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ABSTRACT

This paper discusses gross economic and demographic trends in rural and urban America during the past 30 years, the kinds of competitive advantages enjoyed by urban and rural regions, and insights offered by the new regional economics concerning exploitation of those advantages. The importance of agriculture has declined in rural areas, while that of manufacturing has increased. The rural population continues to decline, be less productive (older/disabled), and be less educated, leading to increased urban-rural disparities in wages and salaries, but improved production technology, reduced transport costs, and the spread of external economies have increased rural competitiveness in manufacturing and many services. These trends are expected to continue, and rural sites will become more attractive for the location of industry. Policies to preserve natural environments, coupled with improved rural access through infrastructure investment, have a clear basis in economic efficiency, but limited impact on rural development. Policies to increase human capital through decentralized extension programs may increase the competitiveness of certain rural areas as better-educated residents are employed in higher productivity jobs. However, transport improvements, increases in human capital and education, and the diffusion of information will facilitate the further depopulation of other rural areas by enabling migration for employment and higher wages. America's current rural landscape will be increasingly bifurcated, as some parts develop into metropolitan hubs and others decline in population and economic activity. A question and answer section discusses whether urban models are applicable to rural areas, effects of infrastructure and human capital improvements on migration, and questions of efficiency in provision of services. (Contains 30 references.) (Author/TD)

Rural Policy and the New Regional Economics: Implications for Rural America

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Introduction

Urban and rural are convenient categories for classifying activities, and the terms conjure up vivid images, perhaps complementary (like the Chicago skyline or Lake Wobegon), or perhaps disparaging (like the South Bronx or Tobacco Road). The terms do provide a convenient dichotomy for data, which are described by the U.S. Department of Commerce as "non-metropolitan/metropolitan" or "non-metro/metro." But these classifications don't provide a strong basis for a taxonomy of government policies.

Both urban and rural areas in the United States are simply too diverse and heterogeneous to make blanket policy concerns relevant, at least beyond a few caricatures—like the Urban Mass Transit Assistance Program or the Freedom to Farm Program. From a national perspective this is probably just as well, as "coherent" urban and rural policies seem to suggest place-based subsidy programs with little grounding in economic efficiency. The challenge of domestic policy is to consider the peculiarly urban, rural, or geographical aspects of economic programs that can enhance economic efficiency and to recognize explicitly the equity issues raised by public programs and private activities.

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This paper considers these issues in a selective manner. The plan of the paper is as follows: The second section compares gross economic trends in urban and rural America during the past three decades, establishing the aggregate gap between urban and rural well-being and the diversity of economic activity subsumed under the urban/rural dichotomy. The third section reflects on the kinds of competitive advantages enjoyed by urban and rural regions and the insights that the new regional economics offer about exploiting them. The fourth section suggests some practical implications of this analysis, and the final section provides a brief conclusion.

Some Rough Comparisons

About 54 million people or roughly 20 percent of the U.S. population live in the 2,350 counties outside of metropolitan areas. The population so classified "non-metro," or simply, rural, has risen by 25 percent, or by more than 10 million people during the past three decades (Table 1). Despite this increase, the fraction of the U.S. population classified as rural has declined slightly. Chart 1 indicates there has been a monotonic decline in the portion of U.S. population classified as rural since about 1976.

There has been a modest decline in the fraction of personal income earned in rural America during the same period (Table 2). In 1969, 16.3 percent of U.S. personal income was earned by 21.4 percent of the population residing outside metropolitan areas; by 1999, 14.8 percent of personal income was earned by 19.8 percent of the resident population classified as rural. Neither of these trends is at all "new." Urbanization has resulted in percentage declines in the rural population since the Civil War and increases in the fraction of total income earned in urban America to date since World War I.

Together, these trends imply a very small decline, on average, in the position of rural, relative to urban, residents. During the past three decades, per capita incomes increased by 61 percent in rural areas, from $13,300 to $21,400 (in 1999 dollars). In urban areas, real income per capita increased by 63 percent. Put another way, in 1969, per capita incomes in rural areas were 71.5 percent as large as those in urban areas; by 1999, rural incomes were 70.5 percent of urban incomes. Chart 2A reports the course of per capita incomes, and Chart 2B indicates the relative trends.

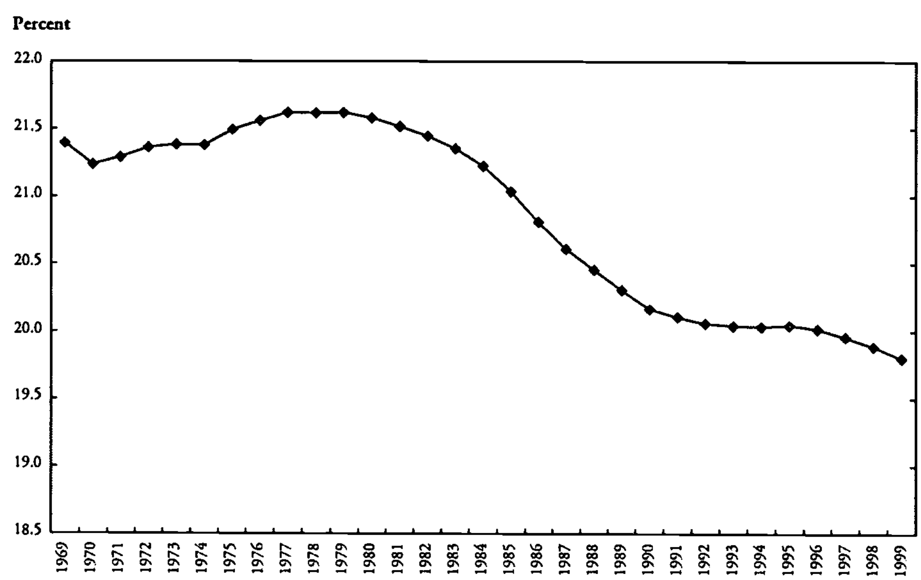
These gross trends, of course, blur over many differences within urban and rural America. The presumed dominance of agriculture pervades much of the discussion about rural America. This is simply a myth.

Table 1
URBAN AND RURAL POPULATION TRENDS, 1969-99

	Population (in millions)		
Year	Rural	Urban	Total
1969	43.1	158.2	201.3
1979	48.5	176.0	224.6
1989	50.1	196.7	246.8
1999	54.0	218.7	272.7

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Chart 1
PERCENT OF U.S. POPULATION CLASSIFIED AS RURAL, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Table 3 reports the fraction of economic activity associated with agriculture in urban and rural counties. Three decades ago more than 12 percent of rural earnings were derived from agriculture. In 1999, only 3.6 percent of rural earnings arose from agriculture. It is true that most of the farm earnings in America arise in rural areas. For example, in 1999 rural farm earnings were 26 percent higher in aggregate than in urban areas. But three decades ago, rural farm earnings were 72 percent higher in rural areas than metropolitan areas. In 1999, 44.2 percent of American farm earnings were generated in metropolitan, not rural, areas.

Table 2
RURAL SHARES OF POPULATION AND PERSONAL INCOME

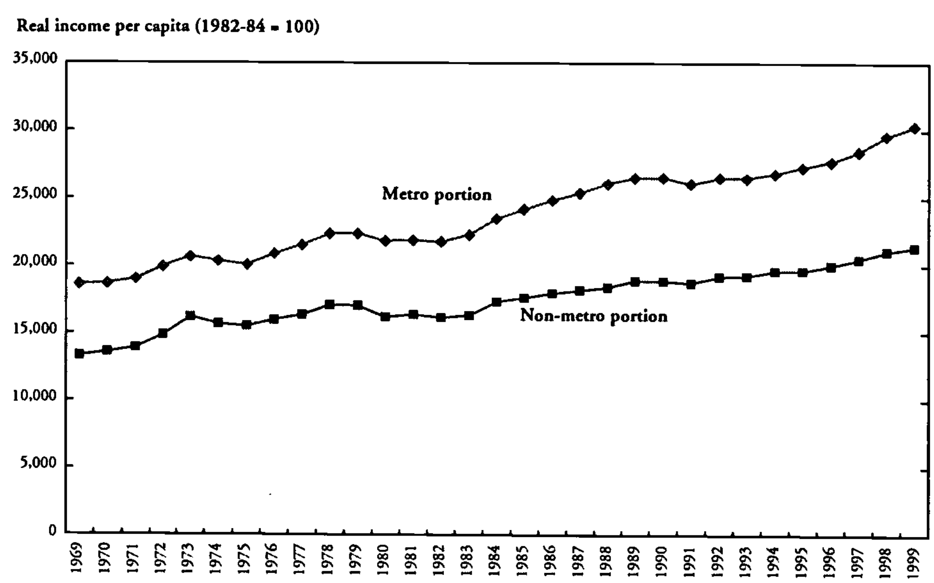
	Percent	
Year	Population	Personal income
1969	21.4	16.3
1979	21.6	17.3
1989	20.3	15.4
1999	19.8	14.8

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Table 3 also reports analogous trends in agricultural employment. From 1969 to 1999, farm employment declined from 1.4 million to 1.3 million workers in urban areas, or from 1.9 to 1.0 percent of the urban work force. During the same period, farm employment in rural areas declined from 2.6 million to 1.9 million, or from 14.7 to 6.7 percent of the rural workforce (Chart 3).

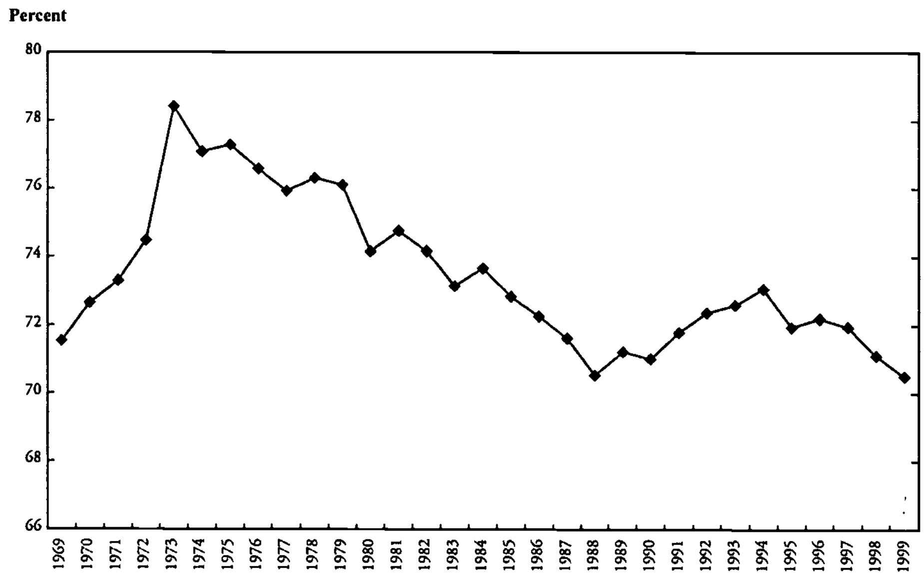
Table 3 also indicates the importance of farm income as a component of total personal income in

Chart 2A
PER CAPITA INCOME URBAN AND RURAL, 1969-99



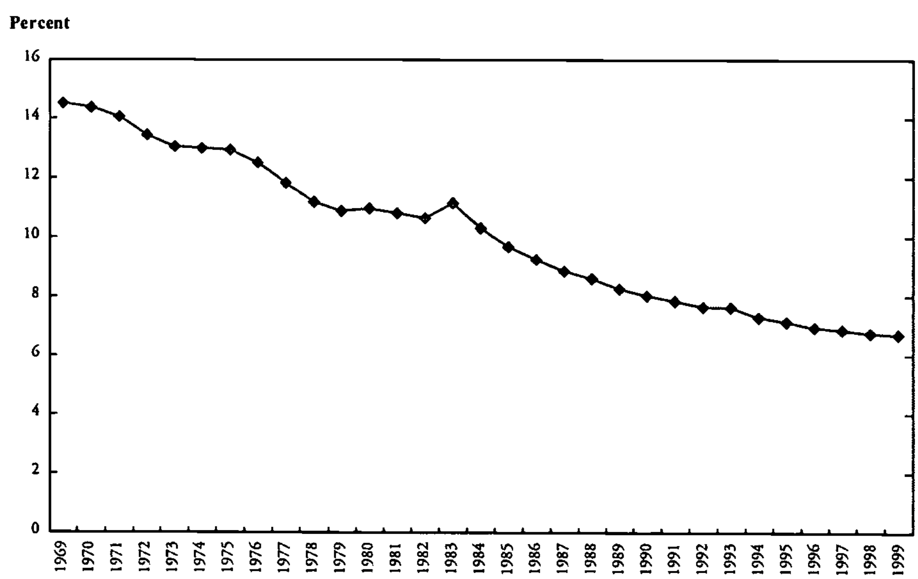
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Chart 2B
RATIO OF RURAL TO URBAN PER CAPITA INCOME, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Chart 3
PERCENT OF RURAL EMPLOYMENT IN FARMING, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Table 3
RURAL AND URBAN EARNINGS, EMPLOYMENT, AND PERSONAL INCOME DERIVED FROM AGRICULTURE

	Percent			
	1969	1979	1989	1999
A. Earnings				
Urban	1.3	.9	.6	.5
Rural	12.1	7.6	5.8	3.6
B. Employment				
Urban	1.9	1.5	1.1	1.0
Rural	14.7	10.6	8.4	6.7
C. Personal income				
Urban	1.0	.7	.5	.3
Rural	9.1	5.3	3.6	2.2

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

metropolitan and non-metropolitan counties. Farm income has always been a trivial fraction of total personal income in urban areas, dropping from about 1 percent to about 0.3 percent between 1969 and 1999. But farm income is also a very small component of the total income earned in rural areas. Thirty years ago, farm income was about 8 or 9 percent of rural personal income; it is now about 2 percent. Ninety-eight percent of the personal income generated in rural areas does not come from farming (Chart 4).

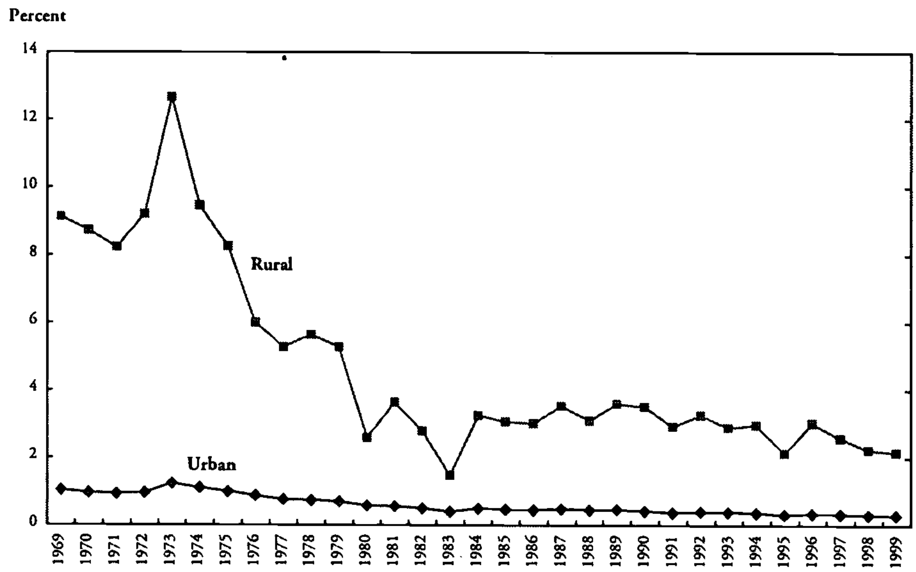
Table 4 presents a summary of the importance of agricultural services and extractive activities in earnings and employment. In 1999, agricultural services, forestry, mining, and extractive activities contributed less than 2 percent to aggregate earnings in urban areas. But in rural areas these archetypal rural activities account for only about 4 percent of non-farm earnings. Three decades ago these activities accounted for only 5.5 percent of rural earnings. These archetypal rural activities contribute even less to rural development.

Table 5 summarizes the reliance upon manufacturing activity, retail and wholesale trade, and services (including finance, investment, and real estate—FIRE) in America's urban and rural areas. The most striking differences in the distribution of earnings are in the importance of manufacturing and services. Manufacturing activity accounts for about 28 percent of earnings in rural areas, about 10 percentage points more than in metropolitan areas. Manufacturing activity is much more important in its contribution to economic well-being in rural areas than in urban areas, and this has been the case since the early 1970s.

Conversely, the service sector, including finance, insurance, and real estate, is much more important as a source of earnings in urban America than in rural areas. But the relative importance of services in earnings in rural areas has increased by more than 50 percent in the past three decades.

Chart 5 reports the trend in manufacturing earnings in rural areas, indicating the rise in earnings over time and the emerging dominance of durable goods

Chart 4
PERCENT OF PERSONAL INCOME FROM FARMING, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Table 4
PERCENT OF NON-FARM EARNINGS AND EMPLOYMENT FROM AGRICULTURAL SERVICES, FORESTRY, FISHING, AND MINING

	Percent			
	1969	1979	1989	1999
A. Earnings				
Urban	1.3	1.9	1.5	1.5
Rural	5.5	7.8	5.4	4.1
B. Employment				
Urban	1.2	1.6	1.7	1.7
Rural	4.4	5.0	4.4	3.8

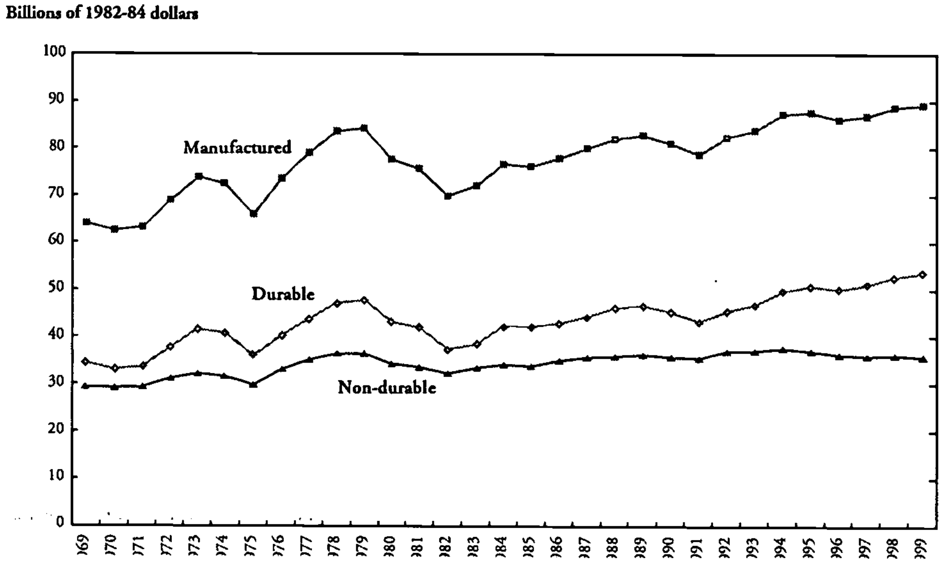
Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

manufacturing over non-durables (which include, for example, the manufacturing of foodstuffs).

Chart 6 shows the steady increase in the percent of manufacturing employment in rural areas.

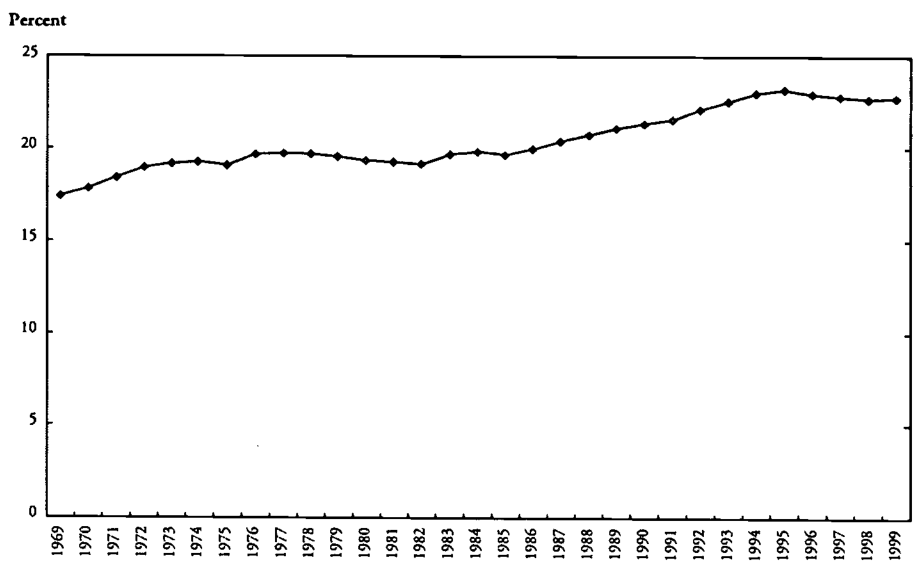
Table 5 highlights the importance of manufacturing employment in rural and urban counties. Among urban non-farm workers, about one in eight is employed in the manufacturing sector. But one in five rural workers is employed in manufacturing.

Chart 5
TOTAL MANUFACTURING EARNINGS IN RURAL AMERICA, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Chart 6
PERCENTAGE OF U.S. MANUFACTURING EMPLOYMENT LOCATED IN RURAL AMERICA, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Table 5

PERCENT OF NON-FARM EARNINGS AND EMPLOYMENT IN MANUFACTURING, TRADE, AND SERVICES

	Percent			
	1969	1979	1989	1999
A. Manufacturing				
Earnings				
Urban	34.7	30.3	23.2	18.2
Rural	34.8	32.9	31.9	28.2
Employment				
Urban	28.7	22.9	16.5	12.8
Rural	29.8	26.8	23.5	19.8
B. Retail and wholesale trade				
Earnings				
Urban	20.8	20.5	19.5	18.1
Rural	21.3	20.0	19.0	18.9
Employment				
Urban	24.6	25.8	25.9	24.7
Rural	24.6	25.3	26.0	25.8
C. FIRE and services				
Earnings				
Urban	26.6	30.2	40.3	47.4
Rural	20.8	21.0	26.7	31.6
Employment				
Urban	32.4	37.1	43.8	48.4
Rural	28.6	29.7	33.8	37.8

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

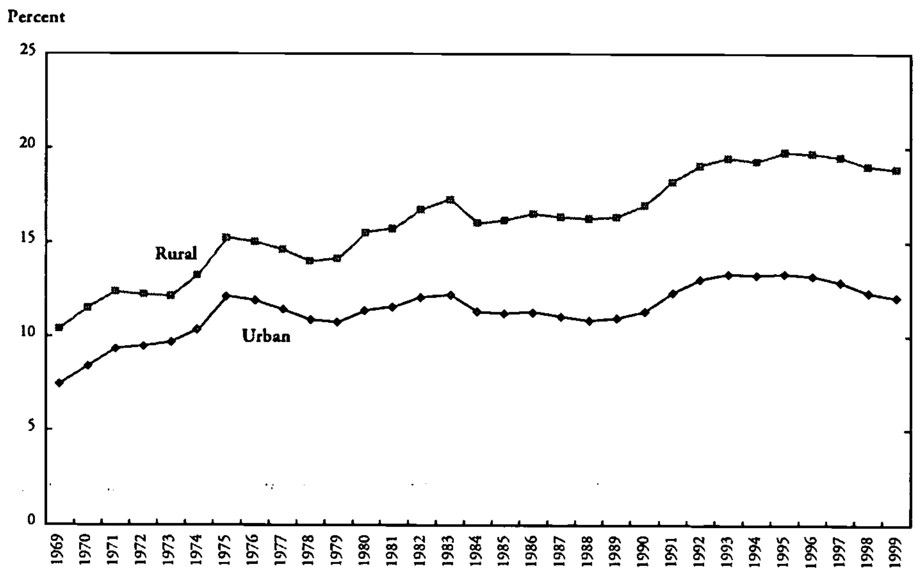
Charts 7A and B summarize transfer payments to households in urban and rural areas. Transfer payments are a substantially larger proportion of total income in rural areas, about 19 percent in 1999 versus 12 percent in urban areas. Since 1979, transfer payments per capita have been larger in rural areas than in urban areas, about 10 percent higher in 1999.

Chart 7A reports the trends in transfer payments as a fraction of income in urban and rural America. Transfers are highly cyclical in both areas, reflecting trends in the macro economy.

Chart 7B indicates that transfers per capita in urban and rural counties were almost identical through 1983, but there has been a steady increase in per capita transfers to rural areas, relative to metropolitan areas, during the past 15 years.

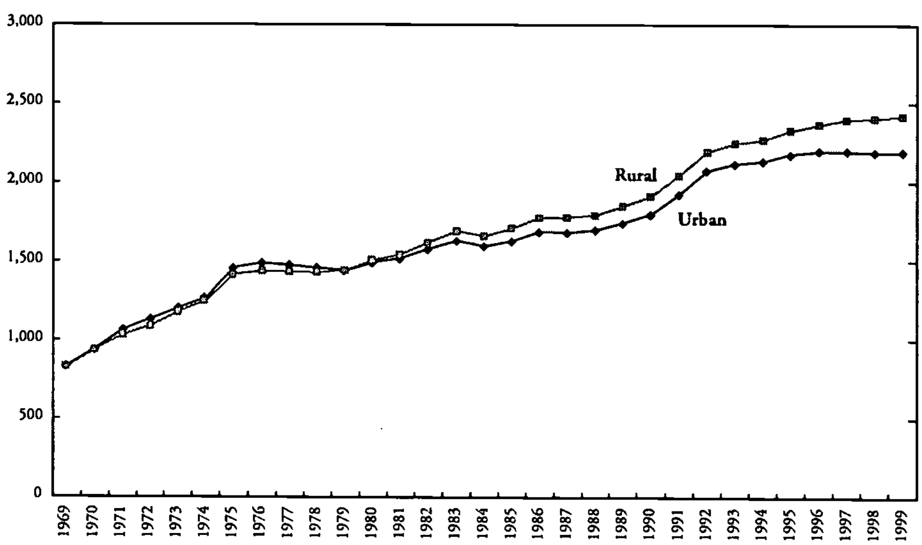
Finally, Table 6 reports government farm payments. About a quarter of these payments go to non-rural areas. Government payments represent a trivial fraction of total income, but they are quite large per farm employee—more than $8,500 per farm worker in rural America in 1999. It is hard for an economist to understand the economic rationale for any of this. It is estimated that 7 percent of U.S. farms with gross revenues above $250,000 receive about 45 percent of federal subsidy payments. Small farms (with gross revenues less than $50,000) receive about 14 percent of subsidy payments. In

Chart 7A
TRANSFER PAYMENTS AS PERCENT OF INCOME, URBAN AND RURAL, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Chart 7B
REAL TRANSFER PAYMENTS PER CAPITA, URBAN AND RURAL, 1969-99



Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

Table 6
FARM PAYMENTS IN URBAN AND RURAL AREAS
(in 1999 dollars)

	1969	1979	1989	1999
Total payments (in millions)				
Urban	3,967	585	3,159	4,257
Rural	13,254	2,570	11,468	16,337
Payments per capita				
Urban	25	3	16	19
Rural	308	53	229	303
Payments per farm employee and proprietor				
Urban	2,801	414	3,262	3,364
Rural	5,174	1,094	8,072	8,569

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Regional Economic Information System*, 2002.

1999, farms in the former group received payments averaging $65,000, while farms in the latter group received payments averaging $4,000 (U.S. General Accounting Office).

In a total of 556 non-metro counties (about 24 percent of all rural counties), a fifth or more of personal income was derived from agriculture from 1987 to 1989, and these counties were identified as "farm-dependent" by the U.S. Department of Agriculture. These counties are primarily located in the Great Plains, from North Dakota to Texas, in Iowa, the Northwest, and Midwest. Farm-dependent counties contain about 4.8 million people, 8.8 percent of the rural population, and 1.7 percent of total population. Real income increases in these counties were lower during the 1990s than in other rural counties, and the variability of income was larger (Gale 2000).

One might presume that the subsidies to farmers were targeted to these vulnerable counties. However, as economic policy for these farm-dependent counties develop, it is reported that these farm subsidies

> ...perform poorly. A large part of government farm payments go to areas where they are barely a blip in the local economy. Farming-dependent counties—where government payments to farmers play a significant role in the local economy—received only 37 percent of farm program payments in 1998, while 19 percent went to metro counties and 44 percent went to non-farm-dependent, non-metro counties. (Gale 2000)

There is rather consistent evidence that these farm payments are capitalized into land values (Goodwin and Ortalo-Magne). This implies that larger landowners receive disproportionate benefits from farm subsidies. But this capitalization also implies that inefficient farms are kept in business growing unproductive crops. Moreover, these increased land values inhibit the conversion of economic activity to more productive uses in the poorer rural areas of the country. Farm payments serve powerful political interests, but they inhibit economic efficiency and impede rural development.

Some information about the demographic composition and labor force attachment of urban and rural populations is available from the micro data files of the Current Population Survey (CPS) conducted by the U.S. Census Bureau. These data are available annually beginning in 1980. Comparisons of CPS data across the past three decades reveal substantial

Table 7
DEMOGRAPHIC CHARACTERISTICS OF URBAN AND RURAL POPULATION

	1980	2001
Percent disabled		
Urban	3.9	4.2
Rural	6.0	6.5
Percent married		
Urban	56.6	51.6
Rural	64.4	58.7
Percent male		
Urban	47.5	48.2
Rural	47.7	48.5
Percent white		
Urban	85.5	79.9
Rural	90.9	89.7
Percent adults not working		
Urban	30.4	28.5
Rural	32.8	32.7
Average age (years)		
Urban	41.2	43.2
Rural	42.9	46.1
Education (years)		
Urban	12.0	13.0
Rural	11.2	12.3

Source: Bureau of Labor Statistics, *Current Population Survey*, March files, 1980–2001.

differences in the average demographic characteristics of urban and rural populations. The rural population is older, by about three years on average in 2001, and rural residents average one year less of education. Rural adults are more likely to be disabled, and they are more likely to be married. A much larger fraction of rural residents are white (Table 7).

In 1980, almost 40 percent of rural workers lacked a high school diploma; in 2001, the figure was only 22 percent. But during this same period, the fraction of urban workers without a high school diploma declined from 31 percent to 17 percent. The fraction of rural workers with more than a college education remained constant at 4.2 percent during the period 1980-2001, while the fraction of urban workers with more than a college degree increased steadily from 6.6 percent to 8.2 percent (Charts 8A and B). Urban-rural disparities in secondary education have declined; disparities in higher education have increased.

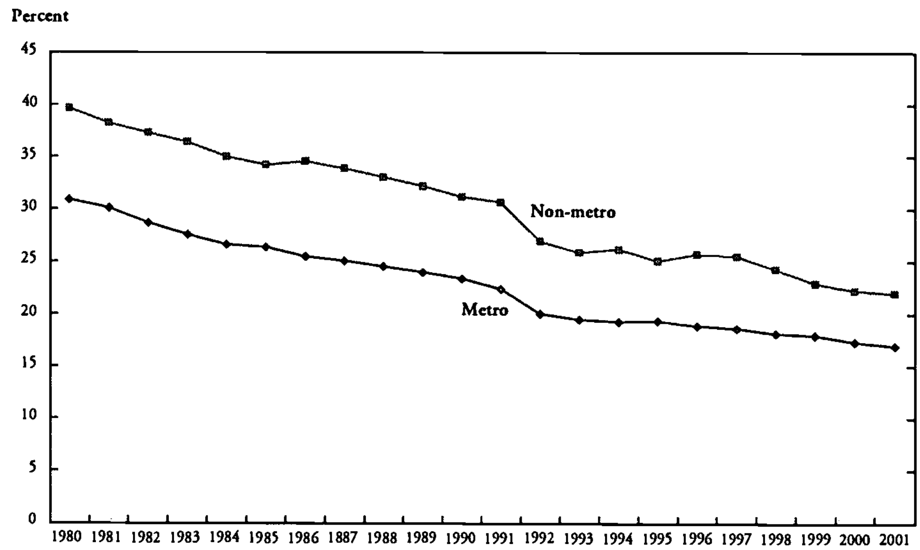
There has been a constant difference in weeks worked per year of about two weeks favoring urban workers and an increasing disparity in hours worked per week. In 1980, both urban and rural workers were employed for 26 hours per week on average. In 2001, the figure was unchanged for rural workers, but was about 28 hours per week for urban workers. The divergences in real salaries reflecting weeks worked, hours worked per week, and differences in wage rates are apparent from Chart 9.

The population in rural areas is older, more dependent, and less educated than the urban population. Rural workers supply fewer hours to the market, have higher unemployment rates, and obtain lower average wages. These trends are persistent.

Competitive Differentials and Theories of Regional Growth

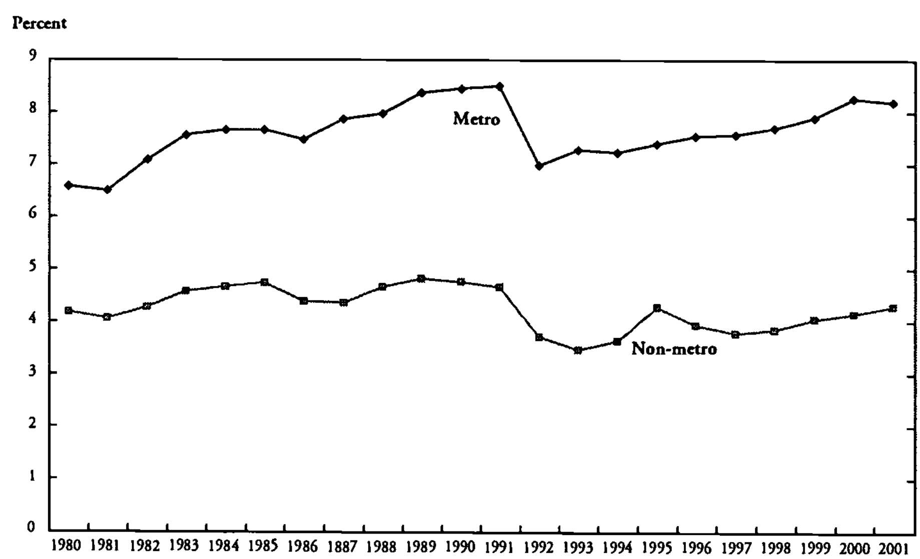
The economic conditions offered by urban and rural sites present differentials in consumption opportunities and in production possibilities. Some of these differentials confer competitive advantages on rural locations and others confer advantages on urban locations. On the consumption side, rural America offers a package of amenities, which is highly valued by many consumers—unparalleled beauty, opportunities for outdoor recreation, and unspoiled natural environments. Further, rural location offers freedom from many of the well-known disadvantages of urban life—pollution and congestion, nearby crime, commuting, and the inherent interpersonal conflicts of dense living and working arrangements.

Chart 8A
PERCENT WITH LESS THAN HIGH SCHOOL EDUCATION, METRO AND NON-METRO, 1980-2001



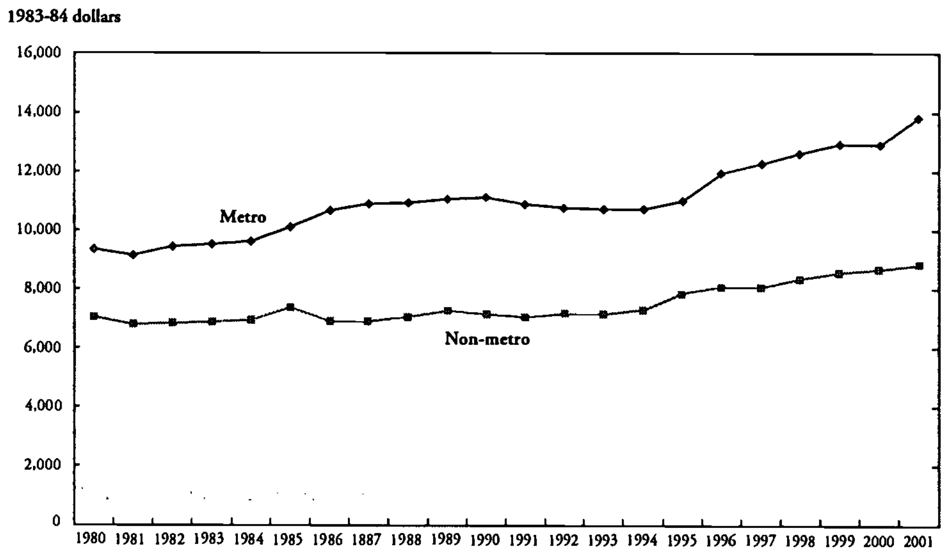
Source: Bureau of Labor Statistics, *Current Population Survey*, March files, 1980–2001.

Chart 8B
PERCENT WITH MORE THAN COLLEGE EDUCATION, METRO AND NON-METRO, 1980-2001



Source: Bureau of Labor Statistics, *Current Population Survey*, March files, 1980–2001.

Chart 9
AVERAGE WAGES OR SALARY, METRO AND NON-METRO, 1980-2001



Source: Bureau of Labor Statistics, *Current Population Survey*, March files, 1980–2001.

On the production side, rural environments are typically distinguished by lower site prices, including land for plant, equipment, and commercial structures, and also land for housing, shopping, and parking. These differences translate into competitive differentials whose value as elements of comparative advantage has changed over time.

Most, but not all, of these competitive differentials between urban and rural locations reflect variations in density, access, and in the competition for sites. The perceived importance of density and access as elements of comparative advantage has also changed over time in several important ways.

Density affects the well-being of consumers through its effects on the costs of consumer goods —land, housing, commuting—and also its direct effects on consumption opportunities—air quality, public safety, and so forth. But higher densities can also affect consumption opportunities through the increased specialization made possible by more compact market areas. With high densities, general stores and supermarkets can be augmented with boutiques and specialty shops catering to narrow market niches. This specialization increases the welfare of consumers and increases consumption.

It is, perhaps, not obvious which of these consumption packages—the rural or the urban—is more income elastic. But it is clear that technical progress can compensate for many of the consumption disadvantages that arose historically from low-density, rural residential living conditions. Out-of-print books, French films, jamon iberico, and competitive chess tournaments are merely a few clicks away from any rural consumer. Or at least they will be as fiber optic technology gives way to modern wireless technology. Some historical advantages in consumption arising from the specialization afforded by higher densities can be achieved in sparsely populated areas.

Density has more complicated impacts upon the structure of producer costs and the profitability of firms. During the past half-century, technical progress greatly increased the comparative advantages of rural areas for the location of manufacturing activities. This has arisen from three factors.

First and foremost, the cost advantages of continuous-flow production processes have increased the attraction of low land prices as determinants of the location for new manufacturing plants. Assembly line continuous-flow production technology used in baking, auto assembly, brewing, and furniture production, means that best-practice plants have lower ratios of labor-to-land and lower ratios of capital-to-land; low land costs are simply more important in the economic calculus of production and profitability.

Second, transport improvements have dissipated almost all the advantages of central-urban or suburban locations in delivering product to markets. Improved roadways, truck capacities, and the suburban location of wholesale facilities have reduced transport cost differentials.

Finally, raw material is much less important in manufacturing, and value-added per ton of output has increased substantially. Together these latter factors, improved transport and the reduced importance of weight in output, have freed manufacturing activities to seek locations where land and labor costs are lower—often rural or foreign locations.

The emergence of manufacturing in rural areas and the increased specialization of rural areas in manufacturing activities arise directly from these competitive advantages. Rural manufacturing uses the same technology adopted in metropolitan areas (Gale 1998). But the incidence of larger plants employing less-educated workers is larger in rural manufacturing, reflecting scarcity and the relative price of inputs. These trends favoring less dense locations for manufacturing continue unabated as the economy becomes more globalized.

But density has other effects upon manufacturing production processes, ranging from (Marshallian) external economies in competitive markets to (Chamberlinian) competition among producers of differentiated products (Quigley). External economies attributable to density in competitive markets include labor market pooling and matching (Helsley and Strange 1990), specialist supplies (Krugman 1998), statistical economies, such as the "natural" unemployment insurance provided by larger labor markets (David and Rosenbloom), and resale markets for assets (Helsley and Strange 1991). Equally important, the co-location of firms in specialized manufacturing activities leads to increased efficiency, at least in certain selected industrial classifications. (See Henderson et al. for extensive documentation.) These externalities in production arise almost entirely from the increased densities in cities. The division of labor is limited by the extent of the market, and isolated markets provide less room to enhance productive efficiency through this form of specialization.

Outside the manufacturing sector, the role of density in production costs is less clear cut. For example, many service and entrepreneurial activities are essentially footloose, tied to no particular location. For many parts of the service sector, especially those in which services can be delivered electronically (e.g., call centers), rural areas with lower land and labor costs offer more efficient locations than competing metropolitan sites. For truly entrepreneurial activities, the location of the business may be chosen *entirely* by the consumption preferences of the entrepreneur.

But one aspect common to entrepreneurial activity and knowledge-based industry is the importance of intimate contact among economic actors. Three-quarters of a century ago, Robert Murray Haig noted the importance of physical location in the garment industry, where the quick recognition of fashion trends was so important to profitability. Haig characterized this interaction as face-to-face contact, but even here he recognized trends toward decentralization, concluding that the American fashion industry was ultimately destined to spread "above 14th Street." A half-century later, the emergence of Silicon Valley as a dominant force in software engineering is widely thought to have arisen from the externalities provided by these same knowledge spillovers (Saxenian). But Santa Clara County in 1980 was much less dense than New York County in 1920 (even the part below 14th Street). And this was all before the development of web-based communication.

Some comparative information on communications, again derived from the CPS, is presented in Table 8. The table reports the fraction of households with access to a telephone, a computer, and an Internet connection separated by income class for urban and rural households. As the table indicates, in 1998 there were no differences in access to a telephone by income class between urban and rural households. At a given level of income there were very small differences between urban and rural households in the incidence of computer usage—no more than 3 or 4 percentage points at any level of income. The differences in Internet usage between rural and urban households are also small. At annual incomes below $50,000, the differences in Internet usage at any level of income are no more than 5 percentage points.

Table 9 presents further perspective on these magnitudes. It presents information on the percent of households using electronic mail over time, separated by income class for urban and rural households. Usage of email is not quite the same as Internet access, and the time series is short, but these are the only nationally representative data.

The table reveals a familiar pattern: Email usage increases with income. But the rate of penetration during a brief four-year interval is phenomenal. At different income levels, email usage increased between 415 and 513 percent in urban areas. But in rural areas, email usage increased from 452 to 838 percent. There is a gap in digital communication between rural and urban places, but it is eroding quickly.

Two trends are clear. First, the diffusion of digital communication is as rapid in rural locations as it is in urban locations. Second, there is scope for substitution of various forms of communication in production. To some extent, the external economies

Table 8
PERCENT OF URBAN AND RURAL HOUSEHOLDS WITH ACCESS TO TELEPHONE, COMPUTER, AND INTERNET CONNECTIONS BY INCOME IN 1998

	Telephone		Computer		Internet Usage	
Income	*Urban*	*Rural*	*Urban*	*Rural*	*Urban*	*Rural*
$10,000-15,000	89.1	88.7	16.6	13.8	7.9	6.0
$15,000-20,000	92.7	92.9	20.8	22.1	10.3	8.4
$20,000-25,000	93.8	95.0	26.1	24.7	12.9	10.0
$25,000-35,000	96.4	95.9	36.5	34.0	20.4	15.4
$35,000-50,000	98.0	97.4	50.0	51.0	30.6	26.4
$50,000-75,000	97.9	98.0	67.1	64.2	45.7	38.7
$75,000+	98.9	98.5	80.8	76.5	62.0	53.7

Source: Data are from U.S. Department of Labor, *Current Population Survey,* 1999. Reported in U.S. Department of Commerce, *Falling Through the Net: Defining the Digital Divide,* Washington D.C.: U.S. Government Printing Office, April.

Table 9
PERCENT OF URBAN AND RURAL HOUSEHOLDS WITH ELECTRONIC MAIL BY INCOME

	1994		1998	
Income	*Urban*	*Rural*	*Urban*	*Rural*
$10,000-15,000	1.4	.5	6.2	3.7
$15,000-20,000	1.5	.9	7.7	5.6
$20,000-25,000	2.0	.8	9.5	6.7
$25,000-35,000	3.0	1.3	15.3	9.5
$35,000-50,000	4.5	3.4	22.7	16.4
$50,000-75,000	6.7	6.0	32.2	25.7
$75,000+	10.8	8.7	44.8	39.3

Source: Data are from U.S. Department of Labor, *Current Population Survey*, 1999. Reported in U.S. Department of Commerce, *Falling Through the Net: Defining the Digital Divide*, Washington D.C.: U.S. Government Printing Office, April.

historically attributed to physical density and face-to-face contact may be achieved by improved communication, networking, video, and electronic means. This does not mean that rural location offers identical conditions for knowledge-based industry. But disadvantages arising from low density per se, have become less important over time. And these rural disadvantages can only erode further in the future.

The Rationale for Rural Policy

In thinking about the rationale for government policy, it is important to distinguish between *place-based policies* and *people-based policies*. Place-based policies presume that there is a specific reason for targeting programs geographically, while people-based policies target recipients by category regardless of their location.

An efficiency rationale for place-based economic policy presumes some existing failure in competitive markets, and this market failure causes economic losses at the location chosen for attention. For example, the economic rationale for the urban renewal program of the 1950s was based upon the enhanced market value of properties improved by federal government programs, relative to the cost of the public investment incurred. The enhanced market value arose because collective government action made investment activities profitable, which had been unprofitable under the divided ownership of neighboring properties.

What is the economic analogy for place-based policies in rural America? Presumably, a strong external effect arises from the option value of unspoiled countryside, the enjoyment of rural beauty, and the irreversibility of urban development. There is clearly economic value to national taxpayers in the preservation of nature for the enjoyment of all citizens and for improved access to the countryside. No single owner of rural property reaps the full benefit of investments in preservation, but government action can make these activities socially profitable.

This analogy suggests an important role for the national government in the preservation of rural environments in various parts of the country, and in making these environments accessible to all Americans. This preservation role requires some practical judgments about aesthetic or historical importance and about the crucial issue of *access* by other citizens. Some progress has been made on these issues in other countries. For example, since 1990 a program of Countryside Stewardships in the United Kingdom has offered payments to landowners and managers who undertake to conserve and restore important or scenic landscapes and to improve public access to them (Ministry of Agriculture, Fisheries, and Food). Types of landscape subsidies have included walls and hedgerows, meadows, orchards, wildlife corridors, and so forth. The stewardship is not a "farm program," even though about three-quarters of the payments have been made to farmers. More recently, the European Union has issued a broader Rural Development Regulation (1257/1999) that generalizes this stewardship principle. Extensions of these notions have been proposed for continental Europe. (See Mahe and Ortalo-Magne for some specific examples.) Programs such as these are taxing of administrative capacity, and ensuring access to preserved environments is difficult. Nevertheless, expanded efforts at preservation and restoration, for the benefit of all citizens, seem warranted. It is important to realize that these investments are the responsibilities of the national government, as well as the states.

But the preservation and irreversibility rationales for policy are limited, and it is not sensible to argue that large national or state expenditures should be made to preserve the "rural way of life."

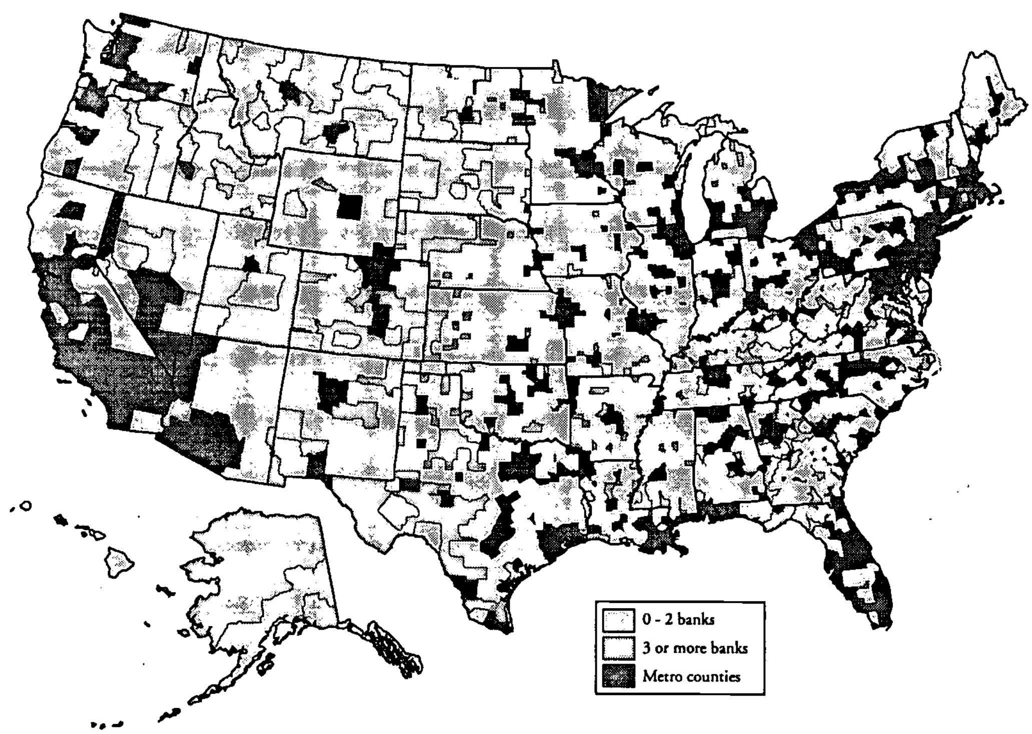
An alternative rationale for place-based policies by state government is the demonstrated rate of return to investment in transportation and public infrastructure. A large number of studies (see Brown for a review) have established that the rate of return to transport investment is high, even in rural areas, and there is some evidence that state infrastructure investment tends to direct growth toward the least dense and most rural parts of states (Haughwout). Thus, there is a narrow efficiency basis for selective public investment by states in transport. These investments can also improve the access of others to the consumption externalities provided by the countryside.

A more important rationale for place-based strategies for rural America is to provide alternative ways to exploit the external economies that arise from the higher densities of population and businesses in cities. Absent sufficient density specialization of private economic agents is discouraged, and costs in both production and consumption are increasing. Improved technology may imply that some of these economies can be achieved by other means.

Business services, particularly credit and banking services, may be a good example. Research on the behavior of small businesses suggests that credit access is improved through specific banking relationships with nearby lenders (Kilkenny). Yet rural densities often do not support specialized commercial lenders at dispersed locations. Indeed, in many rural areas there are few lenders competing for business, and often these lenders have little local expertise outside of traditional agriculture. It is reported that the average number of competing banks within rural counties has "remained remarkably stable over the past 15 years" (Economic Research Service). Nevertheless, in 1994, 27 percent of rural counties were served by two or fewer banks. In contrast, only 4 percent of urban counties were served by two or fewer banks. Four percent of rural counties had 10 banks, while 40 percent of urban counties were served by the same number (Collender et al.). A third of rural counties were served only by non-local banks (Figure 1).

This leads to two sources of concern. First, reduced competition among rural lenders may lead to higher interest rates and above-normal profits by banks. Second, reductions in local expertise by lenders may mean that some profitable loans, particularly to small businesses, are foregone simply because their potential cannot be evaluated easily. Recent analyses suggest that financial markets do serve rural areas "reasonably well" (Collender et al). At least there is little difference in the credit terms and conditions

Figure 1
COMMERCIAL BANKING ACCESS IN RURAL COUNTIES



Source: Collender, Robert N., et al. 1999. "Financial Markets Serve Rural Areas Reasonably Well," *Rural Development Perspectives*, vol. 14, no. 1.

associated with small business loans and home mortgages. But there remain concerns about the structure of rural credit markets and its effects upon commercial borrowers and consumers. In some instances, competition can be increased by standardization of documents and aspatial competition from many sources. In residential finance, this has already taken place as banks and mortgage brokers aggressively compete for home finance and are limited in geographical competition only by government regulation. Some of this can be diffused in the market for business loans, but it does appear that increased competition will be more sharply limited. There may be a role for government-sponsored demonstrations or pilot guarantee programs to encourage more aggressive business lending from longer distances. Analogous public intervention revolutionized mortgage lending in the 1930s by demonstrating the profitability of liberal credit terms.

As noted above, increased levels of human capital are associated with increased entrepreneurial activity, with the attraction of economic activities to particular regions and positive externalities in production. It is banal (and self-serving) for an academic to call for increased investment in higher education. But let me suggest one concrete example.

An outsider can't help wondering if the educational structure in many rural states is really appropriate to the current realities of non-metropolitan America. When the Morrill Act established the system of land grant colleges in 1862, more than half the country lived on farms and engaged in agriculture. The Morrill Act gave the states and territories land to establish colleges and to bring liberal, practical education (meaning agriculture, engineering, and military tactics) to their residents. Federal assistance was in the land granted, partly held as endowment, and in small amounts of direct payments.

This system of payments was greatly expanded by the Hatch Act of 1887, which provided for federal support matched by states for agricultural experiment stations. Finally, the Smith-Lever Act of 1914 created a cooperative extension service to disseminate agricultural innovation throughout the land. Large federal grants under the Hatch and Smith-Lever Acts, matched by state resources, are administered by the U.S. Department of Agriculture. The current federal portion of these expenditures is $1.03 billion per year. The system financed through these programs has evolved into an admirable array of well-funded, state-supported agricultural schools, agricultural extension activities, and experiment stations. The record of innovation in U.S. agriculture is spectacular, and the importance of the infrastructure provided by land grant institutions in creating and diffusing innovation is unquestioned (Evenson and Kislev). The system has made productivity in U.S. agriculture the envy of the world.

These large-scale public subsidies were well suited to a time when agriculture dominated national output. But it is hard to imagine why a current commitment to these subsidies and these institutions is an efficient use of resources. After all, as indicated in Table 3, farm income currently represents a little over 2 percent of non-metropolitan income, and farms employ only 7 percent of non-metropolitan workers. Moreover, much of the farming income and agricultural service income is actually generated in urban areas (42 percent in 1999). This specialization in agriculture does not seem to be a good development policy from the viewpoint of the rural states receiving land grant subsidies, or from the viewpoint of the federal government financing these subsidies.

If institutions of higher education are to engage in extension activity and to invest in practical experiment stations, agriculture seems to be the wrong sector in which to specialize, at least in the 21st century. Extension activities could be directed toward entrepreneurship, finance, or general business skills.

Improving human capital through post-secondary education involves both increasing the skills of those who enroll and increasing the fraction of eligible students who enroll. One way to increase the fraction of eligible students enrolling is by decentralizing higher education further. To the extent that rural populations can be educated locally, this will improve enrollment rates and retention rates. Indeed, decentralization of undergraduate instruction may be viewed as a kind of extension service or experiment station, but one with no specific link to agriculture.

There are other potential advantages to decentralization of educational services. To the extent that those currently living in rural areas are more likely to remain so, this may increase the human capital stock remaining in rural America. One further point is worth stressing. There is some evidence, from the decentralization of higher education in other places, that the location of new educational facilities provides an external benefit in local labor markets. For example, the decentralization of university education to rural areas in Sweden during the 1980s (when the number of post-secondary institutions was increased from six mostly urban to 23 mostly rural colleges and universities) was associated with significant increases in productivity (output per worker) in the mostly rural towns in which the new institutions were placed (Andersson et al.). Moreover, increases in productivity were also observed in towns adjoining these new facilities. All this suggests that these kinds of institutions provide spillovers in knowledge utilization and in enhancing productivity—even in quite rural environments.

CONCLUSION

The fraction of the population living in nonmetropolitan America continues to decline slowly and rural economies diversify, at least in the aggregate. The importance of agriculture has declined in rural areas. Manufacturing, especially that of durables, has increased in relative importance and absolute output.

The rural population continues to be less productive—older or more likely to be disabled—and less educated. These factors combine to increase the urban-rural dispersion between average wages and salaries.

But in many important respects, improved production technology, reduced transport costs, and the spread of external economies have increased the competitiveness of rural areas over time in manufacturing and in the supply of many services. We should expect these trends to continue and rural sites to be even more attractive for the location of industry.

Policies to enhance and preserve natural environments coupled with improved access to rural environments through infrastructure investment have a clear basis in economic efficiency, but their impact on rural development is itself limited.

Policies to increase human capital through educational outreach and extension programs, using the successful model of agricultural programs, may increase the competitiveness of parts of rural America as better-educated residents are employed in higher productivity jobs. In other parts of the country, however, these investments will facilitate the further depopulation of the rural hinterland. Transport improvements, increases in human capital and education, and the further diffusion of information will make it easier for labor to migrate to regions where jobs are more plentiful and wages are higher.

America's current rural landscape will be increasingly bifurcated, as some parts develop into metropolitan hubs and others decline in population and economic activity.

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Regional Policy and the New Regional Economics: Implications for Rural America—Questions and Answers

Moderator: Mark Drabenstott

Mr. Drabenstott: John, thank you very much for a provocative presentation and a great place to start our conference. I am sure there are a number of things you have discussed that are going to provoke some questions.

To try to accommodate as many questions as we can, we are going to try to clump the questions into two or three at a time. This will also give John a bit of time to consider his response and build common themes across the questions.

It is your turn now. Who would like to pose the first question?

Marge Kilkelly, *State Senator, Maine:* I serve on the Agriculture and Inland Fish and Wildlife Committee there.

Several of the issues that were raised seem to me almost to be judging the rural economy with an urban model. That is something that has concerned me for a long time. When you talk about low land costs, they may be low if you are looking at putting in a shopping mall, but they are not low if you are looking at growing a product there or raising your cattle there or cutting wood there. That puts the rural economy at a disadvantage, because it is being judged that way.

When folks in Maine get pushed off the coastal land because of urban money coming in to purchase prime coastland and then are not allowed access to the fishery, that is an impact in terms of our rural economy. Another impact is manufacturing. It draws people away from agricultural employment, either because of healthcare provisions being provided or higher wages—even though they are not higher compared with the urban area—they are still high for rural areas. All of these things speed into policies, and we, as state legislators and federal legislators, have to address them. So instead of seeing that move and instead of always having us compared to the urbans, saying that we earn less money, the understanding we have is that there are also some non-cash advantages to being in a rural area that don't always relate to just how much money you make and how good your life is.

In my state, for example, tourism is an enormous part of our economy. The agriculture, forestry, and fishing industries feed our tourism economy. If everything turns into manufacturing and there aren't cows in the field and there aren't folks hauling lobster traps, that part of the economy is going to go as well. There needs to be an effort to link those relationships, because they all feed each other.

Mr. Drabenstott: Marge, thanks for your question. As a land lubber here in the Heartland, I hope you keep the lobster traps. Next question?

Richard Gupton, *Independent Community Bankers of America:* Through the list of location factors you had factors for manufacturing plants to locate in rural areas. I noticed one of the things that wasn't talked about was the K through 12 school systems. Things being equal, does that factor in, as far as the school system that is in place, as to whether they are going to locate in that area? And does the training of the employees factor in as well?

Mr. Drabenstott: Thank you. Let us take one more question and then we will give John an opportunity to respond.

R. J. Baker, *Elkhorn Valley Economic Development Council, Nebraska:* You mentioned high unemployment in rural areas, but that doesn't seem to be true in the Middle West. What rural areas were you talking about in terms of high unemployment?

Mr. Drabenstott: Okay, so we have three questions: Can we judge rural America by the urban model? How important are K through 12 school systems? And, how serious is the unemployment rate in rural America?

Mr. Quigley: Let me respond by first describing the little bit I know about the actual survey evidence on the locations chosen for plants. There are firms that now specialize in providing assistance to large manufacturing firms in their choice of site location. It seems clear from the kinds of issues they considered that school systems are important and school systems matter, and that having a better school system, or having a better quality of local labor, which may not be directly related to the school system, is very important in the site calculus. Or at least it is *reported* to be important by people who make these decisions. I am not aware of any statistical evidence on it.

I do think the question of how you aggregate rural areas when we talk about unemployment, or other things, really is important. In my presentation I basically looked at the divide between metropolitan and non-metropolitan and put things into these two categories. Now it is very, very clear that even a slightly more sophisticated way of thinking about this would reveal very large discrepancies across parts of rural areas, parts of urban areas, and certainly all metropolitan areas. Thinking about a common unemployment rate for metropolitan areas or for rural areas is a gross simplification. I have no real excuse for doing that other than the fact that time was pressing.

The issue raised by the senator is very interesting to think about. On the one hand, an economist by training would say, "Of course you judge things by the same definition. A dollar is a dollar is a dollar." If somebody who lives in New Hampshire wants to buy something on the Maine coast, that's great. It increases the payments made to some landowner in Maine, who can then move to Florida and spend six months in Florida. Who is to say it is right? On the other hand, there are clearly some non-economic values that are very important in this world. An economic discussion is not going to have them as centrally focused. I presume that, in most of the lives we lead, the economic aspects of it are not the be all and the end all, so I only ask for half an hour of pure, narrow, green eyeshade thinking.

But I do think the second issue—the tourism issue—is very important too. This is the external effect I was describing before. To the extent that lobster fishing and lobster pots provide external benefits in the way of tourism to the Maine economy, the wage that one gets from simply fishing lobsters is an underestimate of the productivity of the lobster fisherman. That is true in a number of places where tourism and the unspoiled beauty of rural areas are important.

Fences and hedges in rural England are of more value than keeping the sheep inside the hedgerows. They are of value because they provide a benefit to tourists. They bring people from other parts of the country. You can imagine that this has to be true for many of the specific place-based consumption activities. And finding ways to reward that without turning it into a kind of boondoggle for guys that have been in a job for ten years and are now doing something that is unproductive is a very hard thing to do. I don't want to say that it is easy. Finding that balance is a very tricky problem.

Mr. Drabenstott: John, we just celebrated Harry Truman's birthday here in Missouri this week. He is well-known for saying, "Won't someone please bring me a one-armed economist?"

We have a question right here to begin this next round of questions.

Mary Jo Gordon, *Rural Development Advisor, Ontario Ministry of Agriculture, Food, and Rural Affairs:* My commentary today stems from our reality in Ontario, which is looking ahead strategically to a large labor shortfall in especially rural southern Ontario and a decline in skilled trades. I am wondering how you integrate policies of attraction, retention of immigrants, and the investment in skills development—trades and especially skilled trades and training—into your rural areas to address that labor shortfall, because I am sure you are dealing with the same sorts of things.

Mr. Drabenstott: Very good question on some migration issues important to the Heartland.

John Bryden, *The Arkleton Centre, Scotland:* I would like to raise a couple of questions for Professor Quigley. They are really about the problem of rural policy, whether it is Europe or America.

I think there are two issues that I would like to pick up from his talk. One is the issue of diversity. Rural policy has to grapple with an enormous diversity in the States. As far as I can see, and certainly in the European context, it has to deal with this huge diversity from the Arctic down to Greece. Whatever system we have has to be flexible enough to deal with very different conditions in different parts and different opportunities and different constraints. So, I'd like hear him talk a little bit about how he sees that issue of diversity being coped with.

Secondly, the problem of integrating policies and places. That's to say, one mistake I think we have made is to treat the environment as if it were something different and support the environment on the national level, for example. Whereas, what we should be doing is linking the environment to the importance of these goods and the way they are used in local economies, because the environment is not worth the same amount in different places. So the problem of integration in places is the second problem that I would like to hear your view on.

Kent Van Landuyt, *Missouri Department of Transportation:* You discussed the importance of transportation—that it was really a double-edged sword. I'd like for you to expand on that in terms of all infrastructure improvements and the relationship of a community to make the high-dollar investments in all infrastructure, versus the gamble that a facility will come to their area. In other words, you build it and they will come.

Mr. Drabenstott: Okay, four probing questions, John. How do we think about labor shortages in rural places? How do we think about the role of the environment in public policy? How do we think about diversity in recognizing the uniqueness of regions? And, finally, is infrastructure really a double-edged sword, and how do we avoid getting cut in the process?

Mr. Quigley: First, I will address the question about the human capital of immigrants and how that can be attracted to different parts of the United States. Our historical data on this, from the wave of immigrants in the 1920s and the waves after World War II, are not encouraging in the attraction of immigrants to rural parts of the country, or to places that are sufficiently different from their original circumstances. The overwhelming evidence from the 1920s through the 1940s is that immigrants tended to congregate in places similar to where the immigrants had lived previously.

There was an accident that happened at one point that resulted in immigrants from Scandinavia moving to Rock Creek, Illinois. All of a sudden there were more immigrants that went to Rock Creek, Illinois.

There was one experiment in the United States—it wasn't an experiment actually, it was the resettlement of Cambodian refugees during the late 1970s. Cambodian refugees were given special AFDC-like transfer payments administered through the states in an attempt to spread them through other states geographically. So it was possible to track Cambodian immigrants in ways in which it was harder for other immigrants. There were particular transfer payments. Five years later, all the Cambodian refugees were in Orange County, California. Why is that? Well, there had been some Vietnamese immigrants in Orange County, California. It has a climate, which is an approximation of what the Cambodian climate was like, perhaps. But one thing led to another and you now have this concentration. Why is that? It means that it is hard for me to think of a strategy that would attract a particular immigrant group to any single location.

The diversity and integration question is really a federalism issue that rears its head. Most of these policies on environmental protection have a national component, but surely have a local component too. Most of the beneficiaries of many of these environmental preservation things are going to be local residents. So their votes have to count a lot. But national residents are not irrelevant to this. The rights or opportunities for residents from other states and from other areas to enjoy these amenities are some of the things that make us a nation, rather than simply a collection of states. So there is a kind of marbled responsibility. Some things can be done honorably by the federal government with national tax dollars to preserve local environments and local activities. But the lion's share of it is going to have to come from the local area, because most of the beneficiaries are going to be local. Finding that nexus is a hard political job. The economic aspect of it suggests that it ought to be shared.

The two-edged sword in the infrastructure investment is a real problem. If we look at the long historical trend of U.S. development, there have been parts of rural areas, which have become cities, and eventually metropolitan areas.

There are other parts where the history for the last 100 years has been of a slow decline in population density and a slow clearing out. It is not altogether clear if we invest in human capital, in education, in infrastructure, or in physical infrastructure like transportation, that we are not simply assisting people to leave. That might not be all that bad. If people go where they are more productive and where jobs are, then the investment in education or other things makes them better equipped to move someplace else. That is not a very comforting finding for those with responsibilities for rural areas.

But there are two edges to it. On the one hand, the investment in infrastructure and education makes people more productive where they are. But it also makes them more mobile and more apt to move to places where there are more economic opportunities. I think that is just a fact we have to live with. We recognize, in general, that most people work in places that are quite far removed from the places where they received their education and their human capital investment—not everyone, but many.

George Beattie, *Nebraska Bankers Association:* I was interested in your comments on credit availability. Certainly in Nebraska, and generally in the Midwest, we have more than enough financial service providers to meet credit needs—certainly capital needs are there. Can you elaborate on that please?

Mr. Drabenstott: All right. A question probing John's comments on capital and financing rural America.

Dean Kleckner, *Iowa:* I'm a retired farmer from north central Iowa, so you know the perspective I am bringing or coming from.

This all has been very interesting and enlightening, however, as we move forward it feels as if rural

America is becoming more a big national park. I am a farmer. Farmers produce food, fiber, and forest products for the United States and the world. What happens to us? Do we say, let Canada, Australia, Argentina, Brazil grow it, and we will make everybody happy in rural America by farming a little bit, but mostly being the national park?

It reminds me of the doctor who said, "The operation was successful, even though the patient died." Are we dying? Can we still exist out there? Your reaction please. Tell me I'm wrong.

Ella Ennis, *National Rural Development Partnership:* I want to touch on the issue of health insurance availability and cost in rural areas. I noticed you mentioned that more people are older and that there are more disabled people in rural areas. I'd like to hear your thoughts about the impact on younger families moving off farms and away from small businesses due to the unavailability and also the very high cost of health insurance in rural areas.

Are there some new approaches, such as coops, that could be used to bring more affordable health insurance to rural areas and stop the out-migration?

Mr. Drabenstott: Okay, we have three more questions, John. One on the further exploration of your capital availability. Is Dean destined to become part of a national park? And, perhaps, to broaden the last question, what role does the whole notion of health-care provision play in creating a sense of density and critical mass in rural areas?

Mr. Quigley: First, on credit issues, there have been a couple of rather detailed reviews of the state of business credit in rural America. The salient findings geographically are that there are many places (counties) where there are relatively few lenders available. That raises the question, is there some market failure, or lack of competition that would then drive up prices?

From my reading, there seems to be no evidence that credit terms are different in rural areas. But it is nevertheless true, that much rural business lending is un-standardized. There has been no attempt to standardize it, which means it is expensive for lenders to find out the creditworthiness of individuals and to evaluate deals and to evaluate things. That makes it hard. If there is no lender nearby, it is a difficult thing to apply for a loan and to get a loan. Are there profitable activities that we are foregoing because of the way in which we are structured over space? The question is, are there under-explored ways using electronic means to make the terms of these loans and the characteristics of these potential borrowing activities more transparent?

In the residential sphere, we saw an investment by the federal government in insurance in the 1930s that really showed lending institutions it was very much in their interest to liberalize the terms of credit for residential mortgages. We have now seen, in the last five years, some very well-standardized ways of measuring the creditworthiness of individuals and firms. Fair, Isaac, and other firms are selling creditworthiness reports that you can generate very quickly on the Internet. One wonders if that can't be more standardized. Are there analogies in rural business lending that would be useful and would extend the possibilities of getting credit, even though there seems to be no evidence that there is a market failure through monopoly?

What about farms? I am not particularly sympathetic to people making their living one way or another. And if there are no farms, it doesn't bother me. What can I say? There are a lot of things we used to have that we don't have anymore. I don't have much else to say about it.

As to concerns about insurance issues and health, one model, of course, is the national insurance program where individuals contribute to a national system, and prices are standardized nationally. We have been having this debate about a national system for a long time. If we are not going to have a national system, then we have systems that have regional differentials. If there are regional cost differentials in health insurance, they could arise from two or three possibilities. One of which is that the real cost of service provision is higher because of transportation and other factors.

The second is that there is an adverse selection system in the pools of individuals for insurance purposes. There are adverse selection issues in pooling individuals, because they live in a certain area, and they are inherently less healthy, because of their rate of poverty, because they are from the inner city, because they are from rural areas. There is a clear argument for pooling these things together and diversifying the risk. This arises, because costs are higher, because of transportation and other things in rural areas, or in particular neighborhoods, it is much harder to see an argument for standardizing the prices or for giving services at subsidized prices.

Again, it is an efficiency argument about paying the right cost, on average, for the services received. If you can divert risk away, do it. If we can do these things at a national level or at a state level or at a regional level, we can surely better serve geographical and demographical parts of America in terms of healthcare. That battle, of course, has not been won; it has barely been joined, but it is surely a way to reduce costs, on average.

Mr. Drabenstott: I think the questions could go on for some time, but we are going to have more time for questions at the end of this morning's session. Thank you for your very insightful questions and let's thank John for tackling them.

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