non-native workers by region. Although race often plays a key role in understanding social and economic phenomena in the South, discussion of racial differences is limited in this article to their effect on college attendance and on the earnings of college graduates. A full treatment of southern racial differences in educational and workforce opportunities is worthy of a separate article.

Much of what emerges from the analysis confirms conventional academic views of the nonmetro South, yet there are also surprises. County natives, for example, form a larger share of the nonmetro South's college-experienced workforce than in any other region. They are not merely "stayers" who never ventured beyond the local area, but are also returnees rebuilding the native pool of human capital. And their earnings, while lower on average than those of nonnatives, are relatively high compared with natives' earnings elsewhere. A chief aim of this study, then, is to revisit familiar ground from a new perspective, to uncover unexpected relationships that may lead us to rethink a few of our images of the nonmetro southern workforce.

About the Data

The analysis in this paper is developed using the National Longitudinal Survey of Youth, 1979 Cohort (NLSY-79). The NLSY-79 is a panel survey that originally included 12,686 respondents who were between the ages of 14 and 21 in 1979. Because of attrition and discontinued subsamples, the number had fallen to approximately 8200 by 1994. Some of these subsamples, specifically black youths and youths from low-income families, are overrepresented in the survey so that accurate subgroup statistics can be obtained. Weights are provided for each wave to correct for the disproportionate sampling design and allow one to draw inferences about the overall population.

Respondents were interviewed annually and are asked a wide range of questions concerning family composition, employment, income and wealth, education, geographic mobility, and social behavior and attitudes. The NLSY-79 is particularly valuable for comparing native and non-native outcomes because respondents were asked about their state and county of residence at age 14, and their residence at each interview from 1979 onward. For the purposes of this study, residence at age 14 is assumed to be the place where the respondent grew up. In addition, colleges attended were recorded for many respondents, allowing the researcher to link education choices with residential mobility.

Throughout the paper I adhere to standard Census geographic delineations. Hence, "South" refers to the region officially defined by the Census Bureau as stretching from Maryland and Delaware in the east, to Oklahoma and Texas in the west.

The Role of Natives in the Regional Education Mix

Despite significant and continuous increases in average schooling, adults in their thirties living in the nonmetro South in 1994 were more likely to be high school dropouts and less likely to have attended college than similar adults in other regions of the United States. Differences are particularly strong between the nonmetro South and the metro non-South—the share of four-year college graduates is about half as large in the former (Table 1).

The differences appear to be explained primarily by the allocation of economic activity between metro and nonmetro areas. Metro areas in general exhibit industry and occupational mixes that require more

Table 1. Educational Attainment of Adults Ages 30-38 by Region of Residence in 1994

	Nonmetro South	All Other Nonmetro	Metro South	All Other Metro
		(percent)		
Less than high school	23	13	16	13
High school	46	45	35	37
College-experience	31	42	48	50
College attendance	12	16	17	18
Associate's degree	5	11	8	7
Bachelor's or higher degree	14	15	23	25

Source: Calculated by the author with data from the NLSY-79.

advanced formal schooling and training, and reflect this in the large share of college graduates in the metro population. Meanwhile, regional differences are more muted. The share of adults with high school diplomas but no further education, for instance, is about the same in the nonmetro South and non-South, as is the share with a bachelor's or higher degree. The South remains distinctive, however, in its large share of adults without a high school diploma, and the small proportion with limited college experience, reflecting in part the disproportionate role of low-skill manufacturing and services in the region.

It is tempting to assume that the generation of human capital in the nonmetro South is a mirror image of skill requirements among the region's employers. As noted in the introduction, the interplay between labor demand and education choices may be subtler. Local job opportunities undoubtedly shape youths' perceptions of the job market and the returns to higher education (Stallmann, Mwachoti, Flora and Johnson 1995). Migration, however, partially mitigates regional variation in skill demand; if youth are not wholly constrained by job opportunities at home, their decision to attend college is predicated to some extent on opportunities available elsewhere.

One approach to analyzing this relationship is to decompose the current college-experienced pool by its geographic origins. We might expect the share of natives among nonmetro southern college-experienced adults to be higher than in other places for at least two reasons. First, lower regional demand for college-experienced labor will reduce the vacancy rate of appropriate jobs, thereby reducing the likely returns to migration for non-natives, unless the home-grown supply of labor is comparably smaller. This is unlikely given the opportunity for interregional migration. Second, the nonmetro South has historically been characterized by relatively isolated labor markets. Whether due to its cultural or its economic distinctiveness, southerners at all education levels have been less likely to move outside the region than models of economic benefit would predict. Although the Great Migration of blacks to northern cities ended one aspect of this isolation, its effect on the regional labor market for *highly-educated* labor was relatively weak (Wright 1986).

A decomposition in one year is a snapshot, of course, and may not fully convey the recursive migration patterns of college-experienced adults. In a world of perfect migration effectiveness, we would expect just enough movement to match people and jobs. Typically, however, large gross flows of migrants in and out of localities lead to relatively small net changes. Even if the available pool of college-experienced workers in the nonmetro South, for instance, were greater than the number of jobs, we would not expect to see all such jobs held by nonmetro southerners.

Our comparison will be between residence at age 14 and a point 16-24 years later, after respondents have completed most of their moves, including return migration. Previous studies of migration and regional human capital shifts, especially the return migration literature, have often used large areas such as "nonmetro South" as the relevant geography (Long and Hansen 1975; Li and Randolph 1982). We have retained this convention, although it means that anyone who grew up in the nonmetro South and remains there is a "stayer," even though she may have grown up in Mississippi and now be living in Virginia. To improve regional comparability using the delineations here, I also calculate the share of those working in the same county in which they grew up.

Respondents living in the nonmetro South in 1994 are indeed more likely to be native to the region regardless of education than other nonmetro dwellers, even though the potential origins of the lat-

ter are more widely distributed (Table 2). They are also less likely to have grown up in metro areas and more likely to have grown up in the same county in which they now reside. The third panel shows comparable statistics for metro residents (with the native percentages omitted), who mostly resemble the "other nonmetro" category rather than the nonmetro South.

Within regions, differences between education categories are less striking in terms of origin than expected. Nonmetro southerners without a high school diploma in 1994 are no more likely to have grown up in the region than college attenders and graduates, and only slightly more likely to be living in their county of origin. The nonmetro southern college-experienced population is somewhat more likely to have roots in the city than other nonmetro southerners, but less so than other nonmetro adults who attended college.

The weight of the evidence from Tables 1 and 2 suggests that Wright's thesis about the historical isolation of nonmetro southern labor markets has some validity even at the end of the twentieth

Table 2. Geographic Origin of Adults Ages 30-38 by Region of Residence and Education, 1994

	Native to region	Native to county	Metro origin
		(percent)	
Nonmetro South			
Less than high school	75	58	24
High school	77	66	21
College experience	73	54	28
All Other Nonmetro			
Less than high school	60	42	49
High school	73	56	26
College experience	61	41	37
Metro			
Less than high school	—	55	91
High school	—	57	90
College experience	—	41	88

Source: Calculated by the author with data from the NLSY-79.

century. High-skill labor market participants in the nonmetro South are primarily locals, the majority of whom attended local colleges and never had to leave home (Gibbs 1998). Others left for college and work experience, but later returned, perhaps in response to the desire to "settle down" and begin a permanent household.

The Regional Production of College-Experienced Workers

The relatively high proportion of natives among the most-educated nonmetro southerners suggests that the regional production of college-trained workers is adequate to supply its labor requirements, unsurprising given that these needs are relatively low. But if an insufficient pool of homegrown labor does not create a bottleneck for employers, an economy composed disproportionately of low-skill job requirements may still dampen regional college attendance and/or graduation rates.

Table 3 shows the educational attainment of adults categorized by the region in which they grew up, rather than by their current residence. The pattern of regional educational attainment closely parallels labor market differences, particularly the higher high school dropout and lower college attendance rates in the nonmetro South. The percentage of adults without a high school diploma splits along South/non-South lines, rather than along nonmetro-metro lines, a vestige perhaps of the historical regional differences in the value of formal schooling, or of continuing regional differences in demographic and economic profiles (although the latter have largely faded in most areas).

The nonmetro South stands out most sharply from the rest of the United States. in college attendance—36 percent of those living in the nonmetro South as youth attended college compared with 46-48 percent of those living in other places. Lower southern rates hold across all categories of the college-experience group, including those with associate's degrees and those with bachelor's or higher degrees. A comparison with Table 1 further supports the notion that while the nonmetro southern attendance rate is low, it may exceed the actual employment of college-educated workers. The comparison of rates is meant to be suggestive only, since they are based on a narrow cohort of the nonmetro southern population measured at two points in time.

If one assumes, however, that all nonmetro southern youth in the NLSY-79 sample who attended college stayed in or returned to the

Table 3. Educational Attainment of Adults Ages 30-38 by Region of Youth

	Nonmetro South	Other Nonmetro	Metro South	Other Metro
		(percent)		
Less than high school	21	11	18	14
High school	43	42	36	38
College-experience	36	47	46	48
College attendance	14	16	17	17
Associate's degree	5	11	8	7
Bachelor's or higher degree	17	20	21	24

Source: Calculated by the author with data from the NLSY-79.

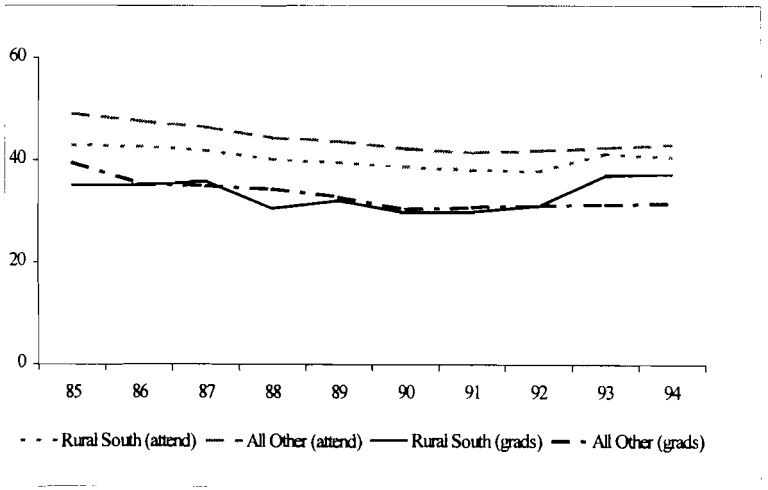
region after terminating schooling, the total number of jobs requiring a college degree could easily be filled with home-grown workers. The potential native labor pool for jobs requiring any college experience is 35 percent higher than the number employed; the pool of native college graduates (bachelor's degree or higher) exceeds employment by 42 percent. Certainly, a large number of college attenders who left the nonmetro South had no intention of returning, and this would have reduced the pool available to employers. Nonetheless, it is also clear that the traditional role of the region as an exporter of human capital continued into the 1980s.

Wages for college graduates relative to less-educated workers soared during the 1980s in metro areas, but rose modestly in the nonmetro South (or in any other nonmetro area). The combination of an ample potential labor pool and low relative wages points to sluggish demand for high-skill labor as the primary reason for the region's lagging performance during this period. Yet, the same combination should also have increased its attractiveness to firms looking for an educated, but low-cost, workforce. Recent data from the Census Bureau's Current Population Survey show such a turnaround (Nord and Cromartie 1999). As regional real wages have risen in the 1990s, the long-standing "brain drain" appears to have ceased, at least for the moment.

Is such a revival of high-education employment evident in the NLSY? Although it is hard to disentangle shifting demand from life cycle patterns and other forces acting on migration, there are indeed signs that nonmetro southerners are responding to the improved fortunes of their home region in recent years. In figure 1, the proportion of nonmetro southern college attenders and graduates (identified by place-grew-up) residing in their home county is tracked against the comparable share for all regions between 1985 and 1994. Native attrition occurs in all regions, brought about by gradual migration to other places. For both attenders and graduates, the nonmetro southern retention rate was lower than for the rest of the country in 1985, when respondents would have been between the ages of 21 and 28. The national/nonmetro South gap for attenders remained fairly constant until 1992, and by 1994 it had nearly closed.

College graduates show a similar pattern. But whereas in other regions the share of natives residing at home levels off around 1990 (when the cohort would have been age 26-33), it climbs sharply in the nonmetro South between 1992 and 1994, and the retention rate

Figure 1. Share of College-Experience Natives in Home County by Region of Residence, 1985-94.



Source: Calculated by the author with data from the NLSY-79.

actually becomes higher than it was in 1985. The settling down period typically experienced between the ages of 25 and 35 explains part of the late rise in native retention, acting as a counterweight to the attrition due to random events and opportunities that lure people away. Yet one would expect a similar trend in other regions. A portion of the late increase in retention may also be due to the enduring cultural distinctiveness of the region and thus a strong pull to home. Still, it is unlikely to be coincidental that this jump occurs at just the point when the nonmetro economy pulled out of the 1990-91 recession ahead of metro economies, and when computer-related and other advanced production technologies were increasingly common in nonmetro establishments (Ghelfi 1992/93; Gale 1997).

Measuring Labor Market Effects on College Attendance

Up to this point, the analysis has indicated an association between low college attendance rates and low college-experience labor demand in the nonmetro South. Native nonmetro southerners are less likely to attend or graduate from college, but probably not in proportion to the relatively weak skill demand of the region's industry mix. In this section, I estimate directly the role of local labor market characteristics on the college attendance decision.

Given the national homogenization of culture and communications media, southern nonmetro youth are more likely than ever to calculate the advantages of a college education in much the same way as metro youth. Yet there are a number of reasons for believing that local labor markets influence education decisions. First, the social and community capital imparted by family and friend networks is an important predictor of educational outcomes. Parents with college education are more likely to have children who go to college, apart from family income, due to parental expectations and the home environment they provide. It seems reasonable that social networks surrounding the families, including peers and their families, and community expectations influence these decisions as well. Adult education levels play an important role in the strength and magnitude of these networks (Behrman, Pollak and Taubman 1989; Cameron and Heckman 1993).

Second, employers who require highly-educated labor may be more willing to support educational improvements in the local community, including providing financial support. Along with parents

who demand and support high-quality schools, they may encourage college attendance indirectly by strengthening the academic rigor and variety of offerings. We know, for instance, that nonmetro schools in general, and nonmetro southern schools in particular are less likely to offer advanced college preparatory courses (Ballou and Podgursky 1998).

Finally, the calculation of expected future benefits necessarily enters into the decision to attend college rather than enter the labor market immediately. To the extent that the local labor market provides his or her clearest picture of the financial returns to higher education, areas with a plethora of high-earnings jobs for the college-educated are more likely to motivate students to continue their schooling in anticipation of their own future earnings.

A Model of College Attendance

Building on the links described above, we can model the decision to attend college attendance as a function of the respondent's personal, family, labor market, and access (cost) characteristics. Personal characteristics include academic achievement, measured here by GPA in introductory high school courses such as math, science, and English; race; gender; and life-course decisions, including the decision to marry or have a child as a teenager. I have also included a variable measuring age at the time of high school completion as an additional measure of ability and motivation. Higher achievement levels should increase the youth's probability of attendance, while marriage and childbirth add financial and emotional responsibilities that raise the opportunity costs of college. Nonmetro southern youth are more likely to marry while in their teens (a complementary discussion of these issues can be found in Wenk and Hardesty 1995).

Family income and parents' education have previously been found to be critical predictors of attendance. Both factors potentially place nonmetro southern youth at a disadvantage. The longstanding gap between nonmetro and metro incomes, in particular, may constrain college attendance. Until quite recently, nonmetro southern family incomes were the lowest in the United States, and as late as 1980, median incomes in that region were only 70 percent of the metro median, according to published data from decennial censuses (U.S. Census Bureau 1981, 1991). Having at least one parent with a college education creates expectations and reinforces positive

perceptions of college life and subsequent careers. Family size and composition, measured by the number of siblings and whether the household is headed by a single mother, may affect time invested in the youth's intellectual development. Overall, nonmetro southerners do not suffer a significant disadvantage on most of these factors, although their parents have lower incomes and educational attainment on average and have slightly large families, and the youth themselves are more likely to marry while in their teens.

Geographic access to college also affects youths' perceptions, and helps determine their familiarity with and positive feelings toward college. The presence of a nearby college increases the likelihood of participation in social and cultural activities, and fosters a large, local college-educated workforce that shapes community values and may reinforce the desire to attend.

Finally, labor market and environmental characteristics are incorporated into the full model: the ratio of the average local earnings of college graduates and high school dropouts, a proxy for relative monetary returns to college; local employment growth, which may dampen college attendance as the opportunities for satisfactory immediate employment increase; and the share of the county's adult population with a college degree as a measure of community capital and the likelihood of social interactions with peers and adults in households where education is highly valued. Also included is a measure of college costs, defined as the tuition rates at the respondent's primary state university.

The model of college attendance is estimated for all high school graduates in the NLSY-79 with logistic regression techniques, and the results are reported as the multiplicative effect of the independent variable's coefficient on the odds-ratio. Hence, values greater than unity indicate a positive association with college attendance; values below unity indicate a negative association. The findings generally follow expectations (Table 4, column 1) with a few notable exceptions. Family income, expected to be a powerful positive predictor, is insignificant once other factors are accounted for, possibly indicating variable measurement problems. More curious, perhaps, are the significant positive effects of being black or growing up in a female-headed household, and these results require further comment. A previous study by Gibbs (1998) finds that the college attendance rate for black high school graduates in the nonmetro South is nine percentage points lower than for nonmetro southern whites. The black-white gap

Table 4. Determinants of the Likelihood of Attending College

Variable	All High School Graduates		Nonmetro Southern HS
	Individual and family	Plus region and local	Modified full model
	Multiplicative effect on the odds-ratio		
Grades	1.996***	2.036***	2.228***
Age at high school	0.808***	0.812***	0.750**
Black	1.537***	1.466***	1.119***
Male	1.021	1.017	1.003
Married in HS	0.972	0.986	1.141
Had child in HS	0.643**	0.631**	0.620
Family income	1.000	1.000	1.000
Parents' education	5.585***	5.374***	4.251***
Female-headed family	1.464***	1.406**	1.841
Always lived in area	0.823**	0.815***	0.881
Siblings	0.930***	0.935***	0.939
Average state tuition	0.999***	0.999***	0.999
Nonmetro residence	0.785**	0.963	—
Southern residence	0.939	0.979	—
Nonmetro and southern	0.994	0.975	—
Adjacent to metro area	—	—	2.216***
College/dropout wage	—	1.268*	0.941
Local job growth	—	0.994*	0.978*
College in county	—	1.326***	0.973
Share of workforce with college degree	—	4.288*	9.990***
Number of cases	4132	4127	463

Note: ***, **, * denote statistical significance at 1, 5, and 10 percent levels, respectively.
Source: Calculated by the author from the NLSY-79.

is similarly large on an array of other measures of socioeconomic well-being, many of which are strongly associated with educational attainment. In particular, the inclusion of family income, parents' education, and high school grades in the model are key in explaining the reversal of the negative partial correlation between college attendance and being black. The attendance rate of youth from female-headed households undergoes a similar reversal when the raw rate is compared with the expected rate derived through regression.

Binary variables denoting nonmetro residence, southern residence, and an interaction between the two have been added to test whether geography plays an additional role above and beyond its indirect effect on other characteristics. Nonmetro youth are significantly less likely to attend college, even after controlling for personal and family characteristics, and tuition costs. But there is no disadvantage to a growing up in the South per se, nor does being nonmetro and southern place respondents in a sort of "double jeopardy." The addition of local characteristics, however, appears to explain away the effects of rurality, and each of these characteristics has a significant and expected influence on college attendance (Table 4, column 2).

County characteristics affect attendance within the nonmetro South as well (Table 4, column 3). When the equation is estimated for the subset of respondents who grew up in the nonmetro South, the number of significant independent variables falls. Achievement, race, and parents' education continue to be strong predictors of attendance, although the predictive power of race is diminished. Among the local characteristics, metro adjacency and a highly educated local workforce is positively associated with attending college, while higher local employment growth rates dampen the likelihood of attendance. Attributes associated with urban or high-skill labor market, then, help generate and reinforce both the expectations and the means leading to high college attendance rates. The nonmetro South, however, does not appear to be disadvantaged in this sense more or less than other nonmetro regions, nor is there a general southern disinclination to pursue higher education.

Employment Characteristics of the College-Experienced Workforce in the Nonmetro South

The relatively small size of the college-experienced population in the

nonmetro South reflects an industry mix that depends much less on high-skill and highly-educated labor than in other regions. The historically distinct character of the nonmetro southern economy has changed dramatically since mid-century. Yet as late as the 1980s, Falk and Lyson (1988) documented an economy still weighted toward low-skill work paying low wages—in sharp contrast to the suburban labor markets in major urban centers.

Furthermore, the region's college-experienced population is unlikely to be a downsized version of metro college attenders and graduates for several reasons. One is that the nonmetro economy is organized differently, less marked by high-level administrative and managerial functions, or by high-tech research and development facilities. In many nonmetro counties, the majority of college-educated workers are employed by the public school system and by local and state government. While these jobs typically offer stability and comfortable living standards, they are less likely to draw upon graduates of the most competitive institutions, or to attract those seeking long-term career investments.

Like other nonmetro regions, the nonmetro South by definition tends to have small geographically concentrated pools of college-experienced labor. The specialization of skills that typically accompanies urbanization is in less demand here, which also dampens wages as well as workers' incentives to invest in additional human capital. Local labor markets with large numbers of jobs requiring college experience, an essential characteristic of most urban markets, offer greater opportunity to climb the local job ladder. Large markets also aid the job-worker match process for two-earner households, now the norm among this segment of the population. Such households in small towns frequently experience difficulties finding two suitable jobs within commuting distance.

Despite these difficulties, nonmetro southerners with college experience in this age group appear to have labor force participation and employment rates comparable to similar adults elsewhere (Table 5). In fact, metro residents exhibited lower employment rates in 1994, most likely as a residual effect of the 1990-91 recession, which affected metro economies disproportionately. Likewise, college-experienced adults in the nonmetro South are about as likely to be employed in white-collar occupations as their counterparts in other regions--and more so than other nonmetro college-trained workers.

Table 5. Labor Characteristics of College-Experienced Adults Ages 30-38 by Region of Residence, 1994

	Nonmetro South	Other Nonmetro	Metro South	Other Metro
		(percent)		
Labor force participation rate	89	90	88	88
Employment rate[a]	88	88	84	84
Managers	16	15	21	19
Professionals	31	27	33	30
Other White Collar	13	9	10	9
		(1994 dollars)		
Average Earnings	28,137	25,107	30,960	31,132
		(percent)		
Earnings relative to nonmetro South	100	89	110	111

[a]Employment rate is defined as (% Employed ÷ % College-Experienced Pop. Ages 30-38). Source: Calculated by the author with data from the NLSY-79.

Among those employed in 1994, average annual earnings were higher in the nonmetro South than in other nonmetro regions, a break from the recent past; and about 10 percent lower than metro earnings (last panel in Table 5). If nonmetro southern earnings are lower than in metro areas, why are 46 percent of the college-experienced workers in the region from other, mostly metro, places? The answer lies in understanding that this population is in fact a heterogenous group, that the jobs attracting regional "outsiders" are not identical to that for natives. Interregional migrants to the nonmetro South, for example, will have less initial psychic attachment to place, less likely to have social or kinship networks to bind them as they do natives. Hence nonmonetary factors on average will play a smaller role, and migrants will require a higher destination wage rate in order to move. Also, migrationists have long held that migrants are a self-selected group, more motivated to make large investments in themselves to improve their earnings and other desirable residence/job characteristics. They are therefore more successful in the labor market, on average, at least over the long run, than stayers (Greenwood 1985; Cadwallader 1993). If so, then it is deceptive to compare regional earnings without taking this heterogeneity into account.

Table 6. Annual Earnings of Natives and Non-natives by Region, 1994

	Native to region	Native to county	Interregional migrants	County native-to-migrant ratio
	(1994 dollars and percent)			
Nonmetro South	27,525	27,670	29,979	92.2
Other Nonmetro	23,834	23,195	27,236	85.2
Metro South	29,851	26,668	33,028	81.7
Other Metro	32,835	31,073	31,390	99.0

Source: Calculated by the author with data from the NLSY-79.

Table 6 illustrates the importance of distinguishing natives and in-migrants in evaluating labor market opportunities. Within each resident type, native or migrant, the regional rankings of average regional earnings are fairly consistent, with metro residents of each type earning more than nonmetro southerners, who make more than nonmetro nonsoutherners. Similarly, with few exceptions, natives earn less than interregional migrants. The attractiveness of the nonmetro South becomes clearer when we compare the annual earnings of interregional migrants in the nonmetro South ($29,979 in 1994 dollars) with the earnings of county or regional natives in metro labor markets (as low as $26,668 for county natives in the metro South). Once lower nonmetro housing costs are factored in, real earnings may be even higher for nonmetro southern in-migrants.

The crosstabulations imply that the nonmetro Southern economy is not unique other than that it is both nonmetro and southern, that these two attributes operate additively rather than interactively. To test this more rigorously, and to identify the productive characteristics of natives and non-natives that contribute to earnings differences, I regress (the log of) annual earnings on a conventional set of associated characteristics (Table 7). The first equation includes basic demographic characteristics, while the second and third are estimated with job-related and family characteristics added sequentially to test their ability to explain the association between location and earnings. In all three equations, I estimate the effects of nonmetro and southern

Table 7. Determinants of Earnings Among College-Experienced Adults Ages 30-38 in 1994

	Demographic and regional characteristics	Plus job-related characteristics	Plus family characteristics
		(parameter estimates)	
Annual hours	.01699***	.01592***	.01469***
Black	-.08308***	-.08074***	-.04987*
Female	-.24144***	-.23936***	-.05002
Age	.01611***	-.00070	.00512
College graduate	.30660***	.26224***	.23508***
Health problems	-.34867***	-.25890***	-.25162***
Nonmet residence	-.23635***	-.24846***	-.25875***
Southern residence	-.04842*	-.04174*	-.04822**
Nonmet South	.07945	.11160	.16742***
Native of county	-.05851**	-.09225***	-.07990***
Nonmet South/Cnty	.08230	.05812	.07927
Manager/Professional	—	.14724***	.15129***
Manufacturing	—	.19782***	.18236***
Transportation, Utilities	—	.21753***	.21203***
Public Administration	—	.21858***	.20809***
Professional Services	—	.05940**	.06458**
FIRE	—	.22131***	.21320***
Job Tenure (months)	—	.00088***	.00086***
Married	—	—	.05120*
1 child or more	—	—	.10250**
2 children or more	—	—	.05223
Female x 1 child or more	—	—	-.19768***
Female x 2 children or more	—	—	-.21442***
Age of youngest child	—	—	-.00687*
No. of observations	2902	2772	2772
Adjusted R-squared	.226	.329	.350

Note: ***, **, * denote statistical significance at 1, 5, and 10 percent levels, respectively.

Source: Calculated by the author from the NLSY-79.

residence, residing in the same county that one grew up in, and appropriate interactions.

The family characteristics in the third equation require explanation. We are primarily interested in how family size and composition affect labor supply decisions, and by extension, wages, particularly for women. In addition to gender in the basic demographic set, the family variables measure: whether the worker is married, whether there is at least one child in the household, and whether there are two or more children; the age of the youngest child in households with at least one child; and interactions between gender and the presence of children. A second possible relationship affecting the results is the link between the decision to have children and the financial stability of the household.

Nonmetro residence and southern residence separately depress earnings for college-experienced earnings, the effect of the former being much greater, however. As implied in the crosstabulations, county natives earn significantly less than nonnatives after other productivity and family-related factors are accounted for. Neither the nonmetro/South interaction, nor the nonmetro/South/native interaction has significant predictive capabilities until the family-related characteristics are added in equation 3. Once family composition is controlled, a nonmetro *and* southern residence is associated with *higher* annual earnings. Thus the "double jeopardy" of living in the nonmetro South is less burdensome than the negative effects of its separate components would indicate. The magnitude of the estimates confirm the findings in the crosstabulations—college-trained nonmetro southerners earn less than similar metro wage earners, but somewhat more than other nonmetro workers.

Aside from the locational effects of a nonmetro southern residence, do nonmetro southerners with college-experience tend to have characteristics associated with higher or lower earnings? The answer is that while a few of their attributes actually boost nonmetro southern earnings, there are more characteristics associated with the region that have a depressing effect on earnings (Table 8). Specifically, nonmetro southerners are more likely to be married and have children in the household. They are also more likely to be engaged in manufacturing, all of which appear to raise earnings. But they are also more likely to be black, to report health problems, and to work in occupations with lower earnings. On balance, nonmetro southerners' personal and job-related attributes reduce their earnings relative to

Table 8. Nongeographic Factors Contributing to Nonmetro Southern Earnings Difference Relative to Nonsouthern Metro Earnings

	Nonmetro Southern Mean	Nonsouthern Metro Mean
Key "nongeographic" factors contributing to higher nonmetro southern earnings relative to metro areas		
Married = Yes	.65	.60
One or more children in house-	.64	.59
Industry = Manufacturing	.29	.18
Key "nongeographic" factors contributing to lower nonmetro southern earnings relative to metro areas		
Race = Black	.16	.09
Health problems = Yes	.07	.05
Age of youngest child	3.94	2.87
Occupation = Manager/Prof.	.47	.49
Industry = Public Admin.	.04	.06
Industry = Fire	.04	.08

Source: Calculated by the author using data from the NLSY-79.

other U.S. workers with college experience. It should be noted, nonetheless, that these differences in the mean value of characteristics explain only a small portion of the total gap between, say, nonsouthern metro workers and nonmetro southerners.

Conclusions

This study documents the regional origins of the college-experienced population in the nonmetro South, using the National Longitudinal Survey of Youth, 1979 Cohort. As of 1994, the nonmetro South had generated over half of its own college-experienced adults between the ages of 30-38. The region's high rate of homegrown human capital may stem in part because of its lower demand for highly-educated labor, but also because earnings for natives are relatively high. In

fact, while both nonmetro and southern residence depresses earnings, the interaction between the two partially compensates for the separate location effects, so that nonmetro southerners with college-experience earn more on average than their nonmetro counterparts elsewhere.

College attendance and graduation rates among nonmetro southern youth are the lowest in the United States, but apparently generate enough local talent to supply both regional needs and create a large, if diminishing, outflow of college-trained talents to other places. The nonmetro South departs from national trends by recapturing its college-trained outmigrants once they enter their 30s, although this may be a function of nonmetro and southern prosperity in the 1990s compared with the preceding decade. The key to higher college attendance rates may lie with renewed prosperity; the region's low rates are explained to a large degree by its many low-skill-based labor market areas and low level of college-educated adults, which provide weaker reinforcement to the perceived benefits of a college education.

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