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Reversing Rural America's Economic Decline

The Case for a National Balanced Growth Strategy

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Fundamental structural changes in technology, markets, and organizations are redrawing our nation's economic map and leaving many rural areas behind. Yet our de-facto federal rural policy—providing massive subsidies to a shrinking number of farmers—does little to help develop competitive rural economies or boost opportunity for rural residents.

There is a growing recognition, not just in developing nations but in developed ones as well, that agricultural subsidies in rich nations are condemning many agriculturally based developing nations—including many Islamic Middle Eastern nations—to a state of poverty and underdevelopment. The Organisation for Economic Co-operation and Development (OECD) estimates world farm subsidies to be about $300 billion to $320 billion per year. Some of this funding benefits research or rural development, but much of it simply serves to keep efficiently produced goods out of poorer countries which cannot afford subsidies. The European Union's $2.3 billion olive oil program, for example, keeps millions of efficient olive growers in Tunisia, Lebanon, and Morocco out of American supermarkets. American cotton subsidies, meanwhile, undercut even poorer West African producers who, in the 1990s, were happily selling their produce to textile mills in Pakistan and India. Japan's $30 billion farm program is nearly twice as big as U.S. farm subsidies, and this in turn is dwarfed by the $60 billion Common Agricultural Policy in the EU, which subsidizes everything from beef and wheat, to kumquats and tangerines, to cucumbers and silkworm cocoons.

There is mounting international pressure to reduce these subsidies. Moreover, there are sound domestic reasons and broad public support[1] for moving away from the old subsidy regime, as it does little to help rural economies or the vast majority of rural residents. Therefore, we propose a dramatic change in the subsidy system based on a two-track process: First, the United States should press for serious negotiations with other developed nations and the World Trade Organization to mutually agree to phase down farm subsidies. Second, here at home we should gradually shift agricultural subsidies toward a 15-year effort to help rural America develop a new competitive economic base and to help the nation as a whole develop a better balance between its metropolitan and rural economies. The savings from reduced crop subsidies should be reinvested in a new Rural Prosperity Corporation that co-invests with states to boost the long-term competitive position of targeted rural economies.[2] It is critical, however, that both these tracks occur together, for we do not propose unilaterally disarming when it comes to farm subsidies.

Astute politicians recognize the need for reform. Former Clinton administration Agriculture Secretary Dan Glickman states, "Farm programs became all too frequently a mere money scramble by a limited number of commodity producers, many of them quite wealthy. … We believe New Democrats need to develop, and can develop, a new approach."[3]

In fact, smart New Economy-based rural policies can help progressives become recognized as the supporters of rural progress, forcing conservatives to be defenders of rural nostalgia and narrow business protectionism. For example, Sen. Hillary Rodham Clinton's (D-N.Y.) 2000 senatorial campaign succeeded in part because of her commitment to bring New Economy growth to lagging regions in upstate New York, including rural areas. Gov. Mark Warner (D-Va.) campaigned on a platform of ensuring rural Virginia would not be left behind in the transition to the New Economy, and promised to

help rural areas develop new competitive advantages beyond agriculture and natural resources.

The federal government has had a long and important role in helping shape geographic patterns of economic activity and settlement, from the Homestead Act, to the New Deal efforts to bring vast swaths of the South and West into the modern economy, to the efforts by John Kennedy to revitalize Appalachia. The time is ripe for a similar effort today. However, to craft an effective rural development policy that meets 21st century challenges, Congress and the administration need to keep in mind four key principles:

Principle 1: Shift from subsidies to economic investment.

Providing subsidies to farmers, rural residents generally, or rural localities does little to help build competitive rural economies. Federal policy should help rural areas build the infrastructure, skills, business clusters, and quality of life needed to succeed in the New Economy.

Principle 2: Target places with growth potential.

Some places have significant competitive disadvantages: harsh climate; few natural, physical, or cultural amenities; remote location; extremely small size; and/or poor-quality government services. It is unrealistic to expect all of these places to thrive. As a result, policies should target investments in rural places that have the potential to become self-sustaining growth centers and employ residents from a larger surrounding area.

Principle 3: Change the playing field so more firms choose rural locations.

Helping communities is important, but it is also important to help create overall economic conditions that make it more likely for economic activity to thrive in rural areas. Examples include support for widespread deployment of broadband or funding for research that increases the demand for products and services likely to be produced in rural areas (e.g., wind power or agricultural biotechnology).

Principle 4: Enlist states as full partners.

States spend close to $50 billion per year on economic development, yet little of it is focused on boosting rural economies. No strategy will succeed unless it leverages and engages the states to spur New Economy development in rural economies.

To bring rural development into the information age, the federal government should take three simple but critical steps:

- **Contingent on successful international negotiations to multilaterally phase down farm subsidies, gradually convert agricultural subsidies over 10 years, eliminate existing rural development programs in multiple agencies, and transfer the savings to a quasi-public Rural Prosperity Corporation.**

- **Empower the Rural Prosperity Corporation to jointly fund with states New Economy development strategies focused on rural growth centers and fund research and development focused on technologies likely to boost production in rural areas.**

- **Where possible, decentralize government facilities and employment away from high-cost metropolitan areas to rural growth centers.**

Why Should We Care About Rural America?

Before examining what government should do to help revitalize rural economies, it is worth examining why the nation has a stake in a healthy rural America. The most compelling reason is that 20 percent of Americans live there. When rural economies decline, residents suffer the consequences: stagnating or falling incomes, higher unemployment, out-migration, and increased social disorders. However**, rural policy is not just about redistributing wealth and opportunity to those who need it, it is a vital cornerstone of a national economic growth policy.** Helping rural economies grow will reduce congestion and costs to businesses and residents in large metropolitan areas, and increase the standard of living for people in both places. Metro areas like Boston, Mass., San Jose, Calif., and Washington, D.C., don't need more residents and jobs. Places like Springfield, Mass.,

Fresno, Calif., and Hagerstown, Md., do, and could easily add more people with positive impacts.

It is one thing to make the case that stronger rural economies strengthen the U.S. economy; it is another to argue that government should intervene to influence the location of economic activity. Free market purists counsel us to not worry about rural places, since by definition the market produces the optimal spatial distribution of economic activity. However, while individual firms often locate or expand to places in order to maximize returns, collectively, firm decisions may not maximize national economic welfare. This is because locational decisions made by companies produce negative spillovers—what economists call externalities. For example, while an individual firm may benefit by moving to or expanding in a crowded metropolitan area, other firms and residents may suffer as traffic congestion, air pollution, and land and housing prices increase. Economists call these diseconomies of scale. In other words, in contrast to economies of scale that lead to falling costs as enterprises (or places) get bigger, diseconomies of scale can lead to rising costs as size increases.

Market purists counter by saying that markets adjust for such cost differentials and therefore lower cost rural regions will eventually catch up. The theory goes that as costs fall in rural areas and rise in metro ones, firms will move out of high-cost metro areas to low-cost rural areas until prices begin to equilibrate. Unfortunately, this theory doesn't fit reality. Economists have long recognized that there are many reasons price adjustment alone will not lead to convergence. One is that as rural areas lose population, they become less attractive for investment. As the labor pool declines, governments can no longer afford needed infrastructure, taxes go up, and the overall business environment becomes worse. Expecting convergence based on cost differentials is especially problematic in a global information economy where our own economy increasingly specializes in producing goods and services that are less cost sensitive. Moreover, there are significant "chicken-or-egg" issues that hinder such natural adjustments. For example, firms and workers may want to move to a smaller city—the former for lower prices, the latter for a better quality of life—but unless both act in tandem, neither will. Firms will worry that they cannot get enough workers, and workers will worry they cannot get a job.

If market purists concede any role for government, it is one of helping residents in lagging rural areas move to thriving metro ones. If people were simply interchangeable factors of production responding to the highest rates of return, this might be good counsel. In fact, most rural residents have strong familial ties to their towns and regions, going back generations, that they are loathe to give up. Moreover, it is not as if all Americans living in metro areas prefer living there. **Polls show that if they could find work there, many Americans would gladly move to rural areas or small towns**.[4] As a result, public efforts to boost rural economies would help more Americans live where they want, not where markets alone dictate.

The Economic Crisis in Rural America

America is a metropolitan nation, and is becoming more so every year. In 1990, more than one-half of all Americans lived in metro areas with more than 1 million people. By 2000, the majority lived in suburbs of these metro areas. As a result, in 2001, just 19.8 percent of Americans lived in non-metro areas, down from 21.8 percent in 1980 and 44 percent in 1950.[5] Rural employment has increased, but more slowly than in metro areas. Jobs in large metro areas grew 2.2 percent faster than non-metro areas in the 1980s and grew 3.6 percent faster in the 1990s (non-metros grew 10.3 percent, metros grew 13.9 percent). The disparity widened in the last half of the 1990s when employment growth slowed in rural areas by about half, while remaining steady in metro areas. In the 1990s, almost one-half of the 2,305 rural counties lost both population and employment, while between 1995 and 1999 over 850 lost population.[6] Many of these were in the Midwest and Great Plains states and more isolated counties in other regions.

This is not to say that some rural areas have not done well; many rural counties with retirement-based economies, regional trade

centers, or scenic amenities prospered. For example, while many rural regions grew slowly or not all, population in the rural West, with its scenic amenities, grew by 20 percent in the 1990s. Moreover, farming and manufacturing communities adjacent to metros are growing into bedroom exurbs as these large metro areas grow outward.[7] Rural areas adjacent to metro areas grew 23 percent faster than rural areas not adjacent to metros in the 1980s, and about 5 percent more rapidly in the 1990s.

Many rural areas are not only falling behind on jobs, but also on income growth. The ratio of annual earnings for non-metro residents to metro residents fell from nearly 82 percent in 1979 to 69 percent in 1999, a historic low.[8] Rural Americans now make on average $10,900 less annually than their urban counterparts, up from $5,893 less in 1978. In addition, while urban poverty declined between 1997 and 2000, rural poverty did not.[9] High poverty persists in many rural regions, including Appalachia, the Mississippi Delta, and the Rio Grande Valley. The 1997 Census of Agriculture defined over 500 rural counties (23 percent) as being in "persistent poverty."[10]

As a result, in the 1990s, a disturbing pattern emerged in many states as "New Economy metropoles" boomed while rural areas lagged behind. For example, between 1989 and 1998 employment in the greater Atlanta region increased by 3.4 percent annually, compared to around 2.1 percent in rural Georgia. In North Carolina, employment grew 16.3 percent in areas like Raleigh-Durham-Chapel Hill, but only 7.7 percent in rural places not adjacent to metro areas. The Chicago metro area grew 12 percent in the 1990s, while other, more rural parts of Illinois grew only 1 percent. Even North Dakota, which barely maintained its general population in the 1990s lost 6 percent of its rural population.[11] Many other states, including California, Colorado, New Hampshire, Oregon, Virginia, and Washington, experienced the same pattern. As a result, **leaders in many states are calling attention to a problem called "two states"—a few prosperous, dynamic, and growing metro areas and poorer, stagnant rural areas in the remainder of the state.**

Four Reasons Why Metro Economies Have Out-Performed Rural Economies

Rural America has not always been on the decline. In fact, the 1970s is referred to as a period of rural renaissance because the share of population living in rural America increased for the first time in decades. That growth was not generated by the emergence of a New Economy but rather by the maturity of the old economy as manufacturing jobs decentralized to rural areas and people enjoying the fruits of robust income growth from the 1960s were able to satisfy their desires to live in the country.

The last two decades, in contrast, have produced a different story. There are a number of reasons why rural economies have suffered, including higher productivity of rural-based industries, globalization and its threat to cost-based industries, the growth of knowledge- and innovation-based industries located predominantly in metro areas, and deregulation leading many industries to cut back or raise the price of serving rural customers. Overall, these structural changes, what PPI refers to as the rise of the New Economy,[12] have helped metropolitan America much more than rural America.

1) Rural Economies Rely on Slow-Growth, Goods-Producing Industries

In the old economy, a larger share of the economy was tied to specific places due to their physical attributes: mining located near minerals, fishing near fish, farming on fertile land, resource-based manufacturing near natural resources. In many ways, rural economies are still living off this initial advantage. However, as productivity in rural-based industries has grown faster than in the rest of the economy, they have shed workers faster.

Nowhere is this more evident than in agriculture. Even though the U.S. population grew by more than 60 million, farm employment fell from 3.75 million in 1981 to 3.1 million by 1997, less than 2.4 percent of the workforce. Moreover, new farming methods and technology and methods have led to consolidation, causing the number of farms to

fall from 6 million in 1950 to 2 million today, with the 200,000 largest producing two-thirds of the total U.S. output. As a result, fewer than 10 percent of rural residents live on a farm or ranch.[13]

As a result, the bulwark of most rural economies is not farming, but manufacturing, which accounted for 22.3 percent of non-metro earnings in 1998, but only 16 percent in metro areas. Non-metro counties actually gained around 44,000 manufacturing jobs in the 1990s, while large metro areas lost about 700,000 of these jobs. The growth in non-metro jobs is a result of the loss of manufacturing jobs in large metro areas.[14] In other sectors, natural resource depletion, particularly in mining and fishing, has meant job losses for many rural communities. For example, many rural Arizona communities faced widespread layoffs when copper mines closed in the 1980s and early 1990s.

2) Rural Economies Have Fewer Fast-Growing Knowledge and Technology-Based Industries and a Less Educated Workforce

Large and mid-sized metro areas are more specialized in fast-growing knowledge and technology-based industries, including high-skilled "producer services" (e.g., legal services, financial services, engineering, computer services, and consulting). While rural areas have 20 percent of the population, they received just 13 percent of earnings in producer services. Moreover, they are falling further behind, capturing only 4 percent of producer services growth between 1995 and 1998.[15] Over 40 percent of metro earnings growth was accounted for by producer services, compared with just 13.6 percent in non-metro areas.[16] While all sizes of counties gained service jobs in the 1990s, rural counties not adjacent to metro areas gained much fewer than they would have if they had kept up with the national growth rate.[17] The rapid growth in producer services in the 1990s largely missed rural America.[18]

Because it specializes in lower-skill, less technologically advanced manufacturing sectors, such as textiles, apparel, furniture, metalworking, rubber, stone and clay, and natural resource-based products like food, wood, paper, and leather products, **rural America missed much of the growth in high-tech manufacturing**. Between 1995 and 1998, 70 percent of earnings growth in metro manufacturing came from high-tech industries, especially industrial machinery and electronic equipment, compared to only one-half that in non-metro areas. Many rural areas, particularly in the Southeast, were dependent on textiles and apparel, which because of foreign competition lost $1.71 billion in earnings, compared to a net increase in total rural manufacturing earnings of $7.6 billion.[19]

Even in the sectors where rural areas gain jobs faster than metro areas, they mostly gain lower wage jobs. For example, while rural regions increased their share of total manufacturing employment, their share of income from manufacturing employment remained stable, indicating that they were in fact gaining lower wage jobs. Similarly, while employment in wholesale trade and finance, insurance, and real estate grew faster in rural areas, their share of national income from these industries declined.[20]

There are a number of reasons why rural areas have had difficulty competing in these growing knowledge- and technology-based industries. In an economy relying more on skilled workers, rural areas suffer because their workers are less educated, and the gap is widening. For example, in the South, 28.1 percent of metro residents have a college degree compared to 15.1 percent of non-metro residents.[21] In the 1990s, the share of Southern workers with college degrees increased 4 percentage points in metro areas, but just 1 percentage point in non-metro areas. In many ways, this is a chicken-or-egg issue. Because metro areas have more educated workers, knowledge companies are more likely to locate there. Because more knowledge jobs are in metro areas, rural areas suffer from a "brain drain" as more educated individuals leave. The lower quality of many rural K-12 schools, relative to suburban schools in metro areas, also makes it harder to develop workers of equal skill.

Many rural areas lack other key ingredients of a knowledge economy. A recent study for the Appalachian Regional Commission found that Appalachia's growth is hampered by a shortage

of entrepreneurs, scientists, and university education and research.[22] Rural areas have fewer clusters of companies in similar industries, which are increasingly important to growth, particularly in innovation-based industries. Many rural areas lack high-speed data communications infrastructure, which in an economy powered by information technology is a requirement for growth. Finally, many rural areas suffer from infrequent and costly air travel service, which makes them less attractive locations for many facilities, especially corporate and regional headquarters.

3) Deregulation Has Helped Metro America More Than Rural America

Before the wave of economic deregulation that began in the Carter administration, there was a general commitment to providing at least minimal service (e.g., transportation, utilities) to rural areas at a reasonable price, even if it meant, as it usually did, that rural areas costing more to serve were subsidized by urban areas. Deregulation of telecommunication, banking, trucking, airlines, electricity, and other industries changed that, allowing an increasing share of services to be priced based on the costs of providing service. While this boosted overall economic efficiency, in many cases it meant the reduction or elimination of implicit subsidies to rural areas, which resulted in higher prices and/or reduced service. Airline deregulation lifted fare limits and eliminated minimum service requirements, with the result that airline service to large metros became cheaper and more frequent, while service to many smaller metro and rural airports became less frequent and sometimes more expensive. Banking deregulation led to consolidation and the closure of many small town banks. Telecommunications deregulation is putting pressure on the universal service cross-subsidy system developed in the era of monopoly to subsidize rural telecommunications.[23] Potential deregulation of other industries, like the U.S. Postal Service, could produce similar results.[24]

Recent changes in tax policy will also predominantly benefit metro areas. Because rural incomes are lower, the average rural income tax rate is 12 percent while the urban rate is 15 percent.[25] The Bush tax cuts make the income tax system less progressive, and **therefore the lion's share of the Bush administration tax cuts will go to higher earners in metro areas**. Supporters of the Bush tax cuts will argue that even if metro residents benefit more, rural residents will also benefit. This is only true if the tax cuts stimulate economic growth, and according to the Congressional Budget Office, this is not the case, in large part because of the tax cut's effects on the deficit.[26] As a result, on net and over time, rural residents will be hurt by the Bush tax cuts.

4) Globalization Has Increased Cost Pressures on Rural Economies

Rural areas have long had the advantage of lower costs for land and labor, enabling them to attract establishments seeking lower costs. For many decades, rural regions have relied on the "filtering down" of more mature economic activities, especially manufacturing plants, from urban areas. However, increased globalization now means that many establishments competing largely on costs and producing commodity-type products "filter out" labor to cheaper developing nations. For example, plants that might have relocated to lower-cost locations in the rural South are now more likely to relocate to Mexico or China. Moreover, enterprises that remain in rural areas face significant cost pressures. As a result, many rural regions find themselves squeezed between low-cost developing nations and high-cost U.S. metro areas with agglomerations of skilled workers and knowledge-based firms. This is one reason that, since 1998, rural manufacturing jobs have decreased at a faster rate than urban manufacturing jobs.[27]

Three Opportunities for Rural America in the New Economy

The structural economic changes resulting from the rise of the New Economy present new challenges for rural economies. However, the news is not all bleak. In fact, many rural areas may be able to capitalize on a number of current

and future developments, including the potential centripetal forces enabled by the information technology revolution, the growth in retirees, and the increasing diseconomies of large metropolitan areas.

Opportunity 1: Information Technology Enables Firms to be More Mobile

In the old economy, economic transactions involved processing paper, conducting face-to-face interactions, and producing or moving physical goods. These activities were often located near natural resources (e.g., steel mills located in Pittsburgh near Pennsylvania coal deposits) or population centers (e.g., banks in local neighborhoods). However, a growing share of the economy consists of digital information transactions—be they stock trades, insurance forms, or e-commerce sales. These digitized electronic processes have the potential to replace many paper transactions and some person-to-person transactions. As these transactions differ so markedly from transactions that were more burdened by space and time constraints in the past, they have, through their impact on industries and jobs, the potential to significantly reshape the location of economic activity. In short, the digital economy is creating an ever-more spatially dispersed and footloose economy, which allows an increasing share of economic activity now located in high-cost metro areas to relocate to lower-cost areas.[28]

As more of the economy processes information digitally, more firms are able to locate anywhere with skilled workers and advanced telecom infrastructures. For example, the U.S. Postal Service uses telecommunications technology to allow workers in Greensboro, N.C., to view mail being sorted in real time in their Washington, D.C., central mail facility. Workers in Greensboro see an image of a letter in Washington, D.C., and manually type in the address so that a machine in the Washington facility can print a bar code on the letter. The postal service does this because costs are lower in Greensboro than in Washington. Likewise, e-commerce and advanced telecommunications enabled Northwest Airlines to recently open a travel agency booking office in the small town of Minot, N.D., bringing a number of jobs with it. Continuing advances in IT, including grid computing, ubiquitous broadband, and increased digitization of more sectors and activities, will only accelerate these trends. However, rural areas are not just competing with urban areas for these jobs. IT is sending these jobs not just to rural areas, but also overseas to low-cost places like India and China.[29] Still, not all these IT-enabled service jobs will go offshore, and rural areas are in a position to capture some of this market, especially if rural areas focus on growth centers (see below).

While the digital economy makes activities more footloose, it doesn't liberate them from all locational constraints. First, and most obviously, digital economic activities can't locate in a place unless it has access to advanced telecommunications infrastructure. But while advanced telecom is necessary, it is not sufficient. Companies also want to be located in places with an adequately skilled workforce. Second, airport access is still important for many companies. As a result, even for routine back office employment that could be conducted digitally, small and remote rural places are unlikely to have a competitive edge. The deconcentrating forces of the New Economy are not all powerful—the share of jobs in rural counties not adjacent to metro areas still declined by 11 percent between 1988 and 1997. Rather, the digital economy appears to favor small cities (50,000 to 250,000 in population). While costs in these places are lower, they have the critical mass of skilled workers, infrastructure, and transportation access to compete with large metropolitan areas.

There is an additional way in which the digital economy is increasing the competitiveness of small, remote places. The Internet revolution has reduced the isolation that rural locations used to face. Before satellite TV, many rural areas had poor TV reception. Before the Internet, many had difficulty accessing a range of goods and services that metropolitan residents took for granted. As a result, the increased retail, learning, health care, entertainment, and information access of the high-speed Internet reduces the disparities between rural and metro areas' access to goods and services.

Opportunity 2: Footloose Retirees Are Increasing

If the IT revolution is enabling more companies to be footloose, the looming retiree boom will enable more people to be mobile. The fact that most Americans live in metro areas does not mean it is because they want to live there. In fact, a recent Gallup poll asking Americans where they would prefer to live found that 24 percent wanted to live on a farm or in a rural area, with 36 percent preferring small-town life.[30] As a result, over one-third of Americans are living in metropolitan areas even though they would prefer to live in less populated settings. The fact that the location of jobs does not match the locational preferences of people explains why more Americans don't move to smaller cities and towns. However, as more people retire and gain incomes less dependent upon employment, they can choose places to live based on personal preference, not economic necessity.

Notwithstanding the stock market decline, today's retirees have more money, independence, and a longer life expectancy than past generations. As a result, retirees already are a powerful force for rural revitalization. In the 1980s, retirement counties (defined as having 15 percent or more net inmigration by retirees) grew four times faster than other rural counties. In the future, many rural areas have a real opportunity for growth by attracting retirees, either as full- or part-time residents, particularly if they focus on enhancing quality of life. By 2005, 35 million Americans will be 50 to 59 years of age, and planning retirement (up from 21 million in 1990).[31] But this opportunity can extend beyond retirees. An increasing number of Americans are concerned with quality of life issues, making it more likely that rural areas will become attractive if they hold job opportunities.

Opportunity 3: Congestion, High Costs, and Security Risks Make Many Metro Areas Less Attractive

The final factor working in favor of rural economies is the fact that larger metro areas increasingly suffer from problems that reduce their attractiveness. While large metropolitan economies have many advantages, not the least of which is a large and diversified labor and employment market, they also have significant drawbacks. Housing in metro suburbs is 70 percent more expensive than in rural areas, and land costs are even higher.[32]

These high costs require employers to pay higher wages. Many metro areas also suffer from gridlock. In the nation's 75 largest metro areas, traffic flow is almost 40 percent slower than it would be if there was no traffic congestion. As urban areas grow larger, metro residents must travel farther to reach outdoor recreation opportunities. Finally, the threat of terrorism may lead to another disadvantage for large metropolitan areas as insurance costs increase and many American citizens and businesses perceive dense population areas as more likely targets of terrorism.[33]

How Current Farm and Rural Policies Hold Rural America Back

Without a concerted effort by governments to foster economic growth in rural America, it is unlikely that any more than a small number of rural areas will be able to take advantage of these opportunities. Unfortunately, the current policies on rural development at the federal level are not suited to the task. There are four main problems with the federal government's current approach.

Federal Rural Policy Is Focused on Agricultural Subsidies, Redistribution, and Protectionism

Most of what the federal government does in the name of rural development involves either redistribution of resources from urban to rural residents or attempts to protect rural-based industries from competition. Not only does federal policy do little to strengthen rural economies, it also creates a dependency on federal transfer payments, which makes rural areas less likely to develop a new, more competitive economic base. The most important change the federal government can make in its rural policy is to shift the focus from redistribution to development. **Instead of simply propping up rural incomes and protecting rural**

industries, rural policy should focus on boosting the competitive position of rural economies.

The largest rural subsidy is farm payments. Since the passage of the Agricultural Adjustment Act of 1933, the federal government has given farmers direct cash benefits and loan guarantees. Unfortunately, even after Congress passed the Freedom to Farm Act eight years ago, there is little sign that farm subsidies are declining. In fact, the federal government spent approximately $25 billion on direct agricultural subsidies in 2001.[34]

The 2002 farm bill approved $180 billion over 10 years, including a $40 billion increase in grain and cotton subsidies. On top of this, Congress allocated an additional $5.2 billion in crop insurance and emergency aid in 2003. According to the Environmental Working Group, "agricultural subsidies totaled $114 billion between 1995 and 2002, which works out to $530 for every American over the age of 18."[35] Farm subsidies designed to help rural America are in fact keeping rural Americans locked in the past.

Agriculture is one of the few sectors where market forces are not allowed to work. For example, net income for farmers and ranchers declined by 11 percent in the 1990s, in large part because overproduction drove down prices. In any other industry, market forces would lead the least productive companies to go out of business, and the remaining ones to thrive. But not in agriculture, where the federal government has largely made up the difference with payments to farmers growing by 234 percent in the 1980s and 120 percent in the 1990s. This explains why the share of total transfer payments by governments to rural areas remained unchanged, even though the rural share of population declined by 2 percent from 1980 to 2000.

Farmers in what one analyst has called the "farm payments region," from the Corn Belt in the East to the Rockies on the West, receive approximately one-third of their income from government.[36] Some years, the average is much higher. In 2000, farmers obtained 42 percent of their agricultural income from direct government payments. Moreover, some crops receive exceedingly large amounts of subsidies. For example, between 1995 and 2002, corn producers received $34.5 billion, while wheat producers received $17 billion, and cotton producers received more than $10 billion.[37] Just as welfare was supposed to be a temporary relief measure instituted in the Depression, so too were farm subsidies. Yet, they have turned into a permanent feature as farm businesses continue to press for more subsidies.

Defenders justify farm subsidies by arguing that if farm businesses prosper, rural America prospers. While this may have been true 40 years ago, farming is simply too small to be a major driver of rural economies. In fact, rural counties depend more on manufacturing than on any other sector.[38]

Less than 7 percent of the total rural workforce is employed in farming, and even for most farm families, the majority of their household income comes from non-farm sources.[39]

While subsidies prop up incomes of some rural residents, they do little to help rural economies. Subsidies hinder needed economic restructuring. Just as welfare hurt poor Americans by reducing their incentive to become self-supporting through work, farm payments hurt rural communities by reducing their incentive to be self-supporting through the development of new sources of market-based competitive advantage.

Defenders of subsidies also make the valid argument that abandoning subsidies unilaterally without our major competitors (especially Europe and Japan) making a similar commitment would create an unlevel playing field, putting our farmers at a competitive disadvantage. As a result, we believe that America should not unilaterally disarm when it comes to farm subsidies. Instead, we should engage in serious and sustained negotiations with Europe, Japan, other developed nations, and the WTO to convert farm subsidies into support for rural economic and community development. There is a growing recognition, not just in developing nations but in developed ones as well, that rich-nation agricultural subsidies are condemning many agriculturally based developing nations to poverty.[40] As the issue of global poverty and development becomes more important, it will be impossible to ignore the role that agricultural subsidies play in this process.

In addition to outright subsidies, many rural-based sectors enjoy growing levels of trade protection, especially after the Bush administration measures on lumber and textiles have taken effect. Moreover, tariffs on agricultural products such as butter (110 percent), peanuts (120 percent to 130 percent) orange juice, and sugar are extremely high and are applied on top of quotas.[41]

Some rural proponents see the answer in even larger subsidies and more expansive protections. They call for expanding telecommunications universal service programs; re-regulating airlines so they charge lower prices for serving smaller cities; expanding trade quotas and tariffs on rural-based industries, such as textiles and apparel; opposing new competitors such as Wal-Mart who, they feel, threaten small rural retailers; and protecting rural pharmacies in the Medicare drug benefit. While such proposals may be well intentioned, they are based on the false notion that if costs were simply low enough, rural areas could finally compete. But **the salvation of rural America is not to be found in still more transfer payments and subsidies—rather it is in building a competitive economic base.**

Government Invests Too Little, in Scattershot and Uncoordinated Ways

When asked what the challenge is for rural development, the Bush administration likes to claim there is no shortage of money or programs, only a lack of coordination. The reality is that this is a rhetorical device masking their lack of willingness to invest more. In fact, relative to need, too little money is invested in rural economic development. While federal funding for farm subsidies has gone up significantly, rural development has declined, from $2.7 billion in 1980 to $1.2 billion in 2001. As a result, most rural economic development programs are quite small. The U.S. Department of Agriculture (USDA) recently announced the selection of nearly 100 rural economic development projects for federal funding, but collectively their price totaled $5.8 million, just $58,000 per applicant. For example, one small town got $92,000 for street paving, another got $24,000 to pay for cost overruns on a new fire hall, and one-third got $10,000 to help pay for a new library. This is simply revenue sharing, albeit relatively inefficient and paperwork-intensive.

As long as farm subsidies continue to eat up so much of the budget, it will be difficult if not impossible to obtain the funding needed for significant rural development investments. For example, in last year's farm bill, a proposed $2 billion rural development title was cut in half. Funding for strategic planning and development was cut from an initial $600 million to $100 million, and then was finally zeroed out as pressures to provide bailouts to farmers swallowed up available budget authority.

The effectiveness of these modest rural development efforts is further limited by the fact that most spending lacks real strategic focus. To the extent there is focus, it is the so-called "worst first" strategy. This is embodied in the Rural Community Advancement Program, created in the 1996 Farm Bill, that called upon the Department of Agriculture to "give priority to communities with the smallest populations and lowest per-capita income."[42] In practice, however, federal agencies spread out a limited amount of funds far and wide so that most constituents at least get something.[43] In either case, funding is not targeted to help create a self-sustaining critical mass in a selected number of rural communities.

Moreover, rural communities seeking help from the federal government face a confusing array of programs scattered among at least three different agencies: the Rural Development Administration (USDA), the Economic Development Administration (U.S. Department of Commerce), and the Small Cities Block Grant Program (U.S. Department of Housing and Urban Development). When Congress decided in 1972 that federal policy should foster rural development, USDA, already working with farmers, was seen as the natural host for a rural development mission. Sitting within an agency whose central mission is to enhance agriculture, the Rural Development Administration's focus is lost in the priorities of the department as a whole.

Finally, to the extent that funds go to rural development, they largely go to physical

infrastructure more suited to old economy needs: roads, industrial parks, sewer systems, and public buildings. In the old economy these may have made sense, as the keys to success were low costs, ample labor, and adequate physical infrastructure. However, in the new knowledge-based economy, establishing an economic development strategy focused on old economy physical infrastructure is not likely to help transform rural economies. The marginal benefit of more physical infrastructure is small, given that most needed infrastructure already exists.

Federal Programs Do Little to Leverage State Resources

Though since the 1980s states have taken the lead in economic development, federal rural development policies largely bypass the states by funding localities directly, and thereby miss an opportunity to use funds to leverage and influence state policies.[44] If states had robust rural development policies of their own, this would be less of a problem. However, while states spend billions every year on economic development, both in tax incentives and direct spending, few focus on helping rural economies. Most instead prefer to boost economic activity anywhere in the state, regardless of location. A few states have developed comprehensive rural development strategies and, of these, most are poorly linked to the state's overall economic development strategy, existing as separate rural development plans.[45] Because most growth in the 1990s was in metro areas, state efforts simply exacerbated the differences between rural versus metro. Tying federal funding to a matching commitment by states would induce states to develop robust rural development policies.

Some worry that funding states would weaken the ability of the federal government to set national priorities or start new initiatives. This is only a risk if funds are awarded as block grants without performance requirements. A national initiative can be established to meet collective goals by enlisting the states through performance incentives to help implement those goals.

Federal Programs Are Based on a Mistaken Belief That Bottom-Up Action Alone is Enough

The mantra in rural development circles is that with the right leadership and programs, rural communities can solve their own problems. Taken to an extreme, which the Bush administration seems to have done, this view holds that rural communities need little help from the federal government. For example, USDA Undersecretary for Rural Development Thomas Dorr recently told a meeting of rural development advocates, "You're not going to get solutions out of this town."[46] Eric Ciliberti, associate director of the White House Office of Intergovernmental Affairs, agreed, "This White House is not top-down." When you are not top-down and don't intend to provide solutions, it is easier to justify the lack of leadership and cuts to rural development budgets.

It is true that, absent local leadership and strong local policies, rural economic development is difficult. But in addition, unless the overall economic environment is conducive to rural growth and the federal and state governments provide resources, it will be difficult for even the most astute communities to do well. Market forces supporting metropolitan development are simply too strong. Moreover, relying solely on bottom-up action puts rural communities in competition with each other for the very limited share of the pie likely to locate in rural areas. Such competition would lead to higher levels of financial inducements, with some communities winning and others losing, and no net improvement in rural welfare overall. To prevent this, we need national policies that change the playing field, making a greater share of sectors more footloose and likely to locate in rural areas while maintaining their competitive advantage.

Federal Policy Recommendations

It is time to admit that our current approach to rural development is not working and that we need a new, radically different approach. We need a two-track process. First, the United States should press for serious negotiations with other

developed nations and the World Trade Organization to mutually agree to phase down farm subsidies. Second, here at home we should gradually shift agricultural subsidies toward a 15-year effort to help rural America develop a new competitive economic base and the nation develop a better balance between its metropolitan and rural economies.

This would not be the first time the federal government has made such a commitment. The central goal of the Rural Development Act of 1972 was: "To provide an effective program to enable rural America to offer living conditions and employment opportunities adequate to impede the steady flow of rural Americans to our nation's large population centers. Once this out migration is checked, this legislation proposes to make it desirable for Americans to actually return to our rural areas, thereby lessening the burdens and problems of the modern big city."[47]

While the goal was laudable, however, the implementation fell short. The legislation grafted the responsibility for rural development onto the Department of Agriculture, and authorized only modest funds ($500 million per year), mostly for public works projects. The Rural Economic Development Act of 1990 added some new programs, but largely continued this incremental approach. As a result, if we are serious about fulfilling the promise of the 1972 Act, it is time for a radically new approach. Toward that end, Congress should do the following three things.

Recommendation 1: Gradually Convert Farm Subsidies to Investments in Place-Based Rural Development Strategies

Because many farm businesses are dependent on government largess, an immediate end to subsidies would be disruptive. Therefore, Congress should gradually convert farm subsidies over 10 years **to investments in a new reenergized federal rural development effort. As discussed above, such a conversion should be contingent on progress other major agricultural economies make in reducing their agricultural subsidies.** Programs such as the Agricultural Extension Service, Food Safety Inspection Service, and the Natural Resources Conservation Service would remain, since in contrast to price supports, these programs can be justified by their impact on increased agricultural productivity, environmental protection, and consumer safety.

Clearly, farm subsidies enjoy intense, if narrow, support particularly because the benefits are concentrated while the costs are spread to all taxpayers. Moreover, the benefits are concentrated regionally. Twenty-two states receive above average subsidies on a per-capita basis, but they comprise just 34 percent of the U.S. population and receive 76 percent of the subsidies (see Table 1). This makes outright elimination politically difficult, to say the least. At minimum, however, Congress should take steps to reign in subsidies and use a significant portion of the savings to fund rural development efforts. For example, Congress could properly enforce payment limits that some farmers are now able to get around. They could also limit the amount of subsidies going to large farms. Moreover, they could change programs so that farmers who want to move into alternative, non-subsidized crops are not penalized by losing their entire subsidy.

Defenders of farm subsidies argue that eliminating the benefit would have dire impacts—the agricultural economy and agrarianism in general would collapse, food prices would soar, and rural communities would fall apart. Yet, American agriculture is the most productive in the world. There is no evidence that phasing out subsidies over 10 years would damage the industry. In fact, letting marginal producers get out of agriculture would help strengthen the market. This is particularly true if, as we proposed, any shifting of subsidies toward development aid was contingent upon similar progress by other major agricultural nations in phasing down of subsidies. Given that a key reason for subsidies is to respond to low prices, which result from overproduction, eliminating subsidies would simply allow the market to react as it should. For example, after slashing agricultural subsidies, New Zealand's agricultural output is up and the total factor productivity averaged a 6.3 percent annual increase for the first nine years of reform.[48] Elimination of subsidies would also make it easier for the United States to gain political

Table1: U.S. Total and Per-Capita State Agricultural Subsidies (2002 estimates)

State	Agricultural Subsidy	Population	Per-Capita Subsidy
North Dakota	$383,644,999	634,110	$605.01
South Dakota	$334,633,243	761,063	$439.69
Nebraska	$539,214,387	1,729,180	$311.83
Montana	$261,945,089	909,453	$288.02
Iowa	$739,968,117	2,936,760	$251.97
Arkansas	$659,871,109	2,710,079	$243.49
Kansas	$456,828,509	2,715,884	$168.21
Mississippi	$437,761,897	2,871,782	$152.44
Wyoming	$66,085,103	498,703	$132.51
Idaho	$165,427,709	1,341,131	$123.35
Minnesota	$467,541,736	5,019,720	$93.14
Oklahoma	$317,193,635	3,493,714	$90.79
Georgia	$660,661,668	8,560,310	$77.18
Missouri	$405,872,552	5,672,579	$71.55
Alabama	$289,182,545	4,486,508	$64.46
Wisconsin	$332,424,562	5,441,196	$61.09
Vermont	$36,440,741	616,592	$59.10
Louisiana	$262,701,881	4,482,646	$58.60
Texas	$1,208,944,460	21,779,893	$55.51
Indiana	$334,917,123	6,159,068	$54.38
Illinois	$615,111,337	12,600,620	$48.82
Colorado	$210,758,397	4,506,542	$46.77
U.S. AVERAGE	**$243,011,264**	**--**	**$42.22**
New Mexico	$74,322,874	1,855,059	$40.06
North Carolina	$323,910,824	8,320,146	$38.93
Washington	$215,735,666	6,068,996	$35.55
Kentucky	$138,257,414	4,092,891	$33.78
Tennessee	$145,723,277	5,797,289	$25.14
Virginia	$181,928,386	7,293,542	$24.94
Ohio	$281,030,879	11,421,267	$24.61
Utah	$54,303,797	2,316,256	$23.44
Oregon	$80,177,327	3,521,515	$22.77
Michigan	$190,686,443	10,050,446	$18.97
California	$652,065,444	35,116,033	$18.57
South Carolina	$65,358,080	4,107,183	$15.91
Delware	$11,939,110	807,385	$14.79
Arizona	$70,246,362	5,456,453	$12.87
Maine	$13,745,408	1,294,464	$10.62
Pennsylvania	$130,179,384	12,335,091	$10.55
Maryland	$48,952,590	5,458,137	$8.97
New York	$159,377,265	19,157,532	$8.32
Nevada	$11,377,839	2,173,491	$5.23
Florida	$82,880,530	16,713,149	$4.96
West Virginia	$5,695,986	1,801,873	$3.16
New Hampshire	$3,700,562	1,275,056	$2.90
Alaska	$1,783,168	641,482	$2.78
Hawaii	$1,910,909	1,244,898	$1.53
Connecticut	$4,945,795	3,460,503	$1.43
Massachusetts	$6,070,188	6,427,801	$0.94
New Jersey	$6,475,889	8,590,300	$0.75
Rhode Island	$650,992	1,069,725	$0.61
TOTAL	**$12,150,563,187**		

22 states are above average:	Subsidies	$9,187,130,799 (76% of total)
	Population	99,927,533 (34% of total)
	Per-Capita Subsidy	$91.94

Sources: www.ewg.org/farm, www.census.gov.

support for free trade agreements and to pressure other nations to reduce their subsidies and trade barriers. Even if we only reduced subsidies on commodities that compete more directly with farmers in developing worlds (e.g. sugar, cotton, and rice), it would help gain support for developing countries to liberalize their trade rules. Moreover, poor farmers in developing nations would be helped.

Defenders of subsidies argue that it is not just about economics, it is also about preserving a kind of Jeffersonian agrarian tradition that holds that hard-working independent farmers are responsible for democratic political stability, land stewardship, and feeding the public. The reality is that when full-time farmers make up less than 2 percent of the workforce and most farm output is produced by large businesses, it is hard to see how they are the anchors of democratic vitality, much less why we should pay them $20 billion per year.

With regard to prices, it is true that without subsidies, food prices could increase, hitting low-income Americans the hardest. As the least efficient producers leave the market and the remainder become even more efficient, productivity growth is likely to offset the subsidies loss, so that any increase would likely be significantly less than the $20 billion in subsidies. Further, it is becoming clear that subsidized food prices play a role in the growing obesity epidemic in America. This is particularly true because healthy foods like fruits and most vegetables receive no subsidies, while other less-healthy foods, including meat and corn (which is used to make high-fructose corn syrup) are subsidized. Modestly higher food prices that reflect true economic costs would help reduce food consumption, particularly of less healthy foods, and therefore increase Americans' health.

Recommendation 2: Create a New Rural Prosperity Corporation Recommendation

Revitalizing rural economies requires increased resources, but it also requires a national organization with the flexibility to carry out the mission of rural development. Currently, a number of agencies fund rural development efforts, and none, including the U.S. Department of Agriculture, has made rural development a key priority. As a large bureaucratic agency, the USDA lacks the flexibility and entrepreneurial drive needed to manage an effective program. As a result, Congress should create a new Rural Prosperity Corporation (RPC).[49] It would be governed by a board of directors appointed by the president and Congress, and comprised of business and labor leaders, state and local elected officials, and rural development experts.

The RPC Corporation could be funded by transferring funding from ineffective existing rural development programs in federal agencies. **Agricultural subsidies would be gradually transferred to the corporation for 10 years, after which RPC funding would be phased down to a sustainable level of approximately $4 billion to $6 billion per year.** The RPC would have three missions:

1) to support research on rural economic growth and evaluation of best practices in rural economic development;

2) to manage a challenge grant program to catalyze and support state rural development efforts; and

3) to fund research in technologies likely to increase rural economic activity.

▸ Provide States With Rural Development and Performance-Based Challenge Grants

The RPC's major activity would be to make challenge grants to states for rural development efforts. Rather than making grants directly to communities as the federal government currently does, the Corporation would use the states as intermediaries. Sixty percent of the funds would be allocated to states based on formula factors including: 1) overall population; 2) rural population; 3) rural poverty rate; 4) rural unemployment and out-migration rate; 5) the amount of subsidies to farm businesses (in order to limit the funding loss to states now dependent on farm subsidies); and 6) amount of funding states now receive from regional development commissions such as the Appalachian Regional Commission (to hold states harmless from the elimination of these programs).

States would have considerable flexibility in how they use these funds. In order to ensure that state efforts are effective, 40 percent of the funds would be allocated to states based on performance factors, including the amount of financial match the state provides, the growth in the rural-to-metropolitan employment ratio relative to its growth over the last 10 years, and growth in rural per-capita income relative to the national average and to its growth over the last 10 years. These last two factors measure the performance of the state's rural economy relative to other states. To control for the fact that some regions of the nation are growing faster than others, these factors only measure the growth in the share of the state's economy that is rural. In addition, to control for the fact that some rural state economies are doing better than others, it assesses progress compared to growth in the last decade.

To be eligible for federal funding, states would have to provide at least $1 in matching funds for every $3 in federal funding, and would need to bring together key parties to craft a statewide balanced growth strategy that explicitly lays out a path to boost growth in lagging regions, with a particular emphasis on growth poles (as discussed below).

In order to be successful partners, states must transform their approach to development. To facilitate this, the RPC should encourage states to target growth centers, co-fund New Economy business development strategies, and support deployment of advanced telecommunications infrastructures.

Target Growth Centers

It is not enough to invest more money and leverage state actions if resources are either spread widely across rural communities or targeted to the "worst first." To maximize results, federal assistance needs to be focused on communities with the best chance of achieving self-sustaining growth and employing the most rural residents.

The need for targeting would be a moot point if developing critical mass—what economists call agglomeration economies—did not matter. However, the advantages firms get from locating in areas where there is a concentration of resources—whether it is the frequent flights a good airport provides,[50] a highly skilled workforce, availability of a high-speed telecommunications network, or clusters of firms in similar industries that share common resources—matter even more now when determining the location of economic activity. Places too small or remote will find it difficult to develop the critical mass needed to succeed since infrastructure providers such as airlines and telecommunications companies do not serve areas too small to be economical. Companies employing skilled knowledge workers are unlikely to locate in a place without a pool of available trained workers. Conversely, in a more volatile economy, knowledge workers are less likely to move to places with only one or two possible employers.

Critical mass is not confined to large and mid-sized metro areas. Small metros and even large towns can reach critical mass if they have amenities and adequate infrastructure to attract knowledge workers especially high-speed telecommunications connections. To see this in practice, it is useful to look at one region, southern Utah. A place like Cedar City, Utah, a small city of about 35,000 located on I-85 approximately five-hours south of Salt Lake City, is poised to be a magnet of growth. With a state college, a Shakespeare festival, and a stunningly beautiful natural environment, Cedar City would be an ideal growth center for southern Utah. It is big enough that a software company from California might want to move there and be reasonably confident it could attract the kinds of workers it needs. But it is small enough that it is hard to imagine it suffering from congestion or high housing prices. It would be much more difficult for a smaller town in southern Utah, far away from the Interstate and lacking quality of life, to be a magnet for growth. In the New Economy, agglomeration economies are becoming more important, and small, geographically isolated rural areas with a poor quality of life and few amenities will find it difficult to prosper no matter how much funding they get.

As a result, **in order to effectively create the most jobs in rural areas, efforts should be targeted to a smaller number of centers with the potential to be the regional anchors for growth that surrounding rural residents can commute to for employment.**[51]

This suggests that states should target growth pole regions with populations from 20,000 to 100,000 (the relevant population would include the entire county or labor market, not just the largest city in the region). Targeting smaller places will make it difficult to build critical mass. Targeting larger places will make it difficult to reach towns geographically dispersed enough to provide commuting opportunities for a large share of rural residents.

As a result, the RPC should make grants contingent upon the states identifying growth poles and targeting federal and matching state investments to those areas. Governors should bring together key parties to craft a statewide balanced growth strategy. As part of this effort, states should provide regional planning grants to sub-state regions that are working to select growth poles for targeted development. Once growth poles are identified, states should focus the federal and matching state funds on these designated areas. Growth poles do not have be one city, but could be broader regions of several contiguous towns, as long as they agree to work together, possibly including the development of unified management of schools, public infrastructure, and economic development planning.

Some regional economists have questioned the efficacy of growth pole strategies, claiming that growth poles are just as likely to centralize employment and population, drawing it in from the surrounding countryside.[52] This is because in the 1960s, the original growth center proponents argued for focusing on centers that were quite large—cities with as many as 750,000 people.[53] The interest in such a theory led Congress in the late 1960s and early 1970s[54] to charge the Appalachian Regional Commission, "to concentrate its investments in areas with a significant potential for future growth where the return on public dollars invested will be the greatest."[55]

As the program focused on larger cities (for example, Pittsburgh was made eligible for assistance), it did little to help rural residents. However, selecting a larger number of smaller poles will not only lead to more growth in the growth poles, but will lead to more growth in the surrounding regions as rural residents commute to work in growth centers.[56]

Finally, some may argue that a growth pole strategy will leave too many places behind. While it certainly sounds more equitable to target resources to the most disadvantaged communities, the reality is that a number of these communities are unlikely to grow much even if they receive assistance. The focus should be on helping rural residents live and work in rural areas, not on helping every community. A more diffused strategy is likely to produce less growth in rural areas. In contrast, if the right growth poles are targeted, many rural workers would be helped as they could commute to work in the growth pole from surrounding small towns and rural areas. With the widespread construction of limited access freeways, rural residents in many areas can commute as far as 35 miles to 50 miles in less time than it takes many metro residents to commute 10 miles. Currently, 283 of 2,270 rural counties have more than 40 percent of their workforce commuting from other counties.[57] These kinds of places already serve as growth poles and could employ even more people if economic development support were aimed there. If the goal is to boost the self-sustaining economic growth potential of rural areas to provide the largest number of rural residents economic opportunity, focusing on growth poles is the best strategy.

▸ Co-fund New Economy Business Development Strategies

For rural America to prosper, it will have to generate and grow new businesses, ideally with higher value-added than the existing businesses. To do this, **rural areas need approaches to economic development that stress new success factors, including workers' skills, advanced telecommunications infrastructure, entrepreneurial energy, and technology transfer.**[58] The RPC should help states co-fund these New Economy business development strategies.

First, there are several kinds of strategies that can play a key role. Boosting entrepreneurial activity is important. Access to early stage and smaller scale (e.g., less than $1 million) equity capital is especially important for building entrepreneurial growth-oriented businesses in rural areas. There are some efforts to do this around the nation. Prior to becoming Virginia's

governor, Mark Warner helped create seed capital funds in areas of the state such as Hampton Roads, Charlottesville, and Roanoke. A number of state-funded venture capital programs focus at least in part on non-metro areas. These include the Minnesota Technology Corporation Investment Fund, the Iowa Product Development Corporation, the Kentucky Rural Innovation Fund, and the Small Enterprise Growth Fund of Maine.[59]

But business assistance programs are also important. Some places have adopted innovative entrepreneurial development programs.[60] Others have established small business incubators to assist start-up companies.

Second, programs can help rural regions develop economic activities that add value to agricultural products within the region. For example, Cabot Cheese in Vermont is a co-operative of dairy farmers that uses the milk they produce to make cheese products locally. The Dakota Growers Pasta Company is owned by 1,157 durum wheat producers in North Dakota, Minnesota, and Montana. The co-op not only enables wheat growers to receive higher prices for their wheat, it has also created 300 jobs in the pasta company.

A number of states have value-added programs. Kansas State University runs a technical-assistance program to help agricultural co-ops develop value-added food processes. South Dakota's Value Added Agriculture fund supports feasibility and marketing research for agricultural processing projects. New Valley Connections, a public-private partnership in California's San Joaquin Valley, is implementing a cluster-based economic development strategy for the region's agri-businesses that focuses on making the San Joaquin Valley a center of research and agricultural R&D for new products.[61] The Appalachian Center for Economic Networks has helped support a specialty foods cluster in southeastern Ohio. At the federal level, Congress recently created a $250 million Value-Added Agricultural Grants program to establish new value-added and high-value marketing initiatives, and co-operatives that strengthen small and mid-size farms and increase the rural share of food system profit.

Congress should also change laws governing agricultural co-operatives that now, by law, are prohibited from raising funds in the private capital markets. Co-operatives in other nations, such as Ireland, currently do so. Allowing co-ops to tap new capital in equities markets would enable them to more easily get the financing needed to expand.

New rural development efforts should not be limited to agri-businesses. States can establish programs to help industries located principally in non-metro areas become more competitive. In many cases, this means helping rural manufacturers develop new products and adopt new production processes. A number of state programs do this. For example, Oregon helped fund and organize a private sector-led Oregon Wood Products Corporation to help largely rural wood companies develop new products and cut costs. In particular, programs can target industry clusters—groups of companies in the same or similar industries. Research suggests that firms in many industries are more competitive if they are located near similar firms. Moreover, clusters have been shown to lead to higher wages for workers in the industries.[62] There are a number of successful cluster efforts. The Vermont Sustainable Jobs Fund helps form small business networks. One such network was the Vermont Quality Meats Cooperative, a 46-member co-op to produce, market, sell, and transport meat directly to restaurants.[63]

In North Carolina, the Catawba County Hosiery Technology Center helps rural hosiery firms become more competitive through the adoption of new business practices. Other networks include carpet manufacturing (Dalton, Georgia), woodcrafts (north-central Minnesota) and software (Fairfield, Iowa).[64] While networks are often harder to operate in these areas since it is hard to recruit enough members, they may provide more value in rural areas because they can help overcome some of the information deficiencies rural areas have compared to metro ones.[65] In addition, more effort should be made to help rural industries develop e-commerce capabilities. Senator Jeff Bingaman (D-N.M.) sought $60 million for a rural e-commerce initiative to help expand e-commerce by farmers, ranchers, and other small businesses in rural areas. The new RPC should work with the

National Institute of Standards and Technology's Manufacturing Extension Partnership program to help fund additional rural manufacturing extension efforts.

Facilitate Access to High-Speed Telecommunications

Access to high-speed "broadband" telecommunications is critical if a region wants to grow and attract a wide variety of businesses. **While advanced telecommunication services are not the single factor required for growth, they are necessary.** However, because the demand for broadband is most heavily concentrated in larger and mid-sized metropolitan areas, many telecommunications companies have rightly focused most of their initial investment there. For some rural areas, low demand combined with higher costs means that companies often cannot make an adequate return on the investment.

As a result, the RPC should work with states to help them make concerted efforts ensuring most regions have high-speed broadband connections, particularly businesses in designated growth poles. Business access is particularly crucial—while residents can increasingly gain adequate two-way access through satellite connections, most businesses need more robust wire-line connectivity.

States can do several things to help facilitate the rollout of broadband, including reducing rights-of-way charges and the taxes they levy on providers. The Michigan Senate has passed legislation that preempts local authorities over rights-of-way for telecommunications use and reduces the fees that can be charged for access, while giving telecom providers tax credits for rights-of-way fees.[66] States should reduce the fees charged to private companies that lay fiber along public right-of-ways, as long as the fiber is being used to reach under-served rural areas.

States can also fund regional efforts to aggregate demand for broadband. One reason why telecom providers have been slow to extend broadband to more rural communities is that the costs are higher and the revenues are lower. When aggregated from government, education, and large business users, broadband demand in many rural areas can make investments pay off. As a result, a number of regions have developed initiatives to form broadband buying co-ops that invite telecom providers to bid for their business and extend affordable broadband to their area. For example, New Hampshire formed public-private partnerships to create the Monadnock and North Country "Connects," giving businesses in rural parts of the state access to high-speed telecommunications at reasonable prices. New Hampshire modeled the initiative after Berkshire Connect, which expanded affordable telecom services in Western Massachusetts. The Massachusetts Technology Collaborative created an affinity group of business and government Internet users, and since early 2000 Berkshire Connect has provided high-speed Internet and data services to its members through a new regional network of private vendors selected by a competitive proposal process.[67] Governments can also take more direct steps to enable demand aggregation strategies.

Too often local governments have their own dedicated telecommunications networks. But this is akin to a government building a highway in a rural area and not letting anyone else use it. When governments do this, they end up reducing the overall telecom demand in a region that could be pooled in a demand aggregation strategy. To prevent this, government tenants should be the anchor in rural broadband networks.

Finally, **another way to gain access to high-speed telecommunications is to help rural areas access an interstate fiber backbone** (e.g., the "pipes" that transport data across long distances). Even though a number of telecommunications providers have extensive fiber backbone systems that traverse the nation, access to these, also known as "points of presence," tend to be concentrated in metro areas. Enabling rural regions to access these networks to create local points of presence would lower the costs of telecom access for them.

Support R&D for Rural-Focused Technologies

Technological innovation can not only help increase the competitiveness of industries that tend to locate in rural areas, but also help generate new market demands for farm and

forestry products as well as other products that are produced in rural locations. A case in point is the growing wind energy industry. Virtually all wind turbine placements will be in rural areas, leading to new economic opportunities not just in income gained from leases, but also from the employment generated by constructing and maintaining the turbines and transmission lines. States are now beginning to target this sector; for example, South Dakota has developed a program to boost wind energy production in the southwest corner of the state.

There are a host of technologies that support rural-oriented production. For instance, biotechnology can significantly boost agricultural productivity, leading to even fewer farm jobs, while also opening up a new range of products including new foods, medicines, and crops for industrial uses, including energy. What some call the "New Agriculture" could let more farmers produce specialized products instead of commodity products with lower margins. Biotech could produce "nutriceutical" products that enhance nutrition or even produce medical benefits. It can lead to faster growing trees with higher yields, lowering the price of wood and increasing its demand. It can also boost the supply of cost-efficient industrial crops. For example, through genetic engineering, Dupont has been able to produce a corn-based polyester that has the look and feel of cotton. Energy crops could provide increased economic development opportunities for rural America. Ethanol is currently produced from corn, and most processing facilities are located in the Midwestern Corn Belt. Because it is costly to produce, much of the market is driven by federal subsidies. However, biotechnology could enable ethanol to be produced cost effectively from other biomass, such as grasses, plant waste, and fast-growing trees, enabling farmers to produce and sell more crops and attracting more processing plants to rural areas.

There are significant regulatory issues that will affect the extent to which biotechnology can be a boon to rural economies. For example, the Biotechnology Industry Association has proposed that engineered crops be sequestered to areas where food crops are not grown. This, however, would disqualify much of the Midwest farm belt, and prevent farmers in food crop areas from growing far more profitable pharmaceutical crops.

Congress has funded rural technology R&D programs in the past. However, the Alternative Agricultural Research and Commercialization Center Program has been underfunded (less then $10 million per year), poorly managed, focused on too narrow a mission (developing non-food, non-feed products from agricultural commodities), and reflects the old view that agriculture was synonymous with rural.

As a result, the RPC should fund a rural technology R&D program. This should take two forms. First, in partnership with the National Science Foundation (NSF) they should create a network of natural resource research centers. Through a competitive, peer-reviewed process, RPC and NSF would fund up to 20 industry-university research centers focused on technologies that would support rural-based economic activity. To spur more direct company investments in such generic technologies, RPC should also partner with the National Institute of Technology's Advanced Technology Program to fund cost-shared, company-based R&D projects.

Recommendation 3: Decentralize Government Facilities and Employment Away from High-Cost Metropolitan Areas to Rural Growth Poles

While most of what governments can do to influence rural growth patterns depends on indirect actions—for example, boosting skills of rural workers—governments do have direct control over the location of government jobs. The federal government and all 50 state governments employ 16 percent of the workforce. These jobs can play an important role in rural economic development. As a result, federal and state governments need to begin relocating government facilities that do not need to be in expensive metro areas to designated growth poles.

Not all government facilities can be likely candidates for relocation. Facilities that serve customers through face-to-face transactions need to be where customers are, and other functions like regional and national headquarters need to be in larger metro areas. However, many government jobs are located in crowded, expensive metropolitan areas, even when there

is no compelling business reason for them to be there. For example, the seven Social Security Administration claims processing centers are all located in large metro areas: New York, Philadelphia, Birmingham, Chicago, San Francisco Bay Area, Kansas City, and Baltimore. Likewise, SSA's 36 teleservice centers are also located in major metro areas. These kinds of routine "back office" government functions can be relocated to rural growth poles, allowing governments to cut costs while maintaining the same level and quality of service.

Other nations are using the location of government facilities as a conscious rural development strategy. For example, in 2001 the Finnish government issued a directive that any new governmental units must be located outside Helsinki in any of 30 to 40 designated growth poles. If an agency cannot do this when a new unit is created, they must designate an offsetting number of existing workers to relocate. While the U.S. government has attempted to do this in the past, the efforts have been ad hoc, stimulated by elected officials seeking to bring jobs to their state. A decade ago, when West Virginia Senator Robert Byrd used his seniority to move some federal facilities, including the FBI fingerprint facility, out of Washington, D.C., to less-densely populated West Virginia, he was criticized by many. However, moving jobs out of the high-cost D.C. area was good policy for West Virginia, the District of Columbia, and the nation.

One reason why governments have not used government facility location more as a regional development tool is that government personnel policies limit wage differentials according to the location of work, reducing the savings to government from moving to low-cost locations. While the U.S. Office of Personnel Management (OPM) does manage a locality pay system in which federal employees in high-cost areas receive higher salaries than in other areas, the difference in pay is quite small, about 10 percent between the highest and lowest paying areas. It is even lower for some areas. For example, a GS11, step 1 employee in Washington, D.C., is paid only 3 percent more than her counterpart in a small town like Tattnall County, Georgia. However, non-government pay in Washington, D.C., is 60 percent higher than in Tattnall County. Given that annual salary increases in high-cost places went up by an average of only one-half of 1 percent (approximately 4.5 percent, compared to 4.03 percent), under current policies, the pay differences are not likely to widen anytime soon.[68]

As a result, governments should restructure public employee contracts so that government workers located in larger metros with a higher cost of living are paid significantly more than workers with equivalent jobs in less costly areas. **The Bush administration should commit to increasing federal pay in high-cost areas by twice as much annually than lower-cost areas until the interregional pay differences for government workers reflect civilian job pay differences.**[69] While this would not increase rural incomes in the short run, in the moderate- to long-run it would provide a much stronger incentive for the federal government to shift work out of high-cost metros to lower-cost small metros and rural areas.

The federal government and state governments should develop strategic plans to relocate government facilities that do not need to be in crowded metro areas to smaller cities and rural areas. In addition, when the federal government is making decisions to close certain facilities, such as military bases, one of the deciding factors should be whether the facility is in a large, high-cost metropolitan area.

Conclusion

As we enter the 21st century, it is time to recognize that the economic well-being of rural America is no longer synonymous with the well being of agriculture. If rural America is to prosper, it must develop new industries with sustainable competitive advantages. To help rural communities do that, Congress needs to gradually shift federal rural policies from subsidizing crops to working with states to support rural economic development of all types.

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Endnotes

[1] A recent survey by the University of Maryland's Program on International Policy Attitudes (*http://www.pipa.org/*) found that only 34 percent of respondents favored giving small farmers regular annual subsidies, and just 9 percent favored giving them to large farming businesses; support did not differ significantly in more farm-dependent states.

[2] This would not be the first time that policymakers have begun to pay attention to the spatial distribution of jobs and people. In the early 1970s there was a growing interest in the issue of balanced growth. The leadership for such an effort came from the Nixon White House. Under chief of staff John Erlichman, the administration drew up plans for a national strategy to increase populations in smaller towns and rural areas, including "new towns" in order to cope with the increased congestion in the nation's largest metropolitan areas. But Watergate soon distracted them, and the efforts lay fallow since then.

[3] Glickman, Dan and Greg Frazier, "The 2002 Farm Policy Fight," Blueprint, May 9, 2002, *http://www.ndol.org*.

[4] A recent Gallup poll asking Americans where they would prefer to live found that 24 percent wanted to live on a farm or rural area, with an additional 36 percent preferring small town life.

[5] The U.S. Office of Personnel Management (OMB) defines metro areas as core counties with one or more central cities of at least 50,000 residents or 100,000 people in total, and the fringe counties that are economically tied to the core counties. Non-metro counties are outside of the boundaries of metro areas and have cities of less than 50,000 people.

[6] Stauber, Karl N., *Why Invest in Rural America—And How? A Critical Public Policy Question for the 21st Century*, Federal Reserve Bank of Kansas City, October 2001, p. 17.

[7] In fact, many are likely to be reclassified as metro counties based on the 2010 Census.

[8] Gale, Fred and David McGranahan, "Latest Trends in Nonmetro Jobs and Earnings: Nonmetro Areas Fall Behind in the New Economy," *Rural America*, vol. 16, no. 1, May 2001, p. 5.

[9] Stauber, *op. cit.,* p. 10.

[10] Cowen, Tadlock, "The Changing Structure of Agriculture and Rural America: Emerging Opportunities and Challenges," Congressional Research Service, October 30, 2001.

[11] Sheaff, Katharine, "The 2000 Census and Growth Patterns in Rural America," *The Main Street Economist*, October 2001.

[12] Atkinson, Robert D. and Randolph H. Court, "The New Economy Index: Understanding America's Economic Transformation," Progressive Policy Institute, 1998, *http://www.ppionline.org.*

[13] Browne, William P., *The Failure of National Rural Policy*, Georgetown University Press, 2001, p. 8.

[14] Using "shift-share" analysis, non-metro counties (Beale codes 4-9) as well as counties in small metro areas (Beale code 3) all experienced modest positive competitive share components for manufacturing, but very large industrial mix components as manufacturing jobs declined nationally. The competitive share components for large metro areas accounted for about a 5 percent loss of their manufacturing base, in contrast to about a 5 percent gain for the other areas.

[15] Gale and McGranahan, *op. cit*.

[16] *Ibid*.

[17] Using shift-share analysis, small counties not adjacent to metro areas (Beale codes 5,7,9) had a competitive share component of –38,000, or almost 2 percent of total service jobs.

[18] *http://www.kc.frb.org/RuralCenter/mainstreet/MSE_0803.pdf.*

[19] Rural areas did gain employment and income share in federal government jobs, but largely because federal salaries differ much less between high-cost metro areas and lower-cost rural areas.

[20] Beaulie, Lionel J., Barfield, Melissa A., and Katherine L. Stone, "Educated Workforce, Quality Jobs: Still Elusive Goals in the Rural South," *Rural America*, vol. 15. no. 4, February 2001.

[21] Keeton, William R., "Commentary on the Rural Economy," *The Main Street Economist,* November 2001, p.2.

[22] Feser, Edward and Harvey Goldstein, "Regional Technology Assets and Opportunities: The Geographic Clustering of High-Tech Industry, Science and Innovation in Appalachia," Appalachian Regional Commission, August 2002.

[23] Atkinson, Robert D., "Social Policy in a Competitive Marketplace," *Progressive Policy Institute*, January 2001, *http://www.ppionline.org*.

[24] Ham, Shane and Robert D. Atkinson, "Opening the Mail: A Postal System for the New Economy," *Progressive Policy Institute*, November 2001, *http://www.ppinonline.org*.

[25] Monke, James and Ron Durst, "Numerous Changes Lower Income and Estate Taxes," *Rural America*, vol. 17, no. 2, Summer 2002.
[26] Congressional Budget Office, "An Analysis of the President's Budgetary Proposals For Fiscal Year 2004," 2003.
[27] *http://www.kc.frb.org/RuralCenter/mainstreet/MSE_0303.pdf.*
[28] The Office of Technology Assessment, *The Technological Reshaping of Metropolitan America,* Government Printing Office, 1995, *http://www.wws.princeton.edu/cgi-bin/byteserv.prl/~ota/disk1/1995/9508/950805.PDF*.
[29] See forthcoming PPI report about offshoring IT-enabled services.
[30] Surprisingly, these preferences have changed little in the last 60 years. A Gallup poll conducted in 1937 found that 30 percent wanted to live on a farm while 28 percent of Americans wanted to live in a small town.
[31] Statistical Abstract of the United States, U.S. Census Bureau, 2002, p. 14.
[32] U.S. Census Bureau, *American Housing Survey for the United States,* 2001.
[33] Johnson, James H. and John D. Kasarda, "9-11 and the Economic Prospects of Major U.S. Cities," *Planning and Markets,* vol. 6, no. 1, September 2003, *http://www-pam.usc.edu/.*
[34] Stauber, *op. cit*.
[35] *http://www.ewg.org/farm* (per-capita calculations using U.S. Census Bureau data).
[36] Drabenstott, Mark and Katharine Sheaff, "The New Power of Regions: A Policy Focus for Rural America," *Main Street Economist*, June 2002.
[37] Environmental Working Group, http://www.ewg.org/farm/region.php?fips=0000038. Chad Wilkerson, "Trends in Rural Manufacturing," *The Main Street Economist,* December 2001.
[38] Wilkerson, Chad, "Trends in Rural Manufacturing," *The Main Street Economist,* December 2001.
[39] Cowan, Tadlock, "Agriculture Policy and Farm Briefing Book," *Congressional Research Service*, *http://www/cnie.org/nle/cr.*
[40] Ugandan President Yoweri Museveni observes that dairy farmers in his country can produce 800 million liters of milk each year, while Ugandans drink about 22 million liters. The rest could go to serve markets worldwide, but the $11 billion handed out to American and European dairy farmers each year make this a pipe dream. "The only well organized and big markets," he says, "are the ones in Europe, the United States of America, Japan, India, China, etc. It is these that have been closed to African products ... By blocking value-added products, our partners in the world kill the following opportunities: ability to earn more foreign currency, employment, enhancing the purchasing power of the population, expanding the tax base for the governments of Africa and the chance to transform African societies from the backward, pre-industrial states—in which they are now—to modern ones by building a middle class and a skilled working class." Uganda's case is only one small example of a worldwide phenomenon: subsidies paid to rich farmers in rich countries make it impossible for poor farmers in poor countries to succeed.
[41] For example, some rural members of Congress wanted to tie airline loans packages made after 9-11 to commitments to serve rural towns.
[42] An Office of Technology Assessment report on rural telecommunications argued that the if rural development funds were allocated to the states, the federal government should be sure states fund small, very isolated communities. Likewise, 26 of the 48 rural enterprise communities designated by the federal government have a population of less than 20,000.
[43] The 1996 Farm Bill, Title VII, Sec. 761, amended the Consolidated Farm and Rural Development Act (7 U.S.C. 1921 et seq.) so that states currently receiving large farm subsidies would continue to get more than their "fair share" of federal funding.
[44] For a discussion of this issue as it stood in the early 1990s, see Sears, David W., Redman, John M., Gardner, Richard L. and Stephen J. Adams, *Gearing up for Success: Organizing a State for Rural Development*, The Aspen Institute, 1992.
[45] One exception is Georgia. Its OneGeorgia Authority (*http://www.onegeorgia.org*) oversees economic development aimed at lagging parts of the state. Nearly $1.5 million in grants from the OneGeorgia Authority will go toward specific initiatives promoting technology-based economic development in Georgia. The awards are part of almost $7.5 million in grants and loans being awarded to 16 of the state's most economically distressed communities. Among the $1.5 million awarded was a $499,910 grant to the Georgia Medical Center Authority for the development of a 14,820-square-foot Life Sciences Incubator. Located in one of Georgia's premier medical research zones and partnering with the Medical College of Georgia, the incubator is expected to create up to 75 jobs within five years by spinning off entrepreneurial start-up medical companies to Tier 1 and Tier 2 counties located in this economically depressed region. Additional grants of $500,000 and $499,243 were made to other regions for the construction of two technology centers. The centers will nurture start-up technology companies with high growth potential. All of the awards were made possible through Georgia's Equity Program, which helps communities and regions build the necessary infrastructure for adding Subtitle E-Rural Community Advancement Programs. The act directs that "In carrying out this subtitle within a State, the Secretary shall give priority to communities with the smallest populations and lowest per capita income."
[46] Rowley, Thomas D., "Administration is All Ears," *Rural Policy Research Institute*, January 14, 2003, *http://www.rupri.org/articles/011403.html.*
[47] Rural Development Act of 1972: *http://www.reeusda.gov/1700/legis/ruraldev.htm.*
[48] Darwall, Rupert, "Market Reform: Lessons From New Zealand," *Policy Review*, April and May 2003, pp. 61-72.
[49] Congress took one step in this direction in last year's farm bill when it created the Regional Strategic Investment Program and called for creation of a National Board on Rural America to oversee the program. However, the board is within USDA and ultimately the program will be managed by USDA. Project awards are given through three competitive rounds annually and are capped at $500,000.

[50] In 1996, 84 percent of rural businesses were located in commuting zones without hub airports. As more airlines reduce their dependence on hubs and spoke systems and fly more point-to-point flights, airports in growth poles could have a greater opportunity to increase more affordable and frequent flight access.
[51] Market forces are already leading in this direction. The share of employment located in the largest 61 metropolitan areas actually declined by 1.5 percent between 1988 and 1997, from 55.1 percent to 54.3 percent. In contrast, the share of jobs in mid-sized metro areas (between 250,000 and 1 million people) increased by 4 percent, and the share in small metros (between 50,000 and 250,00) increased by 7 percent. (Source: *The Metropolitan New Economy Index,* Progressive Policy Institute and Case Western Reserve University, April, 2001, *http://www.neweconomyindex.org*.)
[52] The early literature on growth poles was concerned with the transport of physical goods. The new concentration on clusters focuses more on the sharing of information and the resultant boost to innovation.
[53] Henry, Mark S., and David L. Barkley, "The Hinterland's Stake in Metropolitan Growth: Evidence from Selected Southern Regions," *Journal of Regional Science*, vol. 37, no. 3, 1997, pp. 479-501. In hindsight, it is surprising how wrong the growth center theorists were in proposing to target resources on larger metropolitan areas. While such areas clearly were more likely to grow faster than smaller towns, they also largely did not need help from the government. Such growth would do little to help rural areas unless they were located close enough to let their workers commute to jobs there. Perhaps this is because the old growth center strategy was based on the often mistaken notion that growth in metro areas would spread out to the hinterland, instead of on the more limited notion that growth would provide commuting opportunities for residents in surrounding areas.
[54] The congressionally created Commission on Population Growth and the American Future proposed "To promote the expansion of job opportunities in urban places located within or near declining areas and having a demonstrated potential for future growth, the Commission recommends the development of a growth center strategy." *http://www.populationsecurity.org/rockefeller/001_population_growth_and_the_american_future.htm#Letter%20of%20Transmittal*.
[55] U.S. Congress, Appalachian Regional Development Act (Public Law 94-188), Washington, DC; GP0, 1965. Cited in "From Theory to Implementation: An Analysis of the Appalachian Regional Commission's Growth Center Policy," Lawrence E. Wood, unpublished manuscript.
[56] At least one study finds that hinterland employment growth is fastest near small urban areas, compared to large ones.
[57] Browne, William, *op. cit*., p. 16.
[58] Sears, David W. and J. Norman Reid, *Rural Development Strategies*, Nelson-Hall Publishers, 1995.
[59] Barkley, David L. and Deborah M. Markley, "Nontraditional Sources of Venture Capital for Rural America," *Rural America*, May 2001, vol. 16, no. 1, p. 21.
[60] *http://www.sirolli.com/.*
[61] U.S. Department of Agriculture, Office of the Inspector General, report no. 37099-1-FM, *http://216.239.33.100/search?q=cache:Xfi4Rtw0M6YC:www.usda.gov/oig/rptsauditsaarc.htm+alternative+agricultural+research+and+commercialization+&hl=en&lr=lang_en&ie=UTF.*
[62] Gibbs, Robert M., and G. Andrew Bernat, Jr. find that clustering raises earnings 13 percent in rural industries: "Rural Industry Clusters Raise Local Earnings," *Rural Development Perspectives*, vol. 12, no. 3.
[63] Rosenfeld, Stuart, "Networks and Clusters: The Yin and Yang of Rural Development," Federal Reserve Bank of Kansas, proceedings from the Center for Rural Policy National Conference, *http://www.kc.frb.org/Publicat/Exploring/RC01Rose.pdf.*
[64] National Governors Association, *Innovative State Policy to Promote Rural Economic Development,* February 2003.
[65] Munnich, Lee, Schrock, Greg and Karen Cook, "Rural Knowledge Clusters, The Challenge of Rural Economic Prosperity," *U.S. Economic Development Administration*, 2002.
[66] Rights-of-way charges are those charges levied by governments owning land through which utilities (in this case telecom companies) lay telecom lines. TechNet, "The State Broadband Index," *http://www.technet.org/press/Press_Releases/?newsReleaseId=2527*.
[67] *http://www.bconnect.org/.*
[68] One reason for the differences between federal salaries in low-cost rural places and high-cost metro areas is because the federal government does not measure costs in rural places. The Bureau of Labor Statistics, which collects data for OPM, surveys a sample of non-metropolitan counties and a sample of metropolitan areas and combines the data for the "Rest of U.S." locality pay area. However, it is weighted to represent employment in each survey area, and as a result, jobs in small and mid-sized cities predominantly make up the score. The problem is that some mid-sized cities, such as Austin and Raleigh, are assigned labor costs that are too low, while many smaller places are assigned labor costs that are too high. The Federal Salary Council plans to revisit the methodology later this year.
[69] In addition, the "Rest of U.S." locality pay system should be expanded significantly so that all metro areas of more than 500,000 people are assessed separately.