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ABSTRACT

Past rural policies are reviewed, noting the effects of globalization and information technology. Rural business profits can be maximized by direct cost or value-added competition, but cost competition limits the development of productive capacity and leads to unequal income distribution. In contrast, value-added competition could create steep earning and learning curves, promote broadly shared prosperity, and strengthen civic society and democratic institutions. Two necessary elements of high value-added strategies are human resource development and telecommunications. The skills most in demand are computer, interpersonal/teamwork, and problem solving skills. Rural manufacturers have the most trouble finding workers with these skills in counties with low high school graduation rates. Rural areas have closed their educational achievement gaps with central cities, but both still lag behind suburban areas, and all fall short in preparing students for a more competitive and knowledge-intensive world. Rural enterprises are less likely than their urban counterparts to provide worker training. There is evidence that imaginative incentive regulations and competitive market disciplines would make it economically feasible to bring high-quality telecommunications to rural areas. Rural policy should encourage value-added competition by encouraging the development of high-performance companies through education and training systems and have safety nets for conditions over which people have little control. Rural policy should not give inordinate attention to agriculture, but should consider agriculture to be an important component of the rural and national economies. (Contains 32 references.) (TD)

Rural Policy in a New Century

Ray Marshall

This paper addresses two questions: (1) where U.S. rural policy is and (2) what policy gaps are likely to emerge if current policy is unchanged.

Where is rural policy?

An examination of rural policy requires an understanding of the unique conditions in rural places that justify separate national policies. The great differences among rural people and places in America make it hard to fashion national policies that fit all of these places. The analytical problem also is complicated by this diversity as well as the absence of a common statistical definition of rural and the need by policymakers to both accommodate rapidly changing rural conditions and balance diverse interests.

While imprecise and changing, I believe there are relatively unique rural conditions which I outline below. I then trace the broad outlines of the evolution of rural policy from the New Deal to the Clinton Administration, and then examine in more depth two important components of rural policy—human resource development and telecommunications—which illustrate why separate rural policies are warranted. I conclude with my assessment of the policy gaps that are likely to remain if current policy is unchanged.

There are several characteristics of rural areas that make them relatively unique and therefore justify special policies. The most important of these is relatively low population densities, which create fewer organizational resources for most activities. Population densities also make it difficult to achieve economies of scale in the provision of services, and therefore cause many costs to be higher, and require people and organizations to be less specialized. The exception, of course, is the heavy specialization of many rural places on single natural resource-oriented industries like agriculture, mining, and energy. These industries often have had profound effects on rural areas because they have concentrated resources in a few hands and contributed to the concentration of economic and political power and therefore weakened democratic and civic institutions. These dominant interests often have given very limited attention to, or even impeded, the development of human resources. The dominance of resource-oriented industries also caused the large nonfarm sector—now representing over 90 percent of the rural population and work force—to lack sufficient visibility or political cohesion to establish policies for all rural people and industries. In the minds of many people rural policy has been synonymous with agricultural policy.

Unequal distributions of wealth and income have created deep and often self-perpetuated pockets of rural poverty, which is likely to be different from urban poverty. In urban areas more poor people are single-parent heads of households. In rural areas they are more likely to be the working poor. Employment and training programs are therefore likely to do more for rural than for urban poverty. Wherever the poor are relatively small parts of rural societies with social cohesion, as in New England,

poverty is likely to be more temporary than it is in areas like the Mississippi Delta or Appalachia, where power is more concentrated and poverty more pervasive (Duncan). As I show later in connection with the development of rural education, however, some pervasive social impediments to rural human resource development are unrelated to the concentration of power.

The Evolution of Rural Policy

Definitions of rural policy also are complicated by the fact that policies and programs have been evolving. Much of U.S. rural policy in postwar America was developed by the New Deal during the Great Depression. Rural policy became part of a fairly coherent national policy whose main objective was recovery from the depression, the prevention of further depressions, and broader participation in economic progress. A basic assumption was that the American mass production manufacturing and agriculture systems were basically sound except for imbalances in competitive markets. Farmers and workers, for example, sold on competitive markets and bought on noncompetitive markets, leading to cost-price squeezes which, because of the importance of workers and farmers as consumers, led to recessions and depressions. The trick was to balance market competition and provide purchasing power for farmers and workers. The farmers' basic price problem was that individual farmers faced highly elastic demand for their products, but collectively demand was relatively inelastic. As a consequence, by producing more to overcome cost and debt problems, farmers had lower total revenues, digging their hole deeper. The New Deal's solution was agricultural price supports for farmers, collective bargaining and minimum wages for workers, and social security or old age assistance for the elderly. However, basic reliance was placed on monetary-fiscal policies to stimulate aggregate demand. World War II seemed to justify this combination of policies because, despite contributing a large part of our national output and most of our young working-age males to the war, the average American was better off in material terms when the war ended than when it started.

The American economy benefited in the postwar period from the commercialization of technology developed during the war and from the GI Bill, which greatly improved the education and skills of a generation of American men. The consequences of all of this was the longest period of relatively broadly shared prosperity in history. Indeed, broader participation was central to the New Deal's policies.

The New Deal policy paradigm was eroded by the closely related forces of technology and the spread of competitive markets. Globalization is part of this process, but the spread of competitive markets, facilitated by technology, is the main force at work. Globalization is important because it greatly increases options for producers and consumers and puts economic decisions beyond the reach of national policies, regulations, and institutions. It is no longer possible, for example, to take labor and agriculture out of competition through the kinds of policies employed by the New Deal. Technology simultaneously decentralizes production to smaller producing units and enables companies to control vast dispersed activities.

More competitive global markets changed the effectiveness of macroeconomic policy by creating global leakages in demand and making exchange rates, and not just interest rates, important policy outcome considerations. The Keynesian system stressed *national* income and became less effective in an industrial environment.

Globalization changes microeconomic policy as well. Traditional national oligopolies and natural monopolies, which had dominated America's basic mass production industries, became obsolete. Instead of economies of scale from large fixed factors of production, firms compete by giving more

attention to quality, productivity in the use of all resources, and flexibility to adapt to dynamic and diverse markets and rapidly changing technology. Firms, individuals, or places have only two basic competitiveness choices: lower costs, mainly wages, or value added (i.e., quality and productivity). While companies can maximize profits by either direct cost or value-added competition, the impact of direct cost—mainly wage competition—apparently is to lower real incomes for many people and widen inequalities of wealth and income.

Rural areas attracted many manufacturing companies during the 1970s as a result of more intensive cost competition, often induced by state and local subsidies (Galston). However, much of this manufacturing was unsustainable and, along with competitiveness problems in the agricultural, raw material and energy sectors, contributed to rural America's problems during the 1980s. However, rural areas resumed some of their growth during the 1990s, partly because of continuing cost competition, but increasingly because of high value-added productivity, the physical amenities of many rural places, and the geographic independence information and transportation technology permitted knowledge workers to have.

The key to rural America's future is to continue these trends through high value-added competitiveness strategies. These strategies have three elements: high-performance work organizations, human resource development, and supportive policies and institutions. High-performance work organizations stress lean, decentralized participative production systems instead of the command and control processes that dominated mass production businesses, schools, and governmental organizations; the development and use of leading-edge technology; positive reward systems; and continuous learning and higher order thinking skills for frontline workers as well as managers and technicians.

Above all, a high-performance organization is an efficient learning system. The essence of its performance is to substitute ideas, skills, and knowledge for physical labor and resources. This process has been going on in American agriculture for a long time. This is how economics Nobel laureate Theodore Schultz (1981) developed his concept of human capital. Schultz found that American farmers had greatly increased output with less land, labor, and capital mainly by working smarter. Schultz also demonstrated that the returns to human capital were higher than the returns to physical capital. Peter Drucker illustrates the growing knowledge intensity of modern production by comparing the most representative product of the 1920s—the automobile—with the most representative product of our day, the computer chip. According to Drucker, the 1920s automobile was 60 percent energy and raw material and 40 percent knowledge; the computer chip is 2 percent energy and raw materials and 98 percent knowledge.

Because cost competition limits the development of productive capacity and leads to unequal income distribution, public policy should encourage high value-added competition, which could create steep earning and learning curves, promote broadly shared prosperity, and strengthen civic society and democratic institutions. I will give my list of high value-added policies after reviewing changes in rural policy during the 1980s and 1990s.

Rural Policy in the 1980s

Perhaps a good summary of rural policy in the 1980s was the USDA-Economic Research Services' July 1987 report *Rural Economic Development in the 1980s: Preparing for the Future*, which was a response to a Senate Appropriations Committee directive. This report first noted some of the major economic stresses afflicting rural America in the 1980s: slow rural growth and high unemployment, reduced population growth, and underdeveloped

human resources. The report noted that throughout the 20th century a disproportionate share of the nation's poor resided in rural areas, and unlike metro poverty, rural poverty did not decline with the recovery from the recession of the early 1980s. Moreover, the rural poor were more likely to be elderly, white, working, and living in the South. And nonmetro people continued to lag behind metro residents in formal education. The nonmetro high school completion rate lagged the metro rate by about ten percentage points and the college graduation gap had actually widened.

The report emphasized the diversity in rural America, that retirement/recreation areas had continued to grow and that 700 of 2,400 nonmetro counties depended mainly on agriculture, 700 on manufacturing, and 200 on mining and energy extraction.

The ERS staff report identified four elements of a rural policy:

> 1. *Macroeconomic policy.* The rural economy had become more integrated into the national economy, so "rural employment has become slightly more sensitive to change in macro policies than urban policy." In particular, rural areas were especially hard hit by high real interest rates and the high value of the dollar during the early 1980s. Moreover, "Rural areas have a major stake in macro policies to promote rapid rates of real economic growth."
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> 2. *Sectoral (industrial) policy* "regulates the performance of individual industries or focuses on redressing industrial decline." The report pointed out the political attractiveness of this option in some circles, but leaned against it because "such policies have the potential to become primarily protectionist, thus inhibiting needed adaptation and change in rural economies."
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> 3. *Territorial (place-oriented) policies* have been major elements in national rural policy, which "basically focused on strategies to ameliorate differentials in levels of economic activity, growth, and rates of return between rural and urban areas." It noted, however, that the complex international and national forces accounting for rural stress "may significantly reduce the efficiency and feasibility of such place-specific policy." The staff report therefore leaned against these interventions in favor of free market policies.
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> 4. *National human resource policies* are acceptable because many rural people will be displaced and leave rural places or traditional industries. "Human resource policies to prepare people to enter the labor force, to equip them for occupational changes, and to enhance their opportunities to be reemployed if they are displaced are central to the amelioration of rural economic distress."

The report opposed sectoral and territorial approaches in favor of human resource development. Moreover, it noted that rural diversity made national rural policy difficult, so states and rural communities must be mainly responsible for rural policy.

> There are, however, significant externalities resulting from rural structural change that provide the economic rationale for a federal role. That role includes creating a macro environment conducive to economic growth, facilitating multi-state or multi-community approaches to solving rural problems, and assuring adequate levels of investment in human resources. The federal government also has a comparative advantage in providing information and conducting analyses of broad national and rural economic changes that help to shape policy.

The report pointedly dodged the equity questions of whether or not the federal government had a responsibility to ease the adjustment problems cre-

ated by federal agriculture, macro, or competitiveness strategies, noting only that some people argued for such a role but that there was "considerable debate" about it.

Not surprisingly, many rural leaders and experts were critical of the ERS report's philosophy and conclusions. For example, a report by the Center for Rural Affairs noted that "National agricultural policies had generally worked against [small agricultural] communities by encouraging crop specialization and farm consolidation, narrowing their economic base and depleting their population base. Meanwhile, the federal government has largely left economic development policy to the states" (Strange, p. 1). The report concludes:

> State economic development policies for rural areas must be considered in the context of federal rural development policy. Unfortunately, there is no such federal policy context.
>
> For as long as anyone can remember, rural policy has been the distant unwelcome cousin of farm policy. (p. 18)

With respect to the 1988 ERS report, these analysts concluded:

> Facilitating the smooth and rapid movement of capital and labor from weaker to stronger industries and from less competitive to more competitive locations is about as explicit a statement of intervening on behalf of the already advantaged as can be made. This is a policy of favoring the favored. It is not, however, a rural development policy. It is better described as a rural restructuring policy.

The Clinton Administration Policy

The Clinton Administration has been more concerned about equity and the development of places, but still emphasizes the deregulation of agriculture, global markets, and the devolution of responsibility to state and local areas, but has a more explicit role for the federal government than was enunciated in the 1988 ERS report. The Administration stresses the establishment of partnerships with business, private nonprofits and agencies of government. It also stresses coordination and flexibility to make the delivery of federal resources more efficient.

The Administration's rural development mission is to "enhance the ability of rural communities to develop, to grow, and to improve their quality of life by targeting financial and technical resources in areas of greatest need through activities of greatest potential" (USDA 1997, p. 7).

The Clinton Administration's rural policies are based on the following guiding principles:

1. Enhancing the connection between rural and urban areas by improving information infrastructures, disseminating information, and enhancing rural businesses' and people's ability to use this infrastructure.

2. Assisting and encouraging rural firms to target niche markets.

3. Creating "artificial scale economies" to offset the high costs of providing government services in rural areas. This can be accomplished by the joint purchase of services through business or community partnerships.

4. Improve the competitiveness of rural firms by strengthening core labor and management skills.

Despite the diversity of rural communities, the Administration believes most of them share the common problem of financing needed improvements. Financing is a problem for rural communities because there are small numbers of users to repay debts, high costs for each user because of their small scale, the lack of project development and management expertise, and the absence of bond ratings. Similar financing problems confront rural res-

idents and businesses. The USDA's rural development programs are designed to meet these diverse needs through a variety of loans, loan guarantees, grants, and technical assistance programs.

The Administration's *Rural Development Strategic Plan for 1997-2002* reported rural development loans outstanding of $77.7 billion. These loans were for businesses and cooperatives to create jobs and stimulate rural economic activity; rural housing, and community facilities; electric, telecommunications, water, and waste programs; and the Empowerment Zones and Enterprise Communities (EZ/EC) initiative, whose mission is "to create self-sustaining, long-term economic development in areas of pervasive poverty, unemployment, and general distress, and to demonstrate how distressed communities can achieve self-sufficiency through innovative and comprehensive strategic plans developed and implemented by alliances among private, public, and nonprofit entities." The Secretary of Agriculture designated three rural Empowerment Zones and 30 Enterprise Communities, which began implementing their strategic plans in 1995. The appendix to this paper provides a list of the EZ/EC sites and a list of accomplishments as of January 1998 (USDA 1998). This initiative is being evaluated by the North Central Regional Development Center.

The USDA also sponsors the National Rural Development Partnership (NRDP), a network of rural development officials and leaders organized by the National Rural Development Council, 36 State Rural Development Councils, and the USDA's National Partnership office.

A major purpose of the Administration's rural development initiatives is to build local civic capacity, which it believes to be an essential precondition for effective development. The 1999 *Rural Development Policy and Strategy Report* notes:

> The federal government does not have all the answers or resources to independently formulate and implement rural development policy to address the needs of all communities. Therefore, the Administration's rural strategy recognizes that local residents are best qualified to fill in the details to reflect a complete understanding and uniqueness of regional character and state and local capacity. The Administration's rural policy is vested in the ideals of self-reliance and empowerment. It recognizes that local civic capacity and participation are indispensable to sustainable development. Unfortunately, the local capacity in many of the poorest areas of rural America is largely undeveloped. Recognizing this, the Administration has established the...EZ/EC initiative.

The Administration sees several "dominant policy directions" emerging in response to the changes under way in rural America. These include "culture change, flexibility, empowerment, and coordination." The culture change is to transform the federal government to "more of a partner in development rather than just a provider of loans and grants." The Rural Community Advancement Program of the 1996 Farm Bill "provides the flexibility to target resources to the most pressing local needs." The EZ/EC empowerment initiative has caused local communities to develop "leadership skills by participating in the [planning process]" and has caused people to develop "greater understanding of their communities. . . . Furthermore, working with local leaders . . . has created a positive culture change among federal . . . employees in the numerous agencies . . . participating in the EZ/EC program."

The Administration's National Performance Review Report "recognized the importance of collaboration and suggested increased emphasis on intergovernmental and intragovernmental collaboration." As a consequence, coordination among various agencies has increased through a designated lead agency, and memorandums of understanding (MOUs) and agreement (MOAs).

AGRICULTURAL POLICY

Historically, one of the most important federal rural initiatives has been the farm price support program, which, as noted earlier, attempted to stabilize agricultural prices and establish income parities for farmers. Essentially, this program subsidized land and capital and therefore displaced people, with a number of serious social and economic problems noted earlier. Farm price support likewise encouraged the creation of interest groups to perpetuate the political power of commercial agriculture and prevent alternatives like the Truman Administration's Brannon Plan, that would have limited federal farm supports to family-sized units and might have done more to sustain more efficient family farms, which in turn would have strengthened rural civic society and broader participation in rural development. Family-sized farms also might have been less damaging to the environment. There is considerable evidence that in terms of farm production, family-sized farms are more efficient than the large organizations subsidized by U.S. price support programs (Marshall and Thompson).

These developments have subjected American farmers to international competition from foreign producers who are heavily controlled by foreign governments intent on preserving their agricultural sectors. The growing concentration of agriculture has shifted from farming to processing, where fewer firms control larger supply chains (Dorgan).

The Farm Bill of 1996, the Freedom to Farm Act, was designed to move American farmers to free market agriculture and phase out the subsidies. According to Sen. Byron Dorgan, who favors a Brannon Plan-like program to help sustain family farmers, proponents said the 1996 Farm Bill "would 'free' farmers from the stifling bureaucracy of the federal government and enable them to make their fortunes in the global marketplace" (p. 11). But with the global agricultural depression of the 1990s, the Act "really left them free to . . . Get Out of Farming." The Act "phases out the federal-price support program over . . . seven years. During that time, it doles out between $5 billion and $6 billion a year in transition payments . . . to all agricultural entities, regardless of size and regardless of need. The bigger you are, the more you get . . . ."

A report by the Environmental Working Group confirms Senator Dorgan's conclusion that the 1996 Act's farm subsidies went mainly to large producers. In Iowa, for example, half of the payments went to 12 percent of recipients—mostly corporate and partnership farms—and 51 percent of the payments were less than $6,000 each during the program's first three years. The 1996 Act was supposed to have weaned farmers from subsidies by guaranteeing fixed payments and allowing them to plant whatever they wanted. But the program not only went mainly to larger producers, but did little to protect farmers from inevitable declines in farm prices. As a consequence, Congress responded with emergency farm bills of $6 billion in 1998 and $8.9 billion in 1999. However, these do not include all federal subsidies. In Iowa, for example, farmers got $441 million in 1996, $646 million in 1997, and $929 million in 1998. Iowa's three-year total of $2 billion was $243 million more than it got the previous three years. However, this does not capture all subsidies: "All told, the state received $1.54 billion in 1998, including special aid to hog farmers, disaster payments, crop insurance indemnities, and conservation payments . . . . The final tally is expected to show that Iowa agriculture got even more money in 1999" (p. A-16).

The Clinton Administration's *Strategy for the Future* includes: "Promote agricultural exports and provide information on risk management techniques and opportunities to increase demand for U.S. commodities and assist the transition to a more market-driven agricultural economy. Actively develop foreign market opportunities in undermarketed areas such as Africa." The USDA's specific activities under this strategy include the promotion

of foreign markets; breaking down protectionist barriers; supporting and encouraging cooperative and other vehicles "to increase efforts to expand markets and facilitate farmer ownership of raw material processing facilities as a means to increasing net farm income for family farmers," ensuring that "strategic planning recognizes the important role that agriculture holds in specific small communities and regions;" and supporting "research to help producers become more competitive . . . ."

Supportive Policies: Human Resource Development and Telecommunications

As noted earlier, a high value-added rural development strategy requires supportive policies to encourage improvements in productivity and quality through high-performance production systems. Policies to support high-performance systems include rules for the development of competitive foreign and domestic markets; infrastructures; advanced science and technology; improvements in factor as well as product markets; and safety nets to limit wage competition, promote social cohesion, ensure a more equitable sharing of the benefits and costs of change, facilitate market adjustments, and prevent economic restructuring and market forces from damaging society's most vulnerable people. All of these supports cannot be examined in this paper, but two warrant special attention: human resource development and telecommunications, a necessary infrastructure for knowledge-intensive processes with special relevance to rural places.

Human resource development

Education and worker training are uniformly regarded as necessary elements in a high-performance rural development policy. This is so because of the importance of education for the quality of life, vibrant civic and democratic institutions, and improvements in productivity and earnings. Indeed, numerous studies have confirmed Theodore Schultz's conclusion that the returns to human capital are higher than the returns to physical capital. The National Center on the Educational Quality of the Workforce, for example, found that a 10 percent increase in education was associated with an 8.6 percent increase in productivity, while a 10 percent increase in physical capital was associated with a much smaller 3.4 percent increase in productivity (NCEQW, p. 2). There also is mounting evidence that skills account for a larger proportion of the higher rates of productivity in recent years that have made it possible to sustain economic growth and improve earnings without inflation. According to the Bureau of Labor Statistics, skills accounted for only 2.8 percent of the increase in productivity during 1973-79, but 32 percent from 1990 to 1997 (*Monthly Labor Review*). Individuals as well as society gain from higher levels of education. The college/high school earnings premium in 1979 was only 39 percent, but was 71 percent in 1998. The premium had been 77 percent in 1995, but declined thereafter as tight labor markets increased the earnings of high school relative to college graduates.

It should be noted, however, that education and training alone will not necessarily improve earnings. To be most effective a human resource development strategy must be an integral component of high value-added economic development to increase the demand for skilled workers (Rosenzweig).

We should note, in addition, that not all skills are developed in schools. Indeed, many of the skills acquired in traditional rural or urban schools are not those in the greatest demand by high-performance companies. Although schools are pivotal and need to be improved, families and workplaces are more important for many important higher order skills (Marshall and Tucker). And family characteristics are major predictors of achievement in school, as are neighborhood and peer attitudes and characteristics. Comparisons of rural and urban schools, families, communities, and

Table 1

AVERAGE ACHIEVEMENT SCORES OF 17-YEAR-OLDS BY REGION AND RESIDENCE, 1975-94

	United States		South
Subject/area	1975	1994	1994
Reading			
Urban	286.0	288.5	285.8
Rural	283.5	287.4	280.9
	1978	1994	1994
Mathematics			
Urban	301.6	306.7	303.8
Rural	297.4	305.0	298.5
	1977	1994	1994
Science			
Urban	290.0	291.9	289.4
Rural	287.5	298.3	287.1

Addendum for suburbs:

	1994
Reading	293.7
Mathematics	313.2
Science	298.1

Source: Greenberg, Elizabeth J. and Ruy Teixeira. "Educational Achievement in Rural Schools." *Rural Education and Training in the New Economy.* Eds. Robert M. Gibbs, Paul L. Swaim, and Ruy Teixeira. Ames, Iowa: Iowa State University Press, 1998. pp. 25, 27, 28.

workplaces therefore provide insights into rural and urban human resource development.

Rural Education Achievement

The evidence shows rural schools to have some advantages that have enabled them to close the education achievement gaps they historically have had with urban students, even though they have fewer resources. For example, the education achievement of rural 17-year-old students as measured by the National Assessment of Education Progress (NAEP) closed the gap with urban areas in reading and math between 1975 and 1994 and rural students actually exceeded their urban counterparts in science in 1994 (Table 1).

Outside the South, rural NAEP scores exceeded or equaled those of urban 17-year-olds in all subjects in 1994. The southern scores for whites were about the same as in other regions, but were much lower for minorities. It should also be noted that suburban 17-year-olds generally had higher NAEP scores than those from rural or other urban areas, though rural science scores slightly exceeded those of suburban areas by 1994.

Rural students also have increased their years of schooling and reduced their dropout rates relative to urban students. Among 25-year-olds, between 1982 and 1989, 85 percent of their rural residents had graduated from high school compared with 86 percent of urban residents. However, only 22 percent of rural residents had graduated from a two- or four-year college at age 25, compared with 30 percent of urban counterparts (Gibbs, p. 63). Lower rural college graduation rates are associated with lower levels of education by rural people and less access to local colleges and universities. College graduates who leave rural areas earn about as much as their urban counterparts but those who remain in rural areas earn much less. Indeed, for rural residents, education and skills yield much lower returns than they do for urbanites (McGranahan and Ghelfi, p. 151).

Despite improvements, high school dropouts remain a problem for rural areas, especially for students in grades 10 through 12, where the 1990-92 rural dropout rate was 8.1 percent, compared with 6.6 percent for urban and 5.5 percent for suburban

areas, respectively (Paasch and Swain, p. 47). Dropout rates for students in grades 8 through 10 are higher in urban (7.7 percent) than rural (6.3 percent) areas, but both are higher than for suburban students (4.8 percent). Rural and urban students face similar dropout risk factors, but rural students have greater risk from low parental income and education and less risk than urban students because rural students change school less frequently.

Some evidence on the characteristics of rural teachers and schools is provided by the 1987-88 Schools and Staffing Survey (SASS). These data support a number of conclusions:

1) Rural schools have less diversified course offerings, though rural students are at a disadvantage in math and science only when compared with suburban students. For example, central city students spend 2.7 percent of their hours in advanced math, compared with 3.4 percent for suburbs and 2.7 percent for remote rural schools; the comparable percentages for advanced science were 7.2, 9.0, and 6.9, respectively (Ballou and Podgursky, p. 6). Rural students are particularly disadvantaged in advanced courses and preparation for college. Only 64 percent of rural high school graduates have had calculus compared with 93 percent for urban graduates; the comparable figures for physics are 64 percent and 34 percent (Gibbs).

2) Rural students' more limited program offerings are offset by lower student/teacher ratios. The ratio for central cities was 21.2; suburbs, 17.8, and remote rural areas, 16.0 (p. 8). Rural schools have similar low ratios of students to other school staffs. Rural schools also are smaller, another favorable factor in student achievement. Central city schools, for example, average 688 students per school, compared with 570.3 for suburban and 317.7 for remote rural schools (p. 5).

3) Rural teachers have lower pay. In 1987-88 starting teacher salaries were $20,030 a year for central cities, $19,084 in the suburbs, and $16,530 in remote rural areas. There were larger differentials for experienced teachers: $35,398, $34,251, and $26,245, respectively. However, rural teachers are no more dissatisfied with their pay than urban teachers and are more satisfied with their work environment. In fact, Ballou and Podgursky conclude that the data "do not support the claim that rural schools are unable to recruit qualified teachers" (Ballou and Podgursky, p. 10).

4) Other rural-urban teacher differences include:

a. Rural teachers are younger: 42.7 years for central cities, 42.2 for suburbs, and 40.4 for remote rural areas. The comparable total years of experience are 16.4, 16.9, and 15.3; average tenure at current schools are 8.9, 9.7, and 9.7. Thus, while they are younger and have less experience, rural teachers have longer tenure at their current schools than central city teachers and the same as suburban teachers.

b. On almost every measure of satisfaction with their work environment, rural teachers report more attractive working conditions than their central city counterparts. These factors include student tardiness, absenteeism, and possession of weapons; physical abuse of teachers; more contact with principals; more effective principal support; more classroom autonomy, choice of textbooks and course content; homework and discipline; greater influence on school policy; more cooperative and collegial relationships with fellow teachers; more support from parents; and more likely to find needed resources. However, as with student achievement, southern rural teachers lag their non-southern counterparts: they tend to be less satisfied with their salaries, resources, and class sizes. Southern rural teachers' salaries are low

even for rural schools and their students' test scores are well below those of rural students in other regions. To a considerable extent, rural southern student disadvantages reflect the larger proportion of minority students. Southern white student test scores are comparable with whites in other regions. These outcomes reflect a history of racial segregation and inadequate resources for minority schools.

c. Rural schools have some benefits from the nature of the communities in which they operate. Communities and parents are more likely to be involved in the schools' activities and school personnel are more likely to live in and participate in community affairs. In remote rural areas, for example, secondary school teachers devote 5.5 hours a week to after-school activities involving student contact compared with 4.0 for central city secondary teachers and 4.2 for those in suburban schools.

d. Rural schools have fewer resources and less modern facilities on average than urban schools, especially those in the suburbs. The rural disadvantages are particularly serious in physical facilities. Nonmetropolitan school districts are less likely to have modernized their facilities in recent years. Between 1994 and 1998, for example, 21 percent of metro and only 9 percent of nonmetro school districts had built at least one new school for the fastest growing districts; 34 percent of metro and only 11 percent of nonmetro districts had built a new school during these years. According to two school facilities experts, nonmetro "tax rates are lower, their expectations are lower and they don't feel the need to provide at the level suburban districts do" (De Barrso and Henry 1999, p. 1). Aging rural schools are a particularly serious problem for the development and use of modern information and communications technology.

In March 2000, the Clinton Administration announced the Rural Community Schools Rebuilding Program (RCSRP) to provide rural schools with access to up to $1.2 billion in financing to repair school buildings, acquire new equipment, develop course materials, and train teachers and other school personnel. Participating lenders will receive tax credits for providing school districts interest-free loans. The USDA will guarantee up to 90 percent of the amount school districts borrow from private lenders. The RCSRP is a joint effort by the USDA and the Organization Concerned About Rural Education (OCRE), a coalition of business and nonprofit organizations, including Bell Atlantic, U.S. West Communications, the National Education Association, and the National Farmers Union.

Workplace Skill Development

Rural workplaces have relatively little workplace training for frontline workers, though this is a problem for all American companies relative to their counterparts in other countries (Marshall and Tucker). Training is a particularly serious problem for small firms, which constitute a larger proportion of rural companies. The basic problem is externalities: some firms pay for training and other firms and workers benefit. Basic economics suggests that firms will underinvest in such activities. Although it changed significantly during the 1990s, when rural areas experienced a growth in high-performance work practices, they still lag urban areas. High-performance companies are important because they pay higher wages, are growing faster, and do more training.

An analysis of census data for 1983-91 revealed that for manufacturing only 32.2 percent of rural and 41.4 percent of urban workers received any training on their current jobs (Swaim, p. 108). A major reason nonmetropolitan workers are

significantly less likely than metro workers to participate in skill upgrade activities is the composition of employment. Other rural factors limiting education and training include lower rural educational and literacy levels and limited access to colleges and other training institutions.

The evidence suggests that while skill requirements increased significantly during the 1990s, most rural and urban employers actually have not encountered significant shortages of skilled labor. A 1996 Rural Manufacturing Survey (RMS) by the ERS found that 71.9 percent of urban and 74.9 percent of rural respondents reported the quality of available labor to be a problem, the most important of 21 factors influencing industrial location (Teixeira and McGranahan, p. 117). However, only 33.0 percent of urban and 34.3 percent of rural manufacturers reported the quality of labor to be a major problem. The specific skills for which demand increased the most between 1991 and 1996 were computer, interpersonal/teamwork, and problem solving, all of which are critical for high-performance workplaces. Rural manufacturers adopting larger numbers of high-performance practices (i.e., new production technologies, forms of work organization, and telecommunications) had substantially more trouble finding qualified workers than low adopters. Problems for high adopters were particularly intense in counties whose populations had low levels of education. For example, over 40 percent of high adopters report having trouble finding workers with adequate problem solving skills in counties where less than 75 percent of young adults (ages 25 to 44) had at least a high school diploma, compared with under 30 percent of such firms who have difficulty finding workers with such skills in counties where 90 percent of young adults are high school graduates (pp. 124-25).

High adopters likewise are much more likely to provide training. According to the RMS data, only 48 percent of rural manufacturers provide training for production workers, compared with 77 percent for high adopters and 40 percent for low adopters. And 82 percent of high adopters but only 66 percent of medium/low adopters increased training between 1993 and 1996; 44 percent of high but only 26 percent of low/medium adopters increased training a lot (125). Teixeira and McGranahan conclude that:

> Skill requirements at rural manufacturing establishments are increasing about as fast as at urban establishments, with one exception (computer skills). Rural manufacturers appear just as willing as their urban counterparts to raise skill requirements to meet new economy production standards, an assessment supported by the fact that nearly as many rural manufacturers as urban (21 to 24 percent) are high adopters of new technology (p. 126).

Conclusions

Rural areas have closed their education achievement gaps with central cities, but both still lag behind suburban areas. Moreover, while schools have improved, all fall short of the schools needed to prepare students for personal and work lives in a more competitive and knowledge-intensive world. Rural schools have some advantages, including smaller sizes and more cooperative relationships between teachers, parents, and community organizations, and lower student-teacher and school staff ratios.

The rural schools' main disadvantages include fewer advanced course offerings, less attention to college preparation, lower college graduation rates, inadequate physical and education resources, and higher dropout rates. Rural school achievement compares favorably with central city schools, but both lag suburban schools on most indicators.

While they are improving, rural employers provide limited job opportunities for college graduates, many of whom leave rural areas. Those who leave fare well compared with their urban counterparts and much better than college graduates who remain in rural areas. Indeed, rural areas generally provide

relatively low returns to education and skills. And the rural environment provides less encouragement for the acquisition of advanced skills and higher education than metropolitan areas. Rural parents are less likely to be educated and have lower incomes; rural high school graduates' peers are less likely to plan to attend college, and rural people generally have less access to local colleges and universities.

Rural enterprises also are less likely to demand workers with higher order skills or to provide much training to their incumbent workers. A major reason for this is the higher concentration of small low-wage firms in rural areas. Most rural and urban firms do not consider skill shortages to be a major problem. However, those who do are more likely to be the growing minority of firms (21 percent of rural and 24 percent of urban) that have adopted high-performance work practices, and perceive shortages of workers with computer, problem solving, interpersonal/teamwork, and math skills to be major problems. These firms have faster growth, higher wages, and provide much more training to frontline workers.

Building Rural Infrastructures: Telecommunications

Telecommunications have become an important infrastructure in a knowledge-intensive economy. This technology has great potential to overcome many rural developmental disadvantages. There are real questions, however, concerning the extent to which the national policy of developing this infrastructure through competitive markets is applicable to rural areas. The relevance of competitive or deregulated markets is applicable to many other activities, including health care, schools, financial institutions, and electric utilities. This section explores some of these issues with respect to telecommunications.

The current effort to build the national information infrastructure (NII) must take cognizance of the great diversities in conditions throughout the United States. It is particularly important to note the unique conditions of relatively small towns and rural areas, where telecommunications have great promise—and much actual experience—to reverse the decline in population, income, and employment that accelerated during the 1980s. Information infrastructures have the capacity, when combined with effective rural leadership and development strategies, to literally transform these places and to counteract some of the problems created by low population densities and distance. There are remarkable examples all over rural America of telecommunications being used to improve health care, education, recreation, community organization, and development. Indeed, there is evidence that telecommunications played a role in the economic recovery of rural areas during the 1990s.

The main challenge is to maximize the potential for telecommunications as a tool for rural development and to determine whether or not rural areas are sufficiently different from urban places to justify different treatment in policies to promote the development of the NII mainly through private investment and effective competition.

The Role of Telecommunications: General Evidence

The rural challenge for the development of information technology is all the more serious because of the mounting evidence, as the Office of Technology Assessment concluded, that communities and businesses that have limited access to these technologies "are unlikely to survive" (OTA 1991). However, the OTA study adds, "these technologies could help rural communities overcome a number of the barriers that have limited their economic well-being in the past." The OTA report presented case studies that demonstrated how companies had used sophisticated telecommunications to deliver advanced, big-city financial services to smaller towns and rural areas; improve the performance of rural businesses;

improve health care delivery by linking rural doctors and hospitals to medical schools and specialists; improve rural education through specialized computer programs, information retrieval processes, and bringing specialized teachers to rural students; provide electronic video and audio materials to strengthen rural leadership; unite rural people with common interests across wide areas; and allow widely scattered people in places like Alaska to participate in legislative hearings and other functions of government.

While major benefits can be achieved for rural manufacturing, wholesale, insurance, finance, tourist, and other activities, telecommunications also can produce major benefits for agriculture, which has been slow to abandon mass production, producer-driven practices in favor of the better use of information to target specialized markets (Sunbelt Institute).

There is growing evidence from the United States and abroad to demonstrate the value of telecommunications for rural development. Relatively small companies in Northern Italy and Denmark, for example, have established global, high performance strategies to dramatically improve income and employment opportunities for rural people, mainly through the use of communications networks to improve productivity, quality, and flexibility (Rosenfeld). These small companies exhibit a mixture of intense competition and close cooperation to achieve the scale and scope advantages of large organizations and the flexibility of smaller ones. Cooperation and competition would not be possible without high quality telecommunications networks that make it possible to coordinate various activities (training, financing, and marketing) and maintain information flows between and among organizations.

There is both case study and econometric evidence of the value of telecommunications for rural development in the United States. Early quantitative research showed that the availability of telephones contributed to rural development, with important positive externalities, which means that the general benefits (i.e., to customers, government, business, and others) were significantly greater than the direct benefits to providers (Parker et al.). Since this earlier research compared areas with and without telephones, it becomes less relevant now that over 95 percent of U.S. metropolitan and over 91 percent of nonmetropolitan households have basic telephone service. However, later research shows that investment in telecommunications infrastructure, not just the presence of telephones, increases gross national product (DRI/McGraw-Hill; Cronin et al.).

Input-out analyses disclose two kinds of savings from telecommunications: (1) technological innovations lower costs, which produce additional efficiencies as telecommunications are substituted for more expensive alternatives like travel; and (2) these efficiencies produce net improvements in other industries, where most of the savings from telecommunications investments occur.

Rural Areas Are Different

As noted earlier, relative to urban areas, rural places cover greater distances and have lower population densities and fewer opportunities for specialization, all of which increase the costs of rural telecommunications services. A surprising reality to many observers is the extent to which small rural telephone companies have modernized their facilities.[1] Indeed, in many ways, as noted, these facilities are more modern than those deployed in rural areas by many, if not most, large telephone companies. Of course, small rural telcos have some advantages over the larger companies. Being smaller, they face fewer bureaucratic obstacles to innovation and can modernize their central offices by making smaller capital investments. However, these advantages do not offset the higher costs of serving rural areas because of higher loop costs and an inability

to take advantage of economies of scale, even though many rural telcos have been innovative in aggregating demand in order to achieve scope and scale economies.

The Case for Differential Treatment of Rural Telephone Companies

The main case for treating small rural areas differently in telecommunications policy is that rural and urban people benefit from connecting rural people to communications networks, and, under present conditions, rural differences could make competition by multiple providers unworkable. Specifically, the Rural Telephone Coalition (RTC) and others argue that the small number of customers scattered over large distances raise the cost of services relative to urban areas and preclude economies of scale. Under these conditions, fragmenting demand by permitting more than one provider would increase prices to consumers and make it difficult to support modernizing investments. Moreover, according to this view, subsidies to rural telecommunications providers are justified because the social benefits from rural telecommunications cannot be recaptured in the rates charged rural customers.

The evidence seems to support the rural advocates' position. There is no doubt that costs are higher and that conditions make it difficult to recover the cost of external (social) benefits from rural rates. This does not mean, though, that rural carriers should be allowed to ignore competitive pressures to keep prices close to costs. However, at least for the present, this probably can be done more effectively through incentive rate regulation than through competitive market forces. Similarly, very different forces and motivations serve to stimulate efficiency in small rural telcos. First, these companies are more interested in the development of rural areas than is true for larger urban-oriented companies, which are more likely to neglect rural areas in favor of more profitable metropolitan customers and investments outside their core areas. The rural telcos, by contrast, see their welfare more closely related to the development of their service areas. For one thing, coop telcos are owned by their customers, and therefore must be responsive to their concerns. Second, even noncoop rural telcos see their welfare closely related to the development of their service areas. Indeed, many rural telco managers and employees, like rural educators, are integral players in rural communities' social and economic affairs, and derive considerable pride and personal satisfaction from providing the best possible service through technologically advanced facilities. Many small rural telco employees and managers cooperate closely with rural schools, hospitals, and public institutions in implementing advanced telecommunications services to improve the delivery of education, health, information, and other public services. These companies are particularly responsive to the concerns of schools, not only because of the common belief that if they lose the school they lose the community, but also because of the growing recognition that the quality of education is a major determinant of success in the information age and is a major factor in the attraction and retention of rural professionals, businesses, and young people. Finally, rural telcos' rates are constrained by the threat of bypass by their largest and most lucrative customers, who, if they left, would raise costs for those remaining on the networks.

Michael Brunner expressed a view common to rural telco executives:

> Small rural providers are different. The manager or owner, and the directors, are part of the community. The employees are providing service to their families, friends and neighbors. The level of personal service and the sense of accountability are much greater (p. 62).

In addition, Brunner expresses a common rural attitude about competitive market forces:

> Federal policies and mechanisms, not the marketplace, have brought quality service to rural customers. The. . .REA, the Universal Service Fund, geographically averaged toll rates, the service franchise—all reflecting the governments' commitment to rural citizens are responsible for the development of telecommunications in rural America (p. 62).

North Carolina's experience with distance learning provides additional insights into the advantages, disadvantages, and costs of using telecommunications to improve education, especially for poor and rural students. A distinctive feature of this state's program is that, unlike many other states, the governor's office insisted from the beginning that poor and rural areas be included. North Carolina was sufficiently satisfied with a pilot program in 16 schools that in 1994 the legislature appropriated $7 million for start-up costs to take the program beyond the experimental stage. By January 1995, 100 schools were linked to a fiber optic system throughout the state. State officials estimated that a high school must spend $110,000 to $150,000 to buy the equipment and hook into the fiber optic system and another $40,000 to $50,000 a year in telephone user fees. In addition, schools had to hire extra employees to maintain the system.

The state has agreed to be the biggest user of the fiber optic system being constructed by a consortium of phone companies. High schools and colleges will be the system's main customers, though hospitals, government offices, and prisons also were expected to participate in the program. Businesses were expected to be willing to pay higher fees to use the system. While the North Carolina system was expected to provide lessons for use as it evolves, the state's business and political leaders were confident that their advanced telecommunications system would strengthen economic and community development, as well as improve the delivery of education, health care, government, and other services (Winerup).

Similar uses of telecommunications have strengthened rural development in other states, especially in Iowa and Nebraska, which, along with North Carolina, have been innovators in the use of telecommunications for education, medical care, government services, and rural economic development. Some 6,700 miles of fiber optics have been laid throughout Nebraska. This system is being used by state officials to sponsor numerous small-town experiments in telemedicine, education, and government services. In 1994, all but five of Nebraska's 93 county seats were linked to the fiber optic network. State officials prodded telephone companies and other businesses to invest in fiber optics, digital switches, and other advanced technology by promising to use the system as "the anchor tenant" if the companies would build it.

There is convincing evidence that telecommunications has contributed significantly to a developmental turnaround in Nebraska and other rural areas during the 1990s. In the 1980s, for example, 80 of Nebraska's 93 counties lost population; since 1990, all but 20 counties have gained population or have stabilized. While it is not possible to determine the role of telecommunications, since rural areas generally experienced renewed growth in the long economic recovery that started in the early 1990s, information technology appears to have been an important factor. According to Calvin Beale, an eminent rural development specialist at the Department of Agriculture,

> Advanced communication technology is starting to allow small towns to hold on to existing jobs and attract new ones.
>
> Every survey shows more people want to live in small towns than can find jobs there," he says. "If you wire them, they will come (Richards, p. A-1).

Health care

Telecommunications can do much to improve the quality of health care for rural Americans. Information systems can be particularly useful in providing health care education and information to help pre-

vent health problems. Moreover, telecommunications can improve medical service by providing rural health care professionals with specialized assistance in distant places and bringing emergency medical care to rural residents. Interactive TV seems to have enormous potential to avoid the need to move patients to specialists. Rural general practitioners, nurses, and other health professionals can obtain specialized help from distant places to treat patients in rural facilities; and medical associations can establish networks to increase efficiency and improve health care by sharing patient information.

One of the largest stumbling blocks for telemedicine projects is the lack of acceptance of these services by third-party reimbursers, i.e., Medicare/ Medicaid and insurance companies. In addition, costs for the equipment have been prohibitive for some of the smaller hospitals or individual physicians. Finally, public utility commissions have not been very flexible in facilitating the use of technology to improve the delivery of medical services in rural areas. For instance, Texas Tech's "MEDNET was prohibited from on-demand access to telephone lines . . . and was required to lease fully dedicated lines around the clock at considerable cost."

CONCLUSIONS

It is commonly assumed that bringing high-quality telecommunications to rural areas would be very expensive or require much larger public subsidies. However, with the use of more imaginative incentive regulations and competitive market disciplines, there is evidence that the basic objective of providing advanced telecommunications facilities to rural residents, businesses, schools, hospitals, and governments could be a plus-sum process whereby all parties concerned—as well as the national economy—would be much better off. Regulators should therefore test the following conclusion advanced by one group of rural telecommunications experts:

> It *is* economically feasible to provide broadband service connecting every telephone exchange in the country, including those in small rural communities, and narrowband access (for voice and data) for every household in the country. Broadband links for video and high-speed data can be provided wherever the business, educational or other applications require them.
>
> Universal access to high-quality telecommunications networks is not only affordable; it can be provided without tax dollars. Although large investments will be required, the anticipated profits should be sufficient to raise the necessary capital. Telephone subscribers, on the average, are unlikely to have higher telephone bills, except for increased usage. As the new investments lead to lower costs and increased usage, subscriber revenues will repay, over time, the costs of new investments. (Parker et al., p. 14).

Future policy gaps

What policy gaps are likely to remain if current policy is unchanged?

It seems to me that the main policy gaps for rural policy include the following, though, as noted, most trends are favorable for rural areas.

1. Rural Human Resource Development

As noted, rural schools have closed the gap with central cities, but not with suburban areas. Rural schools have special needs to improve their facilities and become fully integrated into telecommunications networks. The Clinton Administration Rural Community Schools Rebuilding Program is a good beginning and should be carefully evaluated with a view to expansion.

Course offerings and standards need to be improved. Rural schools compare favorably with central city, but not suburban schools. These gaps could be eliminated through the use of internationally benchmarked standards with matched assessments and curriculum guides for rural and urban schools. Standards would provide greater incentives

for students and teachers, improve accountability, and promote systemic efficiency by improving the linkages within schools and between schools, businesses, and higher education institutions, especially community colleges. There is strong evidence that closer links between schools and high-performance companies could be mutually beneficial, as is the case, for example, in Germany and Japan. A system of standards for teachers, especially the National Board for Professional Teaching Standards, could do much to improve rural education, as it has in North Carolina, for example.

There is a special need to involve parents and community leaders in rural schools. This is so because rural parents tend to be less well educated than their suburban counterparts and because there is strong evidence that effective parental involvement improves student performance.

Rural schools have special advantages of being smaller and more integrated into community life. However, in some places, especially in the South, this is not so because of racial and social inequalities. A strong case can be made for special efforts by federal and state governments to improve schools in these places. In many rural southern communities the economic power structure is not interested in improving public schools because wealthy families send their children to private schools (Duncan). In some of these cases, as in Kentucky, the poorer school districts successfully sued the state government to overcome unequal distributions of school revenues. When ordered to do so by the Kentucky Supreme Court, the Kentucky legislature corrected the problem. However, "The fractured nature of the local policy among many rural Kentucky counties was most graphically evident when a majority of the representatives from the school districts that backed the initial litigation . . .that would benefit most financially in terms of the new money voted against the reform measures" (Swanson, p. 118).

In short, policies need to be adopted to strengthen rural education through standards and assessments to provide schools run by highly professional teachers and administration who have adequate facilities, resources, and rewards for significantly improving student achievement.

Policies also need to be developed to improve worker and managerial skills. Skills standards being developed by the National Skills Standards Board could do for skills what standards would do for schools. Policies need to be developed to overcome the training problems of small companies and the training externality problem for all employers.

Finally, policies need to be adopted to encourage more rural students to complete college education. High-performance development that increased the returns for rural education would enable more rural college graduates to remain in those areas and others to move or return.

2. Develop a Coherent Rural Policy Statement

I think another major gap is likely to be the development of consensus on some of the fundamental questions raised by the ERS 1988 Rural Development Report. This would be particularly timely if the Clinton Administration's place-oriented initiatives are successful. I think a strong case can be made that efficiency does not always require markets to be controlled by competitive market forces. As noted in the telecom case, people who are interested in developing their communities do not necessarily need the spur of competition to modernize and produce quality goods and services for their friends, neighbors, or cooperative owners. Moreover, shifting resources out of these areas to maximize short-run gains might not be in the interest of long-run efficiency. Moreover, consideration must be taken of the long-run problems for the environment, civic society, and competitive markets as the result of the growth of large-scale agribusiness enterprises which do not necessarily have production efficiency

advantages over smaller, fully mechanized family farmers. Experience in the United States and elsewhere demonstrates the social, political, and economic value of social safety nets. Perhaps it is time to extend these nets to help family-sized farms with the inevitable periodic downturns in agricultural prices. Of course, many of these farmers could combine farm and nonfarm incomes to cause them to be viable.

Opponents of industrial policy have a point in warning against the dangers of protectionism and propping up noncompetitive industries or from trying to pick winners and losers. However, many of these critics have already decided that family-sized farms are losers, even though they prosper in other countries and have been damaged by our subsidies to land and capital. Moreover, proper sectoral policies would not require governments to "pick winners and losers," but to be sensitive to the differential impact of ordinary government policies on diverse areas as well as the multiplier effects of some industries—like education and telecommunications—on others.

Policymakers should therefore determine whether a consensus can be developed on the nature and components of rural policy that answers such questions as: why is a separate rural policy needed? What is unique about rural places? What are the differences between different categories of rural and urban places? How can national policy accommodate dynamic and diverse conditions as well as policies at the regional, state, and local levels? Why is it in the national interest to have a national rural policy? What should be the main elements of a national rural policy?

As demonstrated in this paper, I believe rural conditions are sufficiently unique to justify a national policy to address these conditions and promote rural development. I also believe rural development is in the national interest for many reasons, including the mobility of rural and urban people; the national interest in prosperous, democratic, socially cohesive conditions everywhere; the preservation of the rural environment for people everywhere; and the fact that rural problems become national problems and rural prosperity contributes to national prosperity.

I think the guiding principle for rural development should be to encourage high value added by encouraging the development of high-performance companies through education and training systems for frontline workers, enterprises and managers. A rural policy should create an environment that encourages the growth of high-performance enterprises. Such a policy would have safety nets to make viable enterprises sustainable during temporary changes in conditions over which people have little control. Rural policy should not give inordinate attention to agriculture, but should consider agriculture to be an important component of the rural and national economies. I believe there is more justification for safety nets for family-sized farms than there is for subsidies for large commercial farms. I also believe place-oriented policies have an economic as well as a social justification, but that these places are not likely to benefit from the kind of competitive market conditions that can produce positive outcomes in more populous markets.

These are more in the nature of guiding hypotheses than fixed conclusions. I believe consensus building requires a much better factual and analytical foundation than I have been able to assemble. I would therefore recommend that some organization—perhaps the National Rural Development Council—modernize the ERS' 1988 staff report.

ENDNOTE

[1] These small companies are generally referred to as telephone companies, but their activities have expanded beyond basic telephone service. The broader term, "telecommunications," would therefore be more appropriate. I use the term "telco" to refer to both.

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