RURAL DEVELOPMENT IN THE 1990's: DATA AND RESEARCH NEEDS

by

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Rural America: Lagging Economic Performance

Rural America has been undergoing significant economic adjustments throughout the 1980's. Beginning with a decline in employment between 1979 and 1982, including the loss of nearly 550,000 manufacturing jobs, the nonmetro economy has been beset by change. As a result, twenty years after the vaunted "rural Renaissance" began, many indicators of rural conditions show a rural America under stress.

Three aggregate indicators of nonmetro performance are particularly useful: employment, income, and migration.

Employment and Unemployment - Since the peak of the previous economic expansion in 1979, nonmetro employment growth has generally been slower than urban growth. By 1988 metro area employment had grown by over eighteen percent, while nonmetro area employment had grown by only about eight percent. As Table 1 shows, higher rates of urban job growth were the case during the recessions of 1980-82, and through most of the recovery. Only in 1987-88, the most recent year for which we have data, does it appear that rural employment growth has returned to rough parity with that of metro areas. However, the relative improvement in that year is largely the result

Table 1. Average employment growth, 1979-88

County aggregate	1979-80	1980-82	1982-88	1987-88
U.S. Total	0.4	0.4	15.4	2.3
Metro	0.6	0.6	17.3	2.2
Nonmetro	-0.4	-0.3	9.0	2.4
Region				
Metro				
Northeast	0.1	-0.7	12.9	1.4
Midwest	-2.1	-2.6	15.3	2.3
South	2.0	3.3	19.8	2.6
West	2.4	2.0	20.8	2.6
Nonmetro				
Northeast	-0.1	-1.6	17.1	2.9
Midwest	-2.2	-1.8	5.2	2.7
South	0.4	0.6	9.8	2.2
West	1.6	1.7	9.7	2.2

Source: Bureau of Labor Statistics county data.

of a marked decline of employment growth in the metro Northeast, rather than an improvement in nonmetro employment growth.

Because of the slow growth of rural employment, the nonmetro unemployment rate has been above the metro rate since 1979. This pattern prevailed in virtually every region in every year of the 1980's, as shown in Table 2. This is a reversal of the traditional pattern of unemployment rates.

To many observers, a more troublesome fact is that the relative unemployment situation in nonmetro areas has been getting worse as the national economic recovery continues. For example, the nonmetro unemployment rate was 107 percent of the metro rate in 1979, 118 percent in 1982, and 135 percent in 1988. Thus, while the rural unemployment rate has fallen from 11.1 percent in 1982 to 6.9 percent in 1988, the slower rate of job growth in nonmetro areas has continued to cause stress.

Income and Poverty - During the 1960's and early 1970's there was a dramatic improvement in the relative income position of nonmetro people. (See Figure 1.) That improvement continued until the energy embargo and recession of 1973, after which per capita rural incomes remained at roughly 77 percent of urban incomes until the end of the 1970's. During this decade there has been a slow erosion of these earlier relative rural income gains, so that by 1987 the relative per capita income of nonmetro people is about the same as it was in 1970.

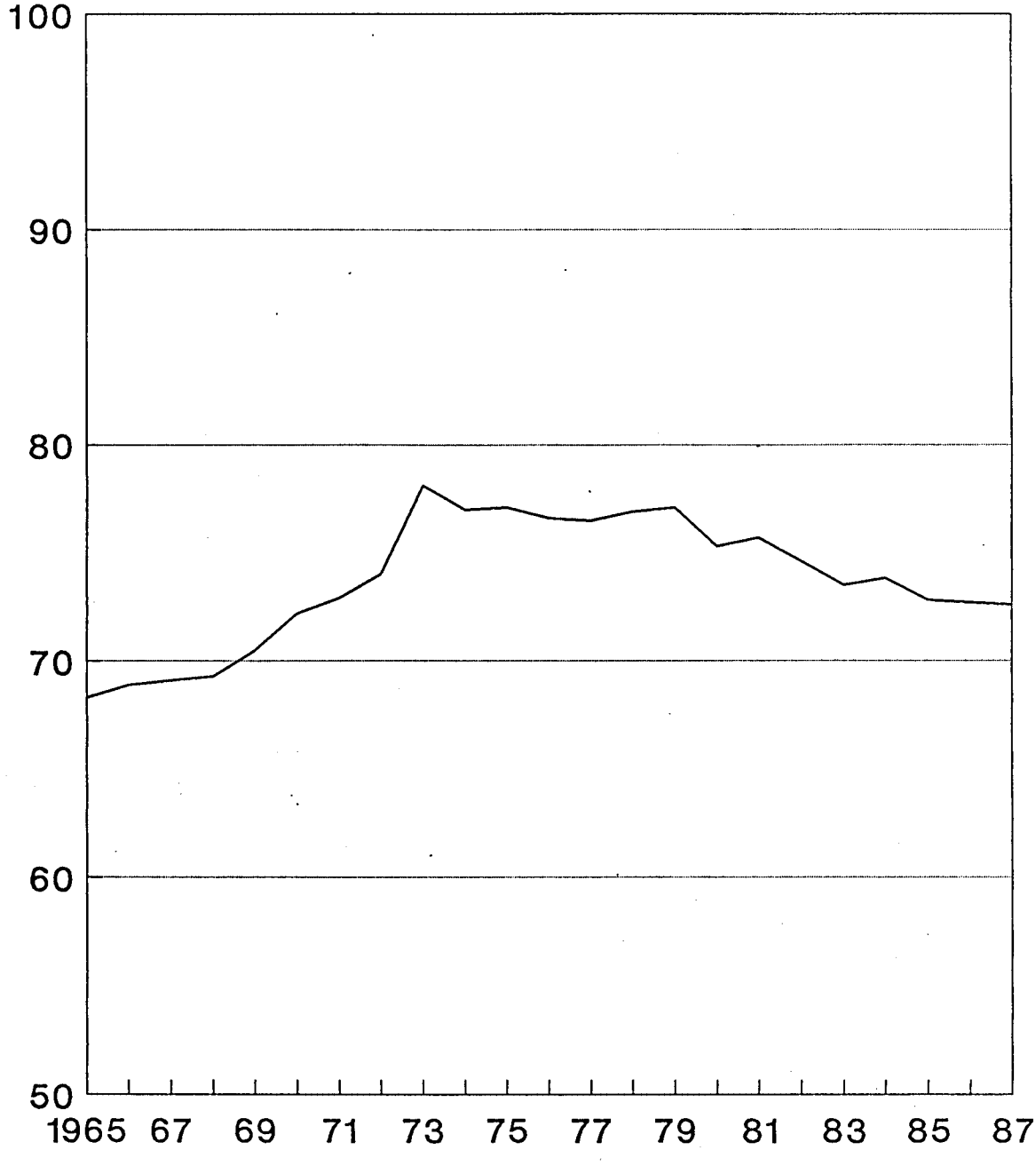
The nonmetro poverty rate which stood at 13.8 percent in 1979 rose rapidly during the early 1980's recessions, as did the urban poverty rate. This was

Table 2. Average unemployment rates, 1979-88

County aggregate	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
U.S. Total	5.8	7.1	7.6	9.7	9.6	7.5	7.2	7.0	6.2	5.5
Metro	5.7	6.9	7.4	9.3	9.1	7.1	6.7	6.4	5.7	5.1
Nonmetro	6.1	8.0	8.5	11.1	11.2	9.1	9.1	9.0	7.9	6.9
Region										
Metro										
Northeast	6.5	7.0	7.3	8.8	8.5	6.7	6.0	5.4	4.4	3.9
Midwest	5.5	8.3	8.7	11.2	10.8	8.2	7.6	6.9	6.4	5.6
South	5.0	5.8	6.5	8.1	8.4	6.4	6.3	6.7	6.2	5.6
West	5.8	6.6	7.1	9.4	9.1	7.2	6.8	6.6	5.9	5.2
Nonmetro										
Northeast	7.0	8.3	8.4	10.5	10.8	8.1	7.3	6.6	5.4	4.8
Midwest	5.5	8.0	8.3	10.8	10.8	8.9	9.0	8.3	7.4	6.3
South	6.1	7.7	8.5	11.1	11.5	9.3	9.4	9.8	8.4	7.5
West	7.3	8.5	9.2	12.0	11.7	9.8	10.0	10.1	9.1	8.0

Source: Bureau of Labor Statistics county level data.

Figure 1. Ratio of Nonmetro to Metro Per Capita Income



Source: Bureau of Economic Analysis

to be expected. However, contrary to previous experience and unlike the urban poverty rate, the nonmetro poverty rate has remained stubbornly high throughout the national economic recovery. For example, the nonmetro poverty rate in 1982 was 17.8 percent. In 1987, the latest date for which poverty data are available from the Current Population Survey, the nonmetro rate was still nearly seventeen percent.

A major difference in the composition of the metro and nonmetro poor population is the higher share represented by the working poor in rural areas. This reflects, in part, the lower-skill occupational structure and higher incidence of part-time work in rural labor markets. Because so many of the rural poor work, sluggish performance in rural economies is likely to be translated directly into measured poverty in nonmetro areas.

Population Retention - Stagnation in rural economic growth has lead to a resumption of rural outmigration in the 1980's, after a decade (the first in modern history) in which more people moved to rural areas from cities than the reverse. The nonmetro population growth rate through 1987 fell to about one-half the metro rate; it had exceeded the metro rate in the 1970's by almost 40 percent. Between 1980 and 1984 the total outmigration was quite modest, only about 30,000. But in the past several years the annual net outmovement has been nearly 500,000. That rate is substantially above the annual average for the decades of the 1950's and 60's. In 1986-87 more than 1,250 (out of about 2,400) nonmetro counties lost population. The persistence of high nonmetro unemployment and poverty rates is even more striking given this scale of net outmovement.

Economic Specialization and Structural Adjustment

Most nonmetro counties are sparsely settled with few towns as large as 5,000 or 10,000 people, and most rural economies remain relatively specialized. In fact, the process of local economic development in most rural communities since World War II involved moving from one economic specialization to another, as the dominance of natural resource-based industry receded. Many rural communities have proved to be too small to have meaningful diversification of their economic base. Thus, while the decline of natural resource-based industries as the major rural economic activity has resulted in greater diversity for rural areas as a whole, small rural economies typically continue a dependence on a few major employers in a small number of closely related industries.

Over the long term, economic specialization is a serious handicap to the development of rural areas. Structural decline in a single sector can cause widespread dislocation threatening the viability of an entire community; there are simply no expanding sectors to take up the slack when decline begins. For rural areas collectively, the problem of specialization is made worse by the fact that entire regions often share a common economic specialty--farming in the mid-West, manufacturing in the South and East, mining in Appalachia.

Manufacturing, agriculture, and mining are important industries in rural America. Collectively, nonmetro counties with one of these economic sectors as the dominant economic base make up about one-third of all nonmetro

counties and contain nearly 40 percent of all rural people. As Table 3 shows, all three of these county types have performed worse than the nonmetro average in terms of employment growth from 1979-88, with the mining counties by far the worst. It is also clear from the population change column in the table that there is a relationship between economic performance and population retention.

There are important differences in the per capita income levels in these three types of counties as well. As Figure 2 shows the agriculture dependent nonmetro counties have consistently had higher per capita incomes than the other counties, although there has been greater volatility in income levels in the agriculture counties. This income instability, when combined with the significant asset devaluation that occurred in the farm sector in the early 1980's, contributed to the national perception of a rural/farm crisis early in the decade. But during the same period, many more people were displaced by rural manufacturing job losses in the recessions of 1980-82, and for the first time in memory for nonmetro areas, total manufacturing employment remains below the previous (1979) peak well into the economic expansion.

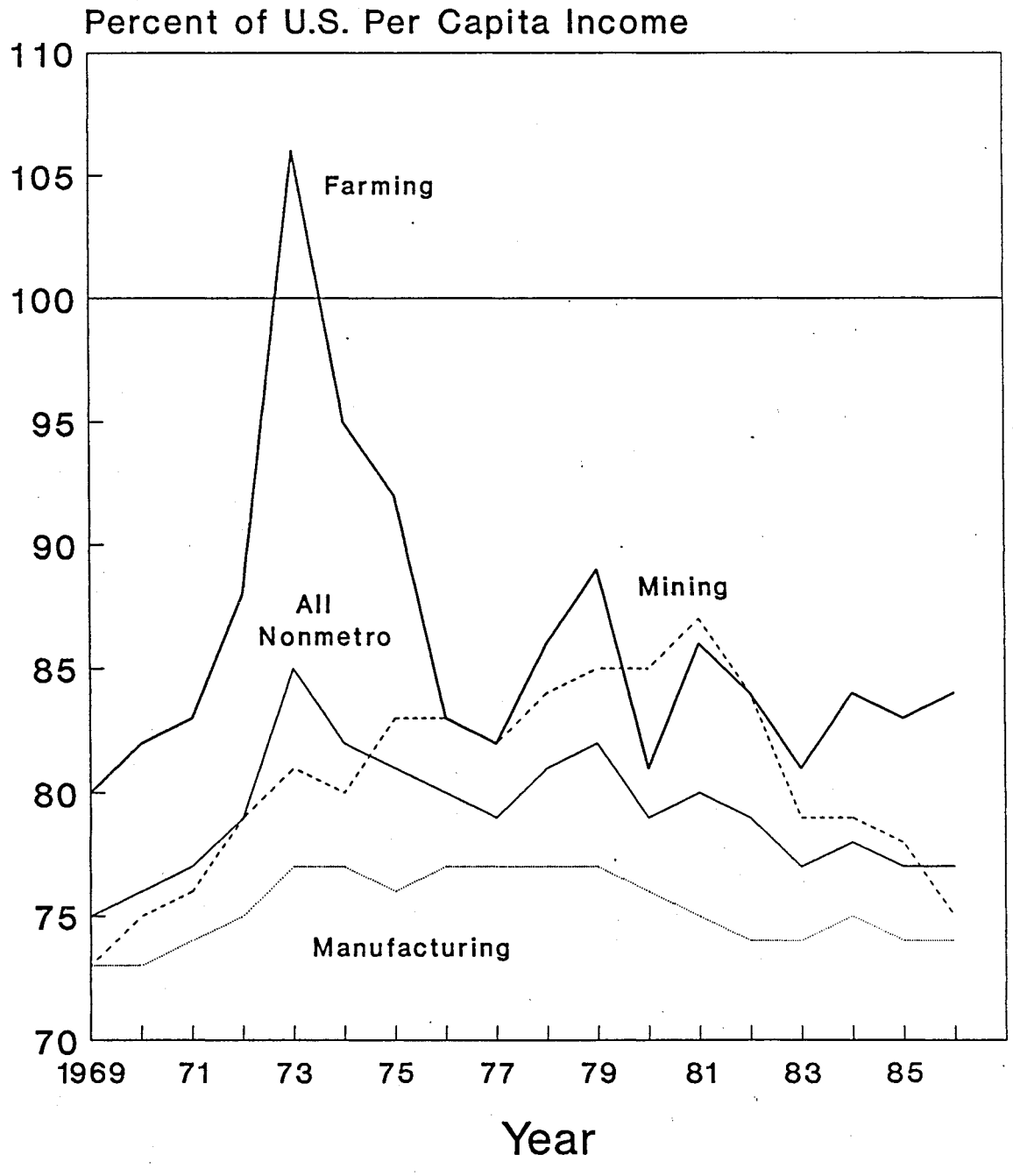
For nonmetro areas the critical questions of future job growth involve manufacturing and services, not natural resource-based industries, whose employment base is likely to continue to contract. In fact, in the 1980's the service sector has accounted for all of the new employment, more than making up for declines in other kinds of employment.

Table 3. Employment and population change by county types

County aggregate	Employment Change 1979-88	Population Change 1980-88
	Percent	
Nonmetro	8.3	4.7
County Type		
Nonmetro		
Agriculture	1.9	1.3
Manufacturing	7.7	3.3
Mining	-11.0	-0.9

Source: Bureau of Labor Statistics and Bureau of the Census.

Figure 2. Per Capita Income: Ratio of County Types to U.S. (U.S.=100)



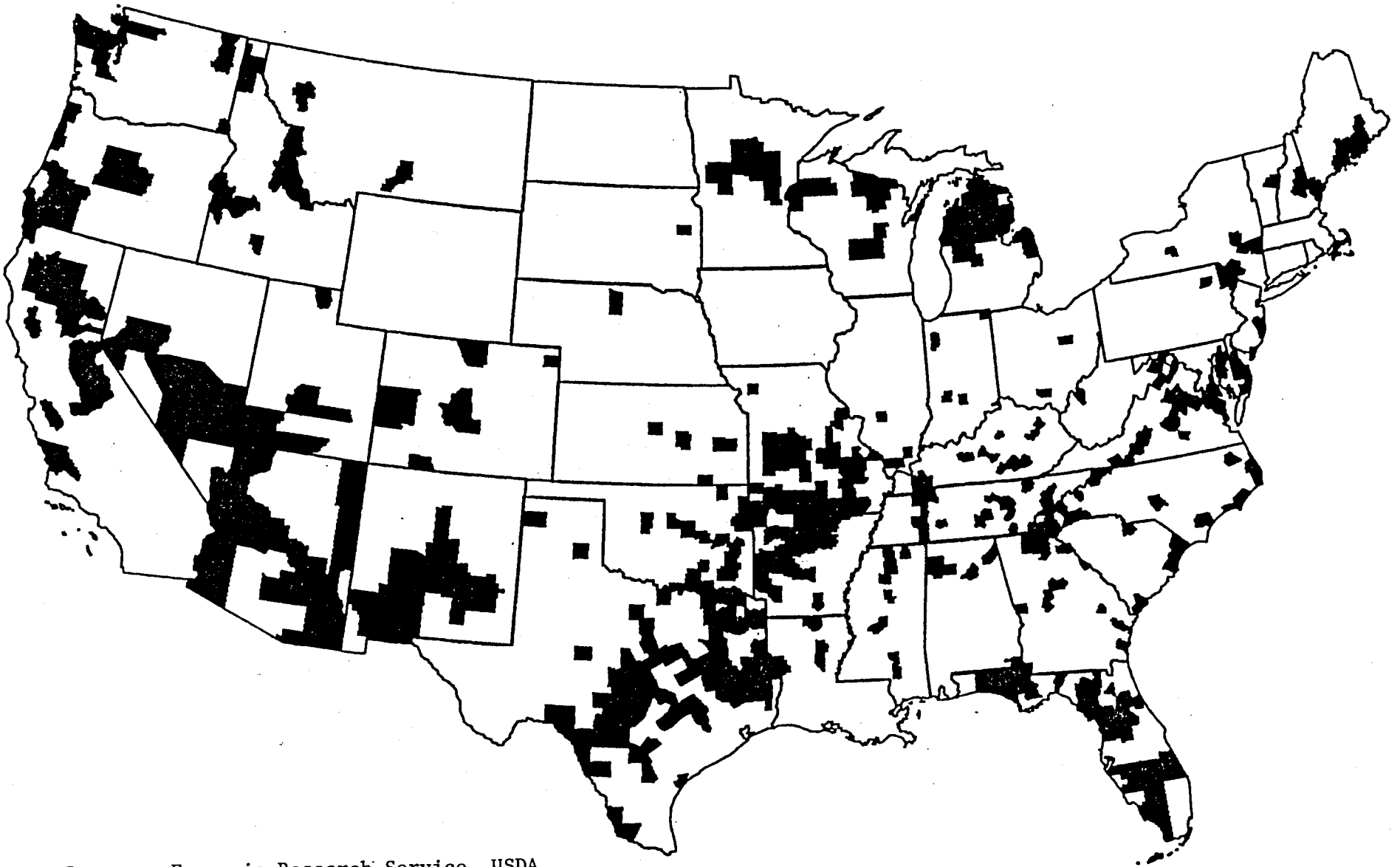
Source: Bureau of Economic Analysis

Rural Counties with Strong Economic Performance

While the overall economic performance of nonmetro counties during the 1980's has been relatively poor, there are two groups of counties that have experienced substantial growth. The first group contains counties, shown in Map 1, with high amenity values. They are attractive to growing numbers of mobile retirees moving out of cities and other rural areas, to vacationers seeking various kinds of recreation, and to owner\managers of footloose industries with a preference for a rural location. They typically have locational assets--lakes, mountains, shorelines, etc.--that make them attractive as residences and for recreation. Since 1983, nearly 85 percent of the growth in nonmetro population has occurred in these 500 counties. They have also experienced strong employment growth, over 26 percent from 1979-88.

The other group of nonmetro counties that has shown strong employment gains during the 1980's is composed of those adjacent to metro areas. Adjacency is defined as having access to the metro area, not simply physical adjacency. Previous research has shown that metro adjacency was a significant factor in explaining rural county growth in the 1950's, 60's, and 70's. Therefore, it is not surprising to see these counties doing well in a decade when spatial patterns of growth in nearly every region of the country have been so favorable to metro areas. In fact, with employment growth of 11.3 percent during 1979-88, the adjacent nonmetro counties grew at more than twice the rate of nonadjacent counties. The approximately 900 adjacent nonmetro counties are home to one-half of all nonmetro people.

Map 1. Retirement Counties



Source: Economic Research Service, USDA

Why Have Rural Areas Lagged in the 1980's?

Our understanding of the complex forces that explain the poor performance of the rural economy during the 1980's is incomplete. Nevertheless, some of the contributing factors are clear.

Changed Rural Comparative Advantage - Historically, the development of rural economies depended primarily on location-specific physical or natural resource advantages; they held the timber, minerals, and produced the food that urban people wanted. In the early days of our nation the major continuing attraction of rural areas was the availability of cheap land to settlers. Through explicit public policy (subsidy) and the pressure of population growth in the cities of the East, people were drawn to the opportunities of the frontier. Despite boom and bust cycles as timber and rich veins of ore played out in location after location, and recurrent periods of depression in farming, most of our rural citizens continued to make their living from natural resource-based activities. Even as late as 1949, farming, fishing, forestry, and mining collectively accounted for 12 percent of GNP and directly employed over 21 percent of the national work force.

But after World War II, changes in technology and the composition of final demand began to undermine the bases of rural prosperity. Farm mechanization improved productivity and reduced the need for labor dramatically; pent up wartime demand for consumer goods drove a massive expansion in industrial activity, and millions of rural (farm) people left to take jobs in the

cities' expanding factories and service businesses. Between 1945 and 1980 the number of farms declined by 3.5 million, and the farm population shrank to less than 10 percent of the rural population.

During this same period, services emerged as the dominant employment growth sector in the economy. Nearly 80 percent of all new jobs created in the United States since 1950 have been in service industries. Many of these service jobs appear to be closely tied to the goods-producing sector of the economy, but they do not require a large component of "rural goods" -- food, wood products, minerals, etc. -- to produce their services. That is, very little of the value added in the services industries depends on natural resource-based production. Thus, the growing relative importance of services in the overall economy has been an indicator of the declining economic advantage of rural places.

Despite weakening in the natural resource advantages of rural areas, they experienced significant expansion in their share of goods-producing employment during the 1960's and early 1970's. The rural share of manufacturing employment, for example, increased from 21 to 27 percent from 1960 to 1980. Most of the growth in rural manufacturing employment occurred in the East and South. The expansion took place mainly in routine production processes. It had numerous causes, including cheap land and labor, and comparative freedom from institutional constraints such as zoning regulations and labor unions. It coincided with completion of major intercity links in the Interstate Highway system. But, as we have seen above, these factors have not been sufficient to continue the strong growth trends in rural manufacturing into the 1980's.

The down-sizing of manufacturing plants in this decade has diminished the importance of land costs in decisions about where to site a plant. More important, in a truly global marketplace cheaper labor can now be found beyond our borders. And labor has become a comparatively smaller and shrinking component of the cost of manufactured goods. In fact, it appears that more highly skilled labor for more sophisticated manufacturing processes is where U.S. industrial competitiveness will continue to be strong. It is unlikely, then, that cheap rural land and labor will provide an impetus to future rural growth equivalent to what it provided only a decade or so ago.

Metropolitan Patterns of Growth - The extent of metropolitan dominance in the 1980's is remarkable. As shown in Table 4, in most states in nearly every region metropolitan growth has outstripped that of nonmetropolitan areas. But within metropolitan areas the pattern of growth is important as well. The rate of employment growth in fringe counties major metropolitan areas has exceeded the rate of growth in core counties by eleven percentage points (25.5 versus 14.5 percent). This "hollowing out" of metropolitan areas has extended the geographic reach of metropolitan economic growth, in some cases radically altering the nature of job opportunities available within daily commuting range of nearby rural residents. Even if residential preference remains unchanged, this pattern of metro growth makes it possible for more citizens to combine a relatively "rural" residential location with urban economic opportunities and amenities. I noted earlier, the rapid growth of metro adjacent rural counties during this decade which is directly attributable to the current patterns of metro expansion.

Table 4. Average metro and nonmetro employment growth by region and state, 1979-88.

County aggregate	Metro Employment Growth	Nonmetro Employment Growth
Region	----------Percent----------	
Northeast		
CONNECTICUT	13.6	25.0
MAINE	23.9	24.8
MASSACHUSETTS	10.7	43.1
NEW HAMPSHIRE	34.9	30.4
NEW JERSEY	15.6	NA
NEW YORK	10.2	6.8
PENNSYLVANIA	10.4	7.6
RHODE ISLAND	16.4	33.5
VERMONT	27.4	21.5
Midwest		
ILLINOIS	8.4	-11.7
INDIANA	8.4	7.7
IOWA	11.8	-.5
KANSAS	18.2	-4.0
MICHIGAN	6.0	8.1
MINNESOTA	22.4	-1.2
MISSOURI	14.2	7.0
NEBRASKA	16.4	-1.8
NORTH DAKOTA	29.3	-4.0
OHIO	6.1	1.8
SOUTH DAKOTA	17.6	3.6
WISCONSIN	12.4	7.4
South		
ALABAMA	15.7	8.9
ARKANSAS	17.0	8.4
DELAWARE	28.5	33.4
DISTRICT OF COLUMBIA	3.6	NA
FLORIDA	49.2	50.6
GEORGIA	37.0	14.9
KENTUCKY	9.3	-1.7
LOUISIANA	10.1	-4.4
MARYLAND	16.7	43.8
MISSISSIPPI	24.6	2.0
NORTH CAROLINA	27.1	13.4
OKLAHOMA	15.9	8.6
SOUTH CAROLINA	29.5	10.7
TENNESSEE	16.7	11.8
TEXAS	24.6	21.1
VIRGINIA	30.6	6.3
WEST VIRGINIA	-8.4	-6.8

West		
ALASKA	39.0	26.2
ARIZONA	46.3	24.5
CALIFORNIA	26.0	20.7
COLORADO	20.1	1.6
HAWAII	19.9	52.9
IDAHO	15.8	8.2
MONTANA	5.1	6.6
NEVADA	43.3	62.1
NEW MEXICO	41.3	9.2
OREGON	15.8	11.6
UTAH	28.7	9.8
WASHINGTON	22.3	5.5
WYOMING	-22.9	4.7

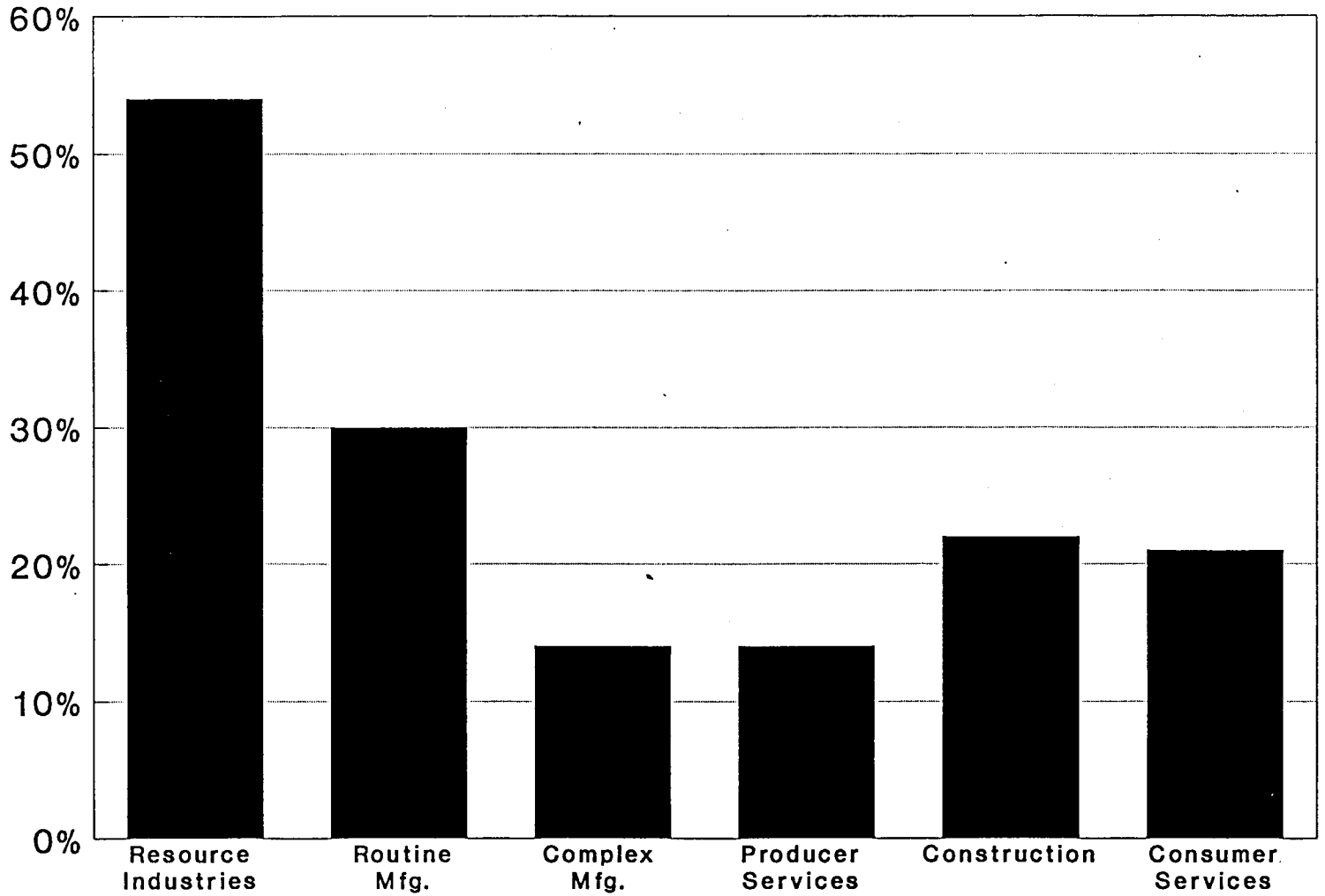
Source: Bureau of Labor Statistics county level data.

In the sparsely settled Great Plains and Western Corn Belt the absence of meaningful access to a well-developed metropolitan structure is a serious impediment to future rural economic development. That is, most rural counties in those regions are too distant from large, growing metropolitan areas for residents to be able to commute daily to work, or to easily establish business linkages with metropolitan markets. It is likely to be quite difficult to devise programs to employ large numbers of farmers and other rural workers in new economic opportunities in the rural areas they now live in, or even within the region.

The metropolitan industrial and employment structure differs from that of nonmetro areas in several important dimensions. Overall, what one finds is the greater representation of routine production activities in rural areas. In Figure 3, for example, note that rural areas have 55 percent of the employment in resource industries and 30 percent of the employment in routine manufacturing, both industries with declining employment. On the other hand, nonmetro areas have only slightly more than ten percent of the employment in complex manufacturing and producer service industries. Similarly, in Figure 4 the proportion of nonmetro occupations that are relatively unskilled is twice that of metro areas, while the share of management, technical and professional jobs is less than half that of metro areas.

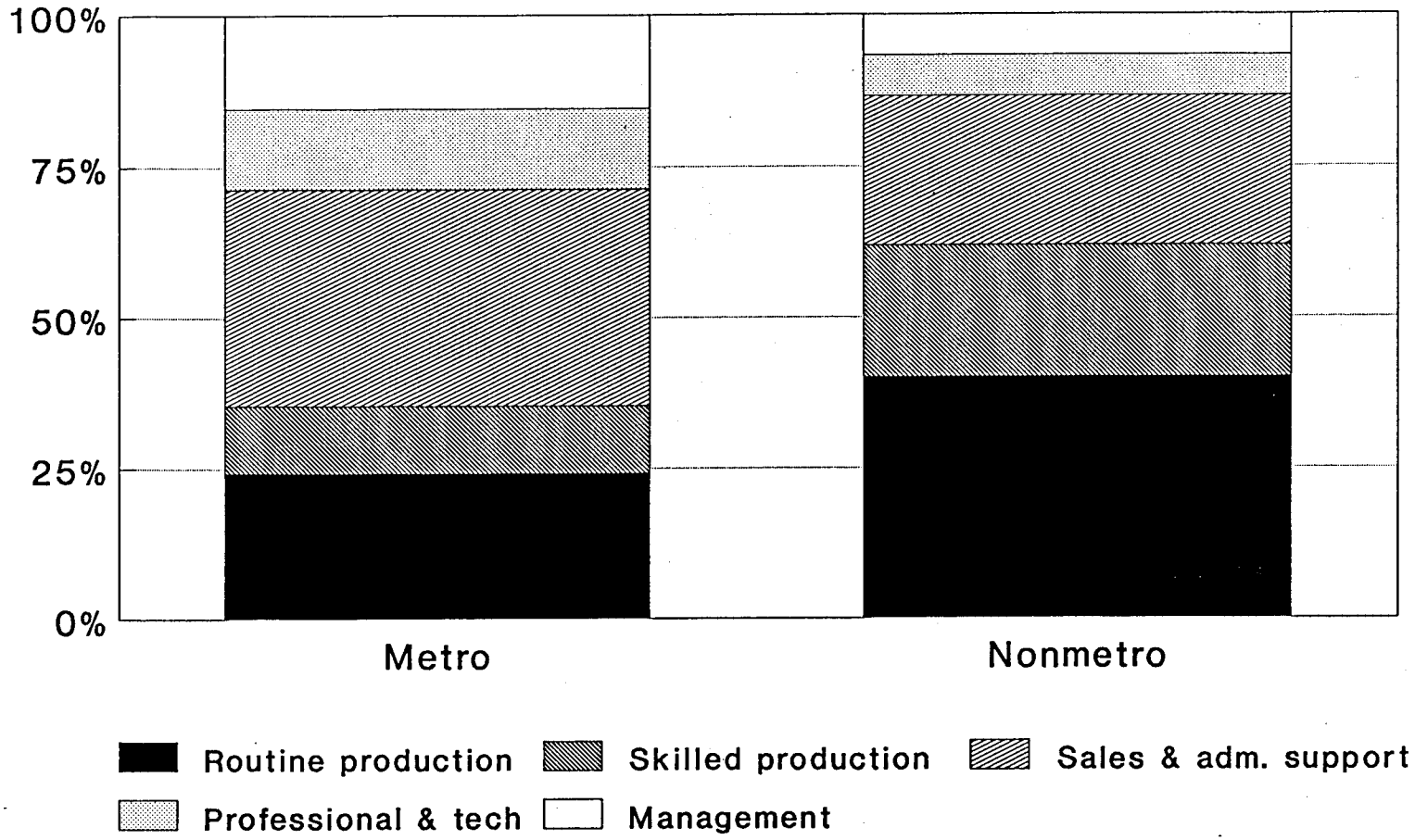
These structural characteristics of rural employment are not new, but their importance to the economic well-being of rural workers appears to have increased dramatically. Figure 5 shows expected relative lifetime earnings of metro and nonmetro residents by level of educational attainment. Two

Figure 3. Percent of Industry Jobs in Nonmetro Areas



Source: Current Population Survey, March 1986

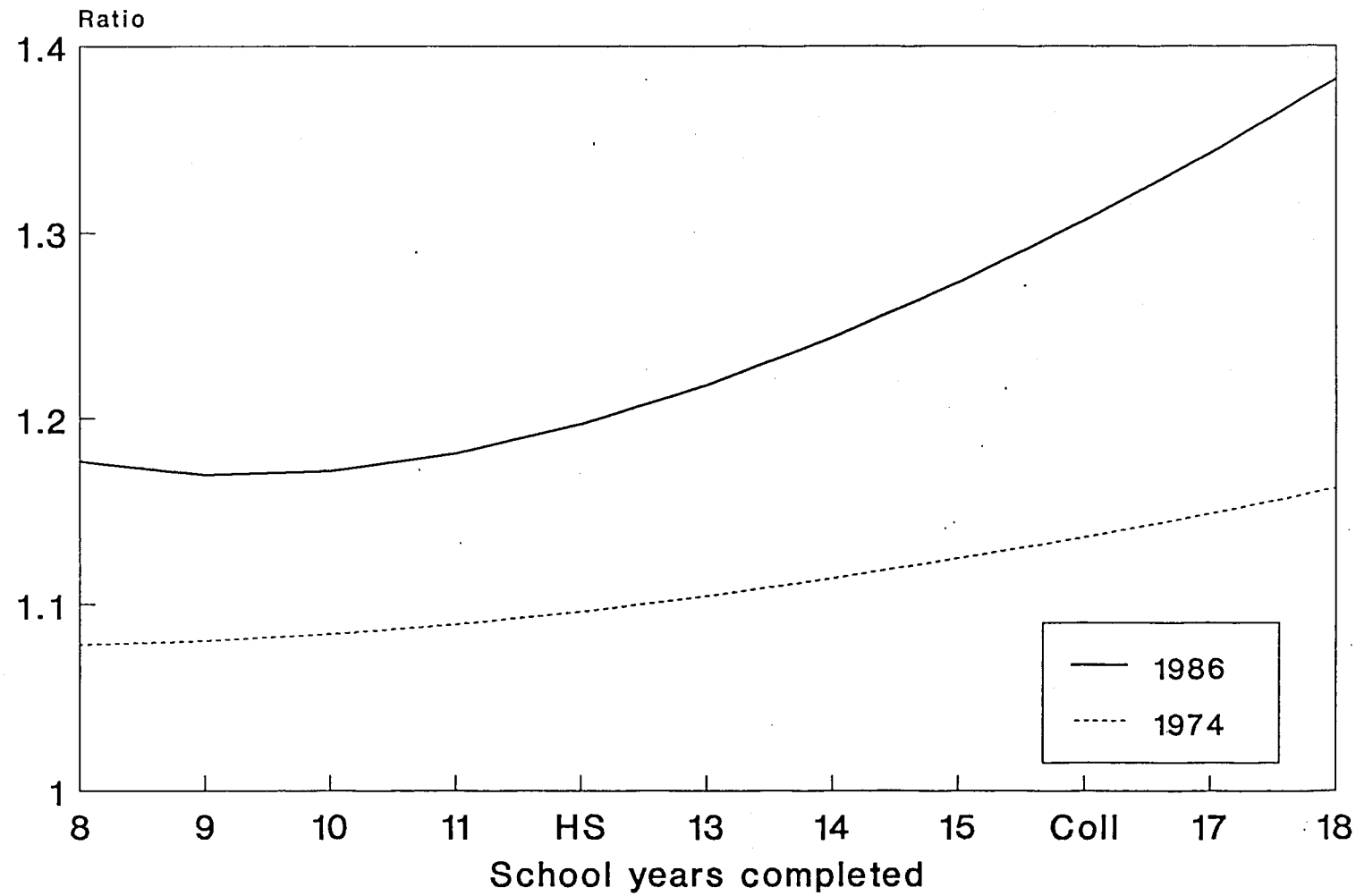
Figure 4. Production Job Distribution by Major Sector



Source: Current Population Survey, March 1986

Figure 5. Ratio of Metro to Nonmetro Earnings

Estimated for men ages 25-34
full-year full-time workers



Source: Current Population Survey

years are shown, 1974 and 1986. It is apparent that at every educational level there has been an increase in the lifetime earnings penalty for rural employment between 1974 and 1986. But, whereas in 1974 the penalty rose only modestly for rural residents with more advanced levels of education, the penalty now rises steeply with educational attainment, to nearly 40 percent for college graduates. It should come as no surprise, then, that rural outmigration is not only age specific but education specific. As a consequence many of the rural citizens most important to future rural development are leaving rural America. Increasing the human capital endowments of rural citizens, without simultaneously increasing rates of return to human capital in rural areas, seems like a dubious rural development strategy.

A national trend toward higher labor force participation by women contributes to the strength of metro attraction. Given the scale and structure of most rural labor markets, it is much more difficult for two workers in a family to find satisfactory career opportunities in rural areas.

Federal Policy Choices - Numerous policies of the Federal government have the potential to have unequal, sometimes unanticipated, and often unintended effects on the spatial distribution of economic opportunity. Three such policies during the 1980's were probably of particular significance.

First, the combination of monetary and fiscal policy used to bring inflation under control contributed to one of the most serious economic downturns in the U.S. economy in the post World War II period. And it gave rise to a

high-valued dollar that worsened the competitive position of our traded-goods industries. It also generated a continuing period of relatively high real interest rates that had significant effects on highly leveraged firms and industries. Serious financial stress in the farm sector was one early symptom of these conditions. Since farming remains primarily rural, largely because of its land-intensive character, problems in farming communities were the best understood and most highly publicized rural feature of the battle against inflation. There is evidence to suggest that agriculture experiences wider swings in prices and asset values as a result of sudden changes in macro policy than the rest of the economy, accentuating the boom and bust cycle in farming areas.

Work done by researchers in ERS suggests that the rural consequences of monetary and fiscal policy changes are broader than agriculture. The research results are ambiguous as to whether rural employment overall is slightly more sensitive or less sensitive to changes in these policies than is metro employment. The regional effects of monetary and fiscal policies appear more pronounced in the nonmetro Northeast and South, in part because of the greater importance of manufacturing in these regions.

The recovery that began in 1982 has been extraordinarily long, and fairly strong in terms of compound annual rates of growth in GNP and employment. For example, through 1988 the compound annual rate of GNP growth was four percent. This compares with a rate of 4.2 percent during the long period of expansion from 1961 to 1969, and rates of 4.6 and 3.4 percent during the two periods of recovery in the 1970's. Nevertheless, in contrast with earlier periods, strong national growth has contributed little to improving the

relative performance of the rural economy in this decade.

The second change in Federal policy was a significant shift in spending patterns. There was an increase in the military defense share of GNP; from 4.9 percent in 1979 to six percent in 1988. The composition of defense spending also changed, with the share committed to procurement rising to nearly 27 percent by 1988. Previous ERS research has shown that defense spending is the one broad category of Federal programs in which rural areas consistently tend to trail urban areas in terms of per capita outlays. And within defense spending, rural areas are less likely to be competitive as sources of advanced research, engineering, and manufacturing capability.

There is another way in which patterns of Federal spending affect rural areas differentially. Economists have noted the dramatic increase in the share of Federal spending that represents current consumption rather than investment -- the growing importance of social insurance programs, health care (especially Medicare and Medicaid), etc. But fewer analysts have noted that the composition of Federal spending at a particular point in time is different between urban and rural areas, with rural areas receiving a larger share of their funds in the form of transfer payments and current consumption.

In a recent analysis for the National Governor's Association, ERS documented the extent of this difference. In FY85, Federal spending per capita was $2,175 in nonmetro counties and $2,179 in metro counties, excluding defense. But the nonmetro total includes about $130 per capita in farm program payments, which go to only a small share of rural families.

The metro total includes only $19 per capita in farm payments. In contrast, per capita Federal spending on community facilities and regional development was more than twice as high in metro areas: $25 compared to $10 in nonmetro. And higher education and research spending was $53 per capita in metro areas compared to $23 in nonmetro.

The pattern is even more distorted if one looks at Federal spending in nonmetro areas with different economic bases. In farm dependent counties nearly every dollar spent for farm program support costs the farm counties' a dollar in other categories of spending, often in the kinds of programs that would have far more long term benefit to the community. The same is true for rural poverty counties which receive much of their Federal assistance in the form of income maintenance spending. Relatively low levels of Federal spending on community facilities, regional development, higher education and research, obviously make it more difficult for these counties to break out of their stagnation.

Finally, during the 1980's the Federal government has made numerous changes in the regulatory environment in order to encourage a more competitive, and therefore more efficient, operation of several previously heavily regulated markets. In virtually every case the regulatory structure had imbedded in it a price pattern and/or operating rules with large cross-subsidies that favored rural facilities or services. Removal of these cross-subsidies has quite naturally reduced the competitiveness of many rural areas.

Airline deregulation is a case in point. There is little evidence to suggest that access to scheduled airline passenger service has declined for

rural communities as a whole. But the nature of that service (timeliness, safety, convenience, and price) has changed in important ways. Other transportation deregulation has been more disruptive, with the abandonment of rail service and interstate bus service for many small rural communities. In still other areas like banking and telecommunications, the effects of deregulation on the competitive position of rural areas is largely unknown.

In our national pursuit of economic efficiency, questions about the spatial consequences of regulatory reform have been largely ignored. Few analysts have carefully examined who wins and who loses in the process of deregulation, in large part because the rhetoric of reform was so attractive -- reduced government interference in the economic decisions of businesses and individuals. This was part of a broader retreat by public policy makers from a willingness to consider seriously the distributional consequences of their actions. Yet efficiency is not the only goal of public policy.

Why Care about Lagging Rural Development?

There are basically three arguments for our concern about rural development policy, though they are seldom expressed in such a discrete way. The arguments rest on three distinct values: economic efficiency, equity or fairness, and a perception of broad public interest.

Economic Efficiency - This argument contends that current rural economic

underperformance is a result of "market failure". Overcoming market failure will improve the overall growth of the national economy. Within limits, public expenditures to remedy specific cases of market failure will increase national productivity and competitiveness, and thus national output, by more than their cost. In this case, more rural jobs are not achieved at the expense of urban jobs. That is, rural policies that improve the competitiveness of rural areas by increasing efficiency are not a zero sum game.

Market failure can take many forms. One of the most obvious is the existence of externalities -- a mismatch between who benefits and who pays for certain activities. The education of rural children seems to be a good example.

Much of the growth in the U. S. economy is attributable to the relatively high levels of capital embodied in the work force. We are a mobile society, moving to adapt to changes in the spatial economic advantage of places. As a result there is a national stake in the educational attainment of all children. The current system of leaving educational financing to states and local areas does not serve our national interest very well. Poor rural jurisdictions (which tend to be concentrated in poor states) have limited resources with which to meet the educational needs of their children; and they have limited incentives to invest in the education of their children.

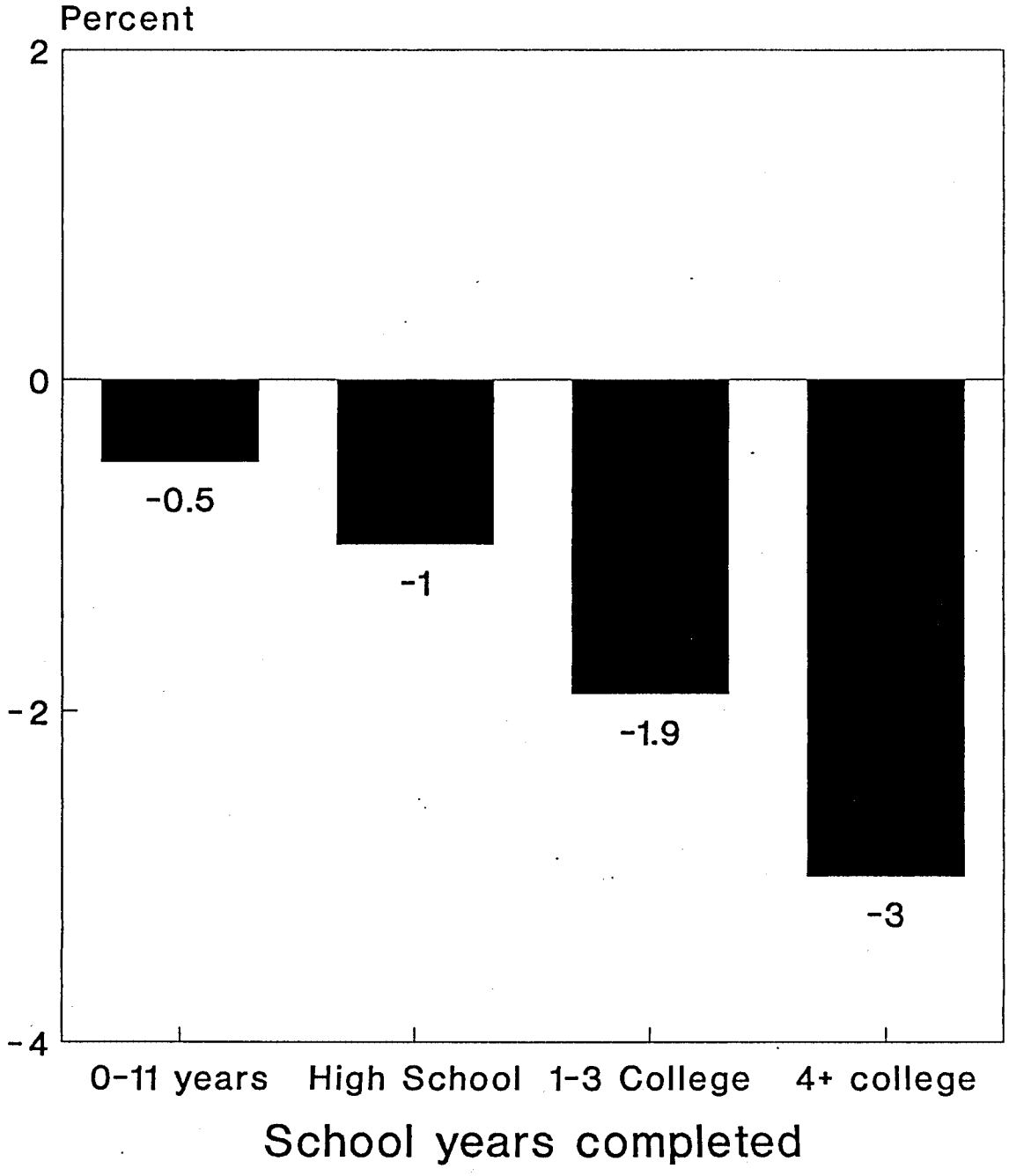
In the mid-West and Plains, rural communities made commitments to invest in the education of their children, only to see them move away because of the unavailability of enough good local jobs. For decades the rural South has

exported large numbers of poorly educated people, placing the burden of catch up on private employers, other public jurisdictions, and these people themselves. There is some suspicion that current problems in many central city school systems have their roots in failures of state and local educational policy many years earlier -- in places far removed in space and time from where the problems now exist.

Because rural areas have few jobs for better educated workers, the best educated rural people are the most likely to move away (see Figure 6), carrying their educational investments with them to other jurisdictions. At the local level, then, it may appear fruitless to invest in upgrading education since it may simply encourage people to leave.

Large scale internal migration of people and firms has been a characteristic of U.S. economic development from the very beginning. And questions about the consequences of such migration for individuals, families, and communities have always been of interest. It appears, from the evidence we have, that at an individual level migration decisions are economically rational. Most people who move do better after their move than they would likely have done if they had remained where they were. But there is little analytical evidence about the public costs to migration as opposed to these purely private returns. If there is a serious divergence between the public costs and private returns, we may be abandoning existing infrastructure in rural areas that could be kept economically productive at a public cost substantially below that of constructing new infrastructure in already congested urban areas. This represents another potential dimension of market failure.

Figure 6. Net Migration of Nonmetro Persons Age 25-64, 1987



Source: Current Population Survey

High per unit costs for some services, which may preclude the organization and delivery of those services in many small, remote rural areas are not an example of market failure. Marshall noted that scale and extent of the market may limit specialization. If a decision is made to subsidize some kinds of rural facilities or services because rural areas will not have such services without subsidies, that decision reflects another goal of rural policy.

Economic theory about competitive equilibrium and efficiency treats information and transactions costs as negligible. But there are many reasons to believe that may not be the case. If rural areas are disproportionately affected by these costs, and it seems likely that they are because of the increased pace of technological and market change, then market outcomes may not result in an efficient organization of economic activity over space. If, for example, the cost of obtaining information about investment opportunities in small, remote areas and firms is very high, capital markets may systematically invest too little in potentially high return rural ventures. Such an argument may justify public efforts to reduce the overall costs of information and of small transactions, but they are not an argument for a general subsidy of rural credit.

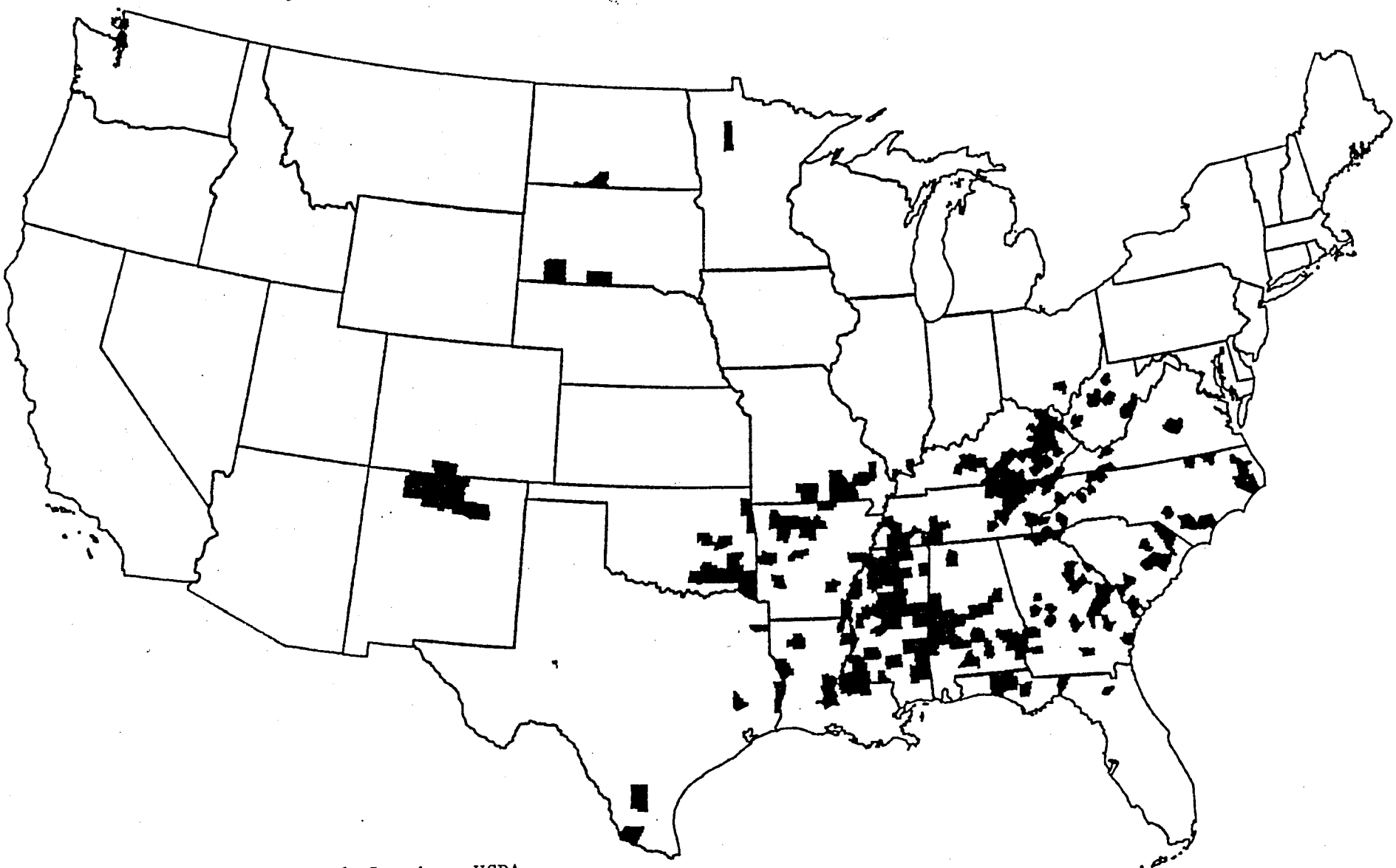
Fairness - The fairness argument is that rural people should not have to pay for their place of residence with a significantly lower material standard of well-being than that of urban people. The argument is particularly relevant to the situation of the disproportionately large numbers of rural poor people. The rural poor not only have low incomes but often live in poor

States in local jurisdictions that are poor overall -- the persistent poverty counties identified by ERS. (Map 2) These areas lack resources to provide the kind of public social services typically available to the urban poor.

Central place theory, perhaps the most powerful concept of regional science, suggests that rural territory with low population density, limited economies of scale, greater distance to markets, information, and technology, and fewer opportunities for specialization, will probably always lag behind larger urban places in a purely market-driven economy. Left to market forces alone, or under the influence of macro policies designed to achieve nationally determined employment and inflation goals, rural areas are likely to remain at a disadvantage.

Faced with this set of conditions, the Federal government has occasionally embarked on expensive programs to address serious disparities between rural and urban incomes and standards of living. The Tennessee Valley Authority was created to aid the economic development of a defined multistate area with limited resources -- an area frequently ravaged by floods and containing a very poor population. Similarly, the electrification of rural America was undertaken with massive subsidies from the taxpayers, and rural telephone systems were created with subsidies provided by all taxpayers and/or other users of the telephone system. The principal justification for these programs was fairness. There was a broad political consensus that rural (at the time mostly farm) people should enjoy the fruits of society's advancing technology and improving well-being, even if the investments were not efficient in a market sense. There appears, however, to be no

Map 2. Persistent Poverty Counties



Source: Economic Research Service, USDA

continuing commitment to inter-regional transfers to disadvantaged areas, to what in the European context would be called the "solidarity principle." In fact, the current political definition of fairness seems to be that each jurisdiction should get back in Federal spending every dollar that it pays in Federal taxes.

Given adequate data, social scientists can identify, measure, and document differences between rural and urban people in income and other indices of well-being. And when the political system reaches agreement on some explicit fairness objectives, social scientists can contribute analyses of the effectiveness of particular strategies in achieving those objectives. But they have no special competence to decide what is fair.

Public Goods - This argument involves recognizing a national stake in protecting certain rural resources and residential living options, and understanding that market price mechanisms alone are an inappropriate way of allocating the use of such resources or protecting alternative living options. There is a long history of such views about the preservation of prime farm land. Similar rhetoric is emerging about other unique rural resources -- clean air and water, aesthetic and scenic settings, community structure and values, low density settlement. What is implied by this argument is that urban people also have an interest in the spatial distribution of economic opportunity and settlement. Urban people believe that certain kinds of rural "scenescapes" have national value and will be preserved for them to enjoy. But without explicit public policy interventions to assure their survival, some may not.

Identifying the "public goods" aspects of rural America that should be preserved is largely a political issue, as is a decision about how much should be spent on these public goods as opposed to others. Nevertheless, social scientists can contribute to an informed debate through their analyses.

What are the Data and Knowledge Gaps?

My emphasis in answering this question is on knowledge and information to serve the process of public policy making, rather than on disciplinary priorities. That emphasis reflects, in part, my position in an organization whose principal clients are public officials and whose funds are provided by Federal tax revenues. It also reflects my personal interest in the role of research in improving public policy.

Changing the Emphasis in Rural Data

I am struck by the continued relevance of comments by the National Academy of Sciences committee that studied rural data nearly a decade ago. In the summary of "Rural America in Passage," the committee said:

> ...Its (rural America's) future is unknown. Its people are growing in numbers and diversity. A more complex economic and social fabric creates many opportunities and dangers about which decisions must be made. Many of these decisions are of immense significance not only for rural areas and rural life but for all America. Improving the data base for

such decisions is imperative.

I am not an expert on the history of the U.S. social and economic data system, nor would a detailed historical review be appropriate in this context. It is useful, however, to remember how deeply rooted in history our data systems are, how that history has shaped the relative emphasis given to particular kinds of data, how the availability (or unavailability) of data affects the research questions on which we work and the institutions in which we work, and how all of these factors combined serve as obstacles to major changes in the data system. We spend most of our time and energy debating relatively marginal changes in the content of existing data series, many of which have long since ceased to be of prime importance to an understanding of the social and economic structure of rural America and the likely future well-being of its rural citizens.

Let us suppose for the moment that we were designing a new data system to inform policy makers on current and likely future social and economic opportunities for rural citizens. What relative weight would we be likely to give to the collection of detailed farm sector data in that new system? What kinds of things might we consider in making such a decision? We know, for example, that the farm population peaked in 1916, that employment in farming peaked in 1907, that farm employment is now less than ten percent of rural employment, that only about 20 percent of all rural counties continue to have an economic base dependent on farming and that only about seven percent of the rural population lives in those counties, that poverty and deprivation of farm households is a small share of all rural poverty and that farm poverty is not concentrated in the farming dependent counties. I

believe that the overwhelming weight of such facts would suggest a very different relative emphasis than the current data system gives to the collection of data on farming.

For example, in place of much of the farm data, we would almost certainly collect more information about the service sector. Services are the largest employer of rural and urban people alike. The service sector has been the only sector with overall growth in rural employment in the 1980's. No meaningful understanding of the process of urban or rural economic development is possible without an increased understanding of the service sector, but the data currently collected on the service sector are inadequate to support the needed research.

Why is it so hard to make such a change? Clearly inertia and vested interest play a role in protecting the status quo in the data system, just as they do in other public arenas. The publicly-funded agricultural research system has an enormous stake in continued collection (and expansion) of farm data that provide the infrastructure to support that system. Whether or not the public interest is well-served by spending so much of the limited data collection budget on farm data, many private and institutional interests are. I have never understood why there is widespread general acceptance among citizens of large public subsidies to farming (most of which go to operators who are not poor) and the agricultural research system. Agrarian fundamentalism, going back to the founding of the Nation, is part of the reason.

But an associate of mine makes an argument that I find more persuasive. He

notes that, not long ago, humans were primarily hunter-gatherers, worrying daily about the security of their food supply to stave off hunger. And we see stark evidence in world events of how fragile the line between survival and starvation is for many people even now. He argues that this is the well-spring of support for agriculture. It has little to do with the objective role that farming plays in the economy of the countryside or the nation, or with any threat to U.S. food security that might come from reducing current subsidies to producers and the agricultural research system.

Another argument for continuing the current public support to agricultural research cites the major role productivity improvements in agriculture played in the rapid growth and industrialization of the U.S. economy after World War II. A USDA publication, "The Secret of Affluence", makes the point that food is the key to continued affluence. By inference, continued public subsidies to agricultural research are critical to the future growth and development of the U.S. economy.

But, in recent years it would be more accurate to say that increased productivity in manufacturing has released labor for the growth of services. Farming is now a small employer in the overall economy; the number of workers released is not very important to the development of the nonfarm economy. In a modern economy there is no reason to think of farming as more fundamental than any other sector. Without transportation, communications, housing or other sectors, the economy would fail as surely as it would without agriculture. But we provide little institutional support for public research in these areas as compared to agriculture.

Even though I think the evidence is persuasive that there should be a dramatic shift in relative funding priorities for rural data, I do not believe that the current emphasis on farm sector data is likely to change any time soon. I do wonder, however, how long the general public will continue to think it is in their interest to fund a large program- and research-bureaucracy to support an industry in which only 300,000 farmers produce almost 80 percent of the total market value of farm production. As Secretary Yeutter said recently, "I wonder how much longer you'll see barbers and dime stores and implement dealers and seedsmen and clothing stores and grocery stores supporting an agricultural regime with that kind of government involvement (covering much of the risk of changes in price, income, and weather) which they finance, when they themselves do not get that kind of risk protection."

It is useful to remember a statement attributed to President Eisenhower, who was discussing farm programs with then Secretary of Agriculture Ezra Taft Bensen. The story quotes the President as saying, "...these farm programs can't continue once the American people discover how few people are getting so much money." Of course, that was 40 years ago, and little has changed, except that fewer people now get more money.

Some Specific Data Needs

Assuming our goal ought to be to have the same level of information available as an input to public policy in urban and rural areas, the general

problem of rural nonfarm data is that it is not sufficiently disaggregated or timely. There are some obvious targets for action. The Current Population Survey and the Survey of Income and Program Participation are the principal sources of annual data on a broad range of economic and social characteristics of the U.S. population, including employment, unemployment, income, and poverty. Detailed data are available from the CPS for every Metropolitan Statistical Area with a population of about 400,000 or more. (There are now some 90 MSA's reported on annually by the CPS.) Because the nonmetropolitan sample in the CPS is relatively small, detailed data on nonmetropolitan conditions are reported only for the U.S. as a whole, or for very large multi-state regional aggregates. Given the diversity that we know exists among nonmetro areas, this is a serious impediment to using the CPS for timely reporting of rural conditions to policy makers, and for policy relevant research.

Similar problems plague the SIPP. But because the sample size is even smaller than that of the CPS, the disaggregation issue is more serious, affecting many MSA's as well as nonmetro America.

In my judgment, first priority in improving the availability of policy relevant rural data should go to expansion of sample sizes for the CPS and SIPP. The goal should be a sample size large enough to support the annual reporting of data on the nonmetro portion of each state. I would prefer CPS and SIPP samples large enough to be reported at the county level, so that analysts could build units of analysis, like labor markets, and analyze change annually. For cost reasons alone I believe that is infeasible. But the availability of state nonmetro totals on an annual basis, in combination

with county data from the decennial census and various local data sources, might lead to some real progress in constructing synthetic local estimates using various statistical techniques. Efforts to do this have made little headway, despite the recommendation of the National Academy Panel on Rural Data.

State level nonmetro CPS and SIPP data are indispensable to an informed rural policy which is attuned to the wide diversity in circumstances among rural settings. They are also essential to states' having an informed basis from which to play the increasing role in rural development policy and programs that the Federal government has been encouraging.

Most of our knowledge of U.S. development comes from analyses of large cross-sectional data sets like the Census of Population. But there are important insights into the processes of development that can only come from longitudinal data. Thus, improvements in longitudinal data are the next priority. An example the value of longitudinal data is what we learned from such data about the poverty population. The poverty population consists mainly of individuals for whom poverty is a temporary phenomenon, resulting from some reversal of personal or family fortunes. Persistent poverty is a much smaller component, more common in rural areas, and the individuals who experience it have several attributes that distinguish them from the ranks of the temporary poor. Knowing that the poverty population consists of two different groups changes the context for public anti-poverty policy. Without appropriate longitudinal data we might not know that.

For the past several years, we have been seeking support for longitudinal

data on farm households, as a beginning for USDA to collect longitudinal data on a broader set of rural households. Without longitudinal data, it is difficult to understand the real economic and social significance of many changes that are observed from year to year in the Farm Costs and Returns Survey of ERS/NASS. Nor can we be sure that the apparent stability in some measures of financial condition are really observations on the same set of farm operators and their households.

I believe that there are important differences in the processes of development across space, and that these differences likely lead to very different adaptation and adjustment strategies for individuals and households and to different needs for public policy. But current longitudinal data sets (such as the Panel Study of Income Dynamics) have sample sizes too small to provide the kind of geographic detail that would allow us to learn whether that is true, and what significance it has for public policy. If we were to take the issue of longitudinal data seriously, we would also want a richer set of socio-economic variables to be collected for the analysis of development than what is collected in any existing longitudinal data activity.

The 1979 National Academy of Sciences report remains a good starting point for a thoughtful review of critical rural data needs. Most of the data issues that they raised remain relevant, and are unresolved. I won't attempt to list them here, but two probably deserve explicit mention. They are measures of underemployment and cost of living.

Anyone who has worked with local area data knows the weakness of

unemployment rates as indicators of underused human resources in rural areas that are poor or are undergoing significant economic restructuring. As the National Academy report notes, the problems include the treatment in official unemployment statistics of discouraged and involuntary part time workers, seasonal and self-employed workers; and the more limited coverage of rural jobs by unemployment compensation. The Academy goes on to say that "the failure of unemployment rates to measure the underuse of human resources can be costly for rural areas because government allocations to areas are increasingly tied to statistical formulas."

Because there are no data on the rural cost of living, it is impossible to know the real income gap between urban and rural people. This difficulty is more than academic when it comes to the measurement of poverty. Current data indicate a higher poverty rate among rural than among urban people, but public policy continues to treat poverty as largely an urban problem. In part this is because of the widespread, but unsupported, belief that lower rural living costs eliminate the apparent disparity in the incidence of poverty. As the Academy panel says in its report, "meaningful comparisons of the economic well-being of communities, regions, and program target groups require that wages, salaries, income, net worth, transfers, outlays, taxes, and other dollar indicators be expressed in comparable units."

Rural Research Priorities

In my view, rural development issues are likely to climb higher on the public policy agenda during the next decade. They will be important because

of their connection to growing concern about the environment, the reemergence of public interest in distributional equity, and the continuing lag in performance of the rural economy which adversely affects rural well-being. They will begin to supplant purely sectoral issues as policy makers seek ways to encourage rural economic activity and social development, and to preserve the institutions and infrastructure of rural life. In a more general sense, this will result from a growing understanding of how little potential there is for traditional farm programs and the farm sector to be the basis for revitalizing most rural communities.

Unfortunately, the research foundation from which to build a coherent and effective rural development policy is weak. That is where I believe we need to concentrate our intellectual and data resources. Four broad areas of research deserve our attention.

1. Economic Disadvantage and Rurality - It is clear that small scale, low density, economic specialization, resource base, distance, and parochialism are all problems for rural areas in achieving development. Despite those disadvantages, the period from World War II to the early 1970's saw a narrowing of rural and urban income differences, and a reduction in rural poverty. However, as I noted early in the paper, it has been nearly twenty years since there was any significant improvement in the average relative income position of rural people. Cost of living differences aside, we need to know whether the lack of progress means we have reached some fundamental limit in the ability of national economic growth to overcome the disadvantages inherent in rural settlement, and to reduce rural poverty.

It is somewhat puzzling that the 1980's have been so unlike either the 1960's or 70's. That is, while there was significant rural outmigration in the 1960's, it was a period of substantial improvement in individual well-being. More than that, work by Tom Stinson on poverty of public services shows a dramatic decline in the disadvantage of rural communities during the 1960's as well. The 1970's saw a major shift in migration patterns in favor of rural areas, and a continuation of the narrowing in the rural/urban income ratio until the oil embargo induced recession of the early 70's. Stinson's unpublished update of the public services poverty estimates to the early 1980's suggests that the decline in rural disadvantage continued. Then came the 1980's, a period of relative if not absolute rural stagnation.

We clearly need a better theoretical foundation for our understanding of spatial economic development, and an ability to study shifts in spatial advantage over time. Roberto Camagni, professor of economics at Bocconi University, Milan has recently proposed a first attempt to build such a model. He proposes to measure "regional comparative locational advantage" by comparing two aggregate indices: an index of local productivity and an index of the "general level of labour costs." He then postulates the spatial relationship between these two indices for two different time periods, 1950-64 and 1965-80, as an explanation for the relative economic performance of Italian regions. (See Figure 7). In this model, development proceeds at a relatively more rapid pace in regions where the productivity index exceeds the labour cost index. A preliminary effort by Camagani to estimate these indices empirically supports the usefulness of the theory in understanding Italian regional development. What is needed is more research in this vein, on the general applicability of Camagani's work,

Figure 7.1 Abstract Regional Locational Advantages
Italian Regions, 1950-64

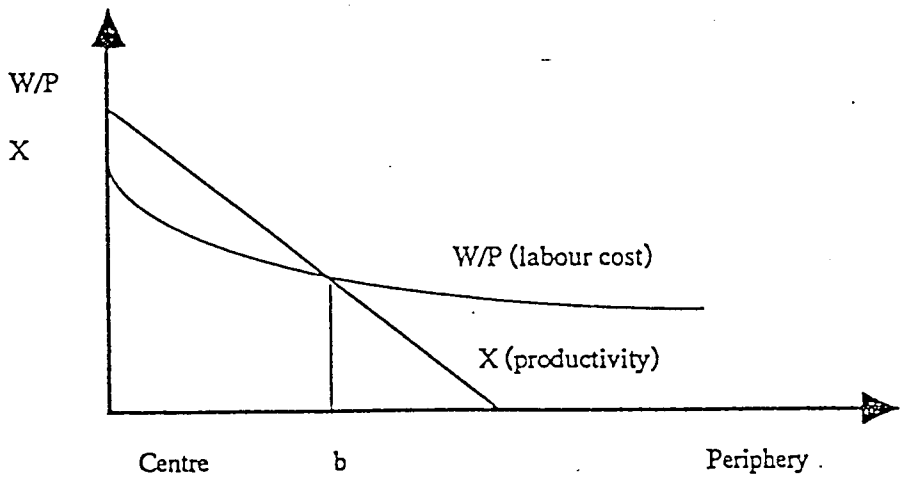
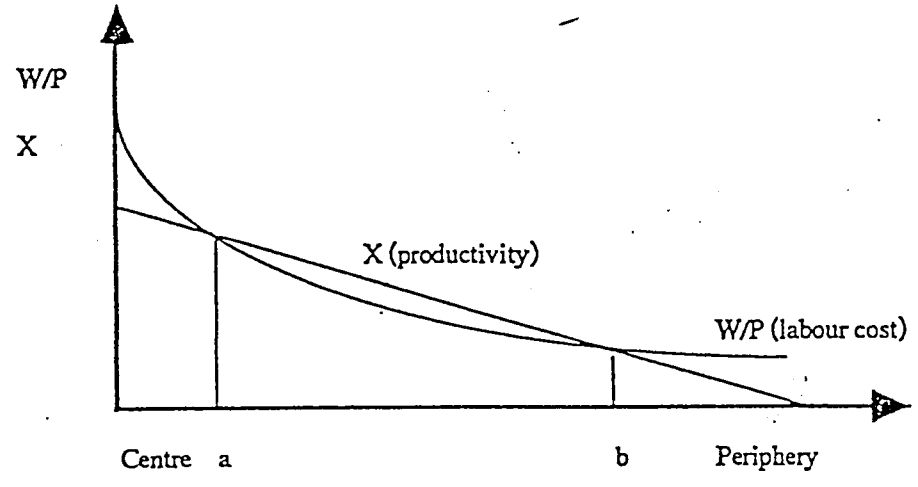


Figure 7.2 Abstract Regional Locational Advantages
Italian Regions, 1965-80



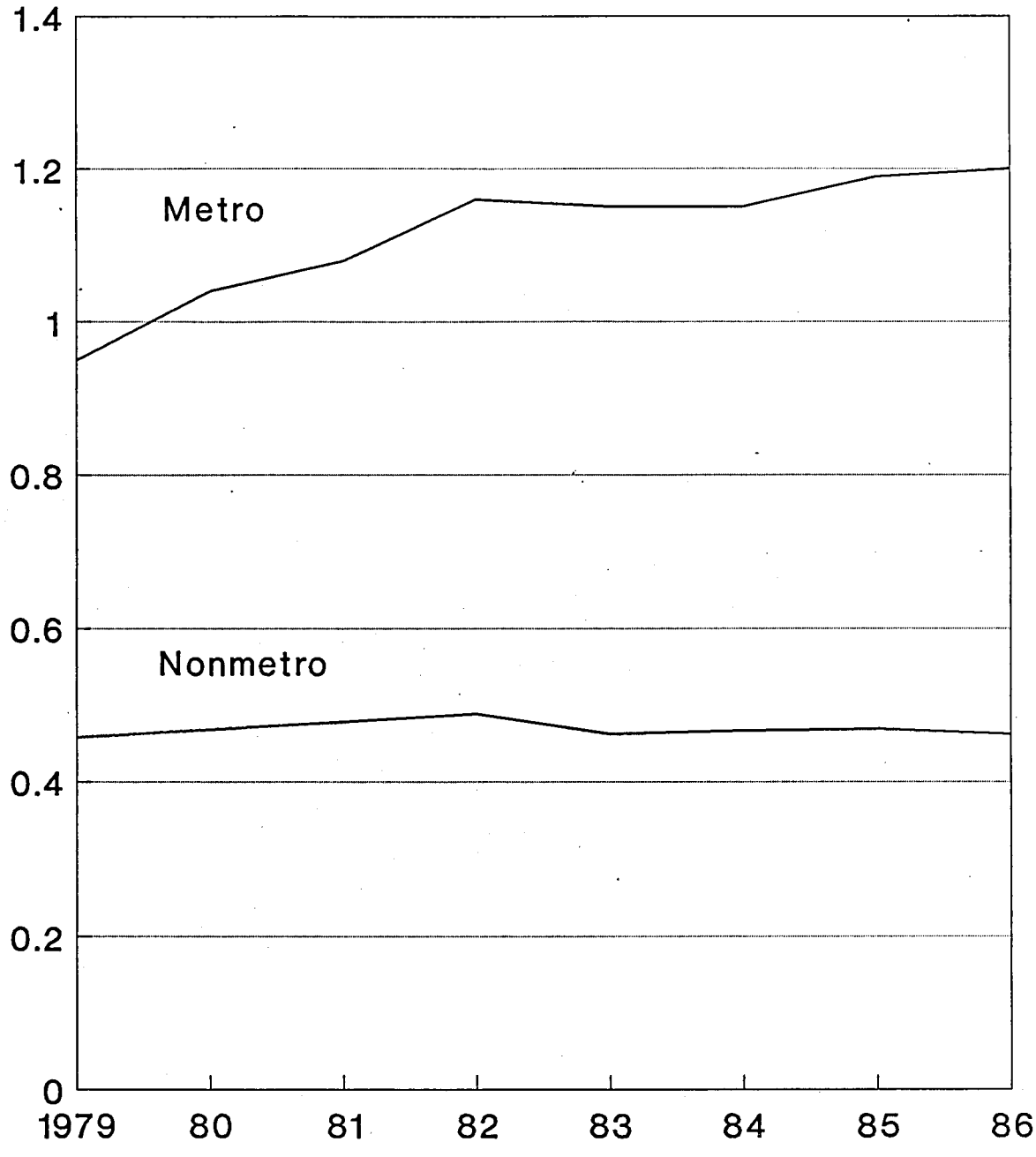
Source: "Italian Success Stories of Local Development: Theoretical Conditions and Practical Experience," Roberto Camagni and Roberta Cabello, unpublished manuscript.

to provide a deeper understanding of the factors that create shifts in the spatial pattern of productivity/labour cost relationships.

2. Structural Change, Migration, and Rural Disadvantage - The agriculture, natural resource, and goods producing sectors are all declining employment sectors in the U.S. That is a problem for rural areas, which still have a disproportionate share of their employment in these sectors. Manufacturing restructuring is a particular challenge for rural areas, because so many rural counties have manufacturing as their principal economic base, and because it was the growth of rural manufacturing jobs in the 1960's and early 70's that fueled much of the improvement in well-being, especially in the chronically poor rural South. If the future of U.S. manufacturing is in more technically sophisticated production processes, can rural areas share in that growth? Figure 8, which show rural areas virtually unchanged in their share of complex manufacturing jobs during the 1980's, while metro areas have improved their industrial job mix, is not encouraging. We need research that increases our understanding of the spatial implications of restructuring of the U.S. manufacturing sector.

Service employment is growing nationally, but in rural areas most of the employment growth has in been in local (consumer) services, not in exportable (producer) services. What is the real potential for trade in services? Is it possible for rural areas to capture a larger share of tradable service employment that becomes the basis for self-sustaining local growth and development? What are the factors that create locational advantage for rural places in an economy where services are the key to growth? As I noted earlier, research on the service sector has lagged

Figure 8. Ratio of Complex to Routine Manufacturing



Source: Bureau of Economic Analysis

despite its growing importance, in part because of inadequate data. Better research and better data must go together.

A rural development theme that was popular in the 1960's has begun to reemerge. It asserts that crowding, pollution, and high public infrastructure costs accompanying rapid metropolitan growth are symptoms of "overdevelopment," reflecting the existence of significant externalities. Thus, a major justification for rural development programs is a slowing of rural outmigration that is fueling "too rapid" urban growth, which is in fact uneconomic when a full accounting of costs is done. At the same time, the debate about public programs has become more narrowly focused on cost-benefit analysis. If, as seems likely to me, that issue continues to be a central question asked of advocates for rural development programs, we need to be better able to asses the implications of migration in that context. In particular, we need a serious research effort aimed at measuring the benefits and costs of individual and firm migration decisions, with a full accounting of public as well as private costs and returns. Currently available data are not adequate for such a research effort to be mounted.

3. Process of Local Development - Our current knowledge of how and why economic development occurs at the local level is quite weak. One measure of that is our inability to model the process of development over time with much success. For example, while we can explain most of the variation in levels of development among counties at a point in time (typically the r2 for such studies are in the .7 to .8 range), models attempting to explain rates of change in income or employment at the county level over time are much less successful. It is usual for them to exhibit r2 in the range of .2

or less, unless they include some measure of previous growth as an independent variable, which often doubles the r2. Those results should make us modest and cautious when asked to guide policy makers in the choice of local development strategies.

Camagni provides some useful insights into what may be going on. He postulates two sets of factors as explaining growth rate differentials: "objective factors" such as the supply and demand of raw materials that determine local productivity levels and which economists tend to emphasize in explaining locational advantage, and "subjective factors" such as entrepreneurial skill which sociologists and others tend to see as important determinants of local success or failure. For Camagni, "the presence of both elements is a prerequisite....to the birth of local firms and sustainable regional growth." He argues that the subjective elements have deep roots in the community and influence the local capability to shift resources from traditional to innovative uses.

In their current form Camagni's distinctions are not empirically operational, but I find his arguments intuitively attractive. I think that further work to integrate the objective and subjective aspects of local development is essential to an informed understanding of local rural development. Measuring the presence and role of so-called subjective factors in development poses a serious challenge for the design of data systems, but without such measures the interpretation of causality for local development can border on tautology -- there is industrial development because there is entrepreneurship (or leadership). Simply adopting a name for the unexplained residual in our regression equations is not a very

useful contribution.

4. Effects of Public Policy - Because my interest is ultimately in better informed public policy, I think we need more research with a specific evaluative intent. Such work is unglamorous, and so far as I can tell, largely unvalued within the academic community generally and the agricultural research system in particular. That does not diminish its importance.

An example of where we need better research to support public policy may help to make the point. We know at both a societal and individual level that higher levels of education increase the range and quality of development opportunities. What we don't know is whether local communities can devise strategies to link their efforts at educational improvement to local economic development. If they cannot, then the externalities argument for a major expansion of the Federal responsibility for funding education seems overwhelming. Even if they can, the argument for assisting the poorest communities is persuasive. In either case, however, the role of education in local as opposed to national development may be overstated. That is, human capital investments as a path for local economic development may be less important than site-specific kinds of capital, or efforts to integrate rural space more effectively into the overall national and international economy through appropriate infrastructure -- e.g., telecommunications. These are difficult and complicated research questions, but public policy makers are already grappling with how to choose among such programs.

Finally, we should not be over confident about the ultimate role of research findings in the formulation of public policy. We all want to believe that what we do is important, and politicians are no exception. Suggesting that they should simply ~~to~~ implement the results of our research trivializes their role. They seem immune to that advice.