Regional Economies in Transition
The Role of the Land Grant University in Economic Development

Presented for discussion by

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Executive Summary

People and places are undergoing great change. An aging baby-boomer generation and demographic shifts on the rural landscape, in suburbs and metropolitan areas necessitate a new vision for citizens and communities that encompasses healthy people, healthy environments and healthy economies.

Land grant institutions are about people, human capital. The inseparable mission elements of research, education and engagement ensure that land grants will continue to contribute to a well-educated citizenry, a skilled work force and the economic development that stems from research innovation and creative intellect. Land grant institutions must help ensure that the creative wealth that resides in people is reinvested in communities, entrepreneurs and the opportunities that lead to economic growth and quality of life.

The Morrill Act of 1862, which established the land grant colleges and universities across the United States, was a timely and effective economic development strategy for its day. The donation of lands for these institutions democratized education and transformed educational opportunities for individuals into prosperity for communities, states and the nation.

Land grant institutions today can and should help communities and states reinvent their futures, through research, life-long learning and partnerships. Land grant institutions can:

- Make regional competitiveness a goal of partnerships with communities and states, aligning research and programs accordingly;
- Design new interdisciplinary efforts that ultimately help regions – and clusters of communities – seize innovations and grow entrepreneurs; and
- Enhance delivery systems that bring programs and information to regions.

Some of the most significant change, for example, is occurring in rural areas, where the traditions of families and communities are rooted in agriculture. However, with the shrinking percentage of individuals engaged in farming and the growing need for other sources of income, rural communities are searching for new pathways to vitality. Such change cascades through multiple organizations and institutional relationships.
To successfully help others manage change across communities and regions, the land grant institutions must reinvent their futures, too. While other entities at the local and national level can assist communities with infrastructure and financing, the land grants can support new potentials through a focus on human capital. The needs and opportunities in communities are broad based and interrelated. They include health care, early childhood development, K-12 education, higher education, lifelong learning, entrepreneurship, applications of new technologies, workforce development and support for small businesses. Land grants can best respond through their interdisciplinary strengths. They can best serve citizens, their states and the broader society through the integration of research and education that addresses the issues of today and tomorrow.
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The land grant universities of the United States are about the future. They help to develop a well-educated, active citizenry that will participate in the local, national and international decisions of tomorrow. They prepare individuals to be leaders in a range of disciplines that will address the next set of social, scientific, technological and policy challenges in innovative and interdisciplinary ways. They generate the knowledge that spawns new intellectual contributions and fuels the economy.

Land grant institutions must continuously reassess their abilities to serve the future. As English novelist and playwright John Galsworthy (1928) said, “If you don’t think about the future, you can’t have one.” Lessons from the recent past and a scan of the years ahead tell us with certainty what the future holds – nothing but change.

It is imperative that land grant institutions evolve to support the change that must occur in their respective states to ensure the health of citizens, the health of the environment and the health of the economy. Increasingly, economists and policy makers see that success among regional economies across the land will translate as success for the national economy.

The country’s land grant institutions have shaped economic development and educational opportunity for citizens since the mid-1800s. To better appreciate the dynamic public mission of these institutions today, it is instructive to review the history of the federal land grant and related legislation and to acknowledge the future challenges of a rapidly changing global economy.

Reviewing Land Grant History

Although the Morrill Act is one of the most important educational bills passed by any Congress, its purpose and history are often misunderstood. To truly understand the purpose and intended effect of the Morrill Act, the Act must be placed in a historical context. The Act was passed at a time when the United States was divided and at war. In addition, and perhaps just as importantly, the delivery of higher education was then based on a European model adopted by colleges such as Trinity (now Duke), Harvard and Yale. These institutions generally served as finishing schools for the upper-class elite in American society. That education methodology imparted little practical knowledge to students. Both the war and the lack of access to meaningful education beyond grade school served as the primary impetus to the support and passage of the initial Morrill Act.

Morrill Act of 1862. The initial Morrill Act was passed and signed into law by President Lincoln in 1862. The Morrill Act provided both the land and part of the funding to establish land grant colleges and universities throughout the United States. The timing of the passage of the act (during the Civil War) is important because the original impetus for
support of the act was to establish colleges where military tactics could be taught and military officers trained for service in the Civil War. In its final iteration, the purpose of the act was stated as follows (emphasis added): “...the endowment support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life” (USC, 1862).

Although there is much debate about the purpose and intended effect of the Morrill Act, there appears to be a consensus that the Morrill Act was meant to democratize educational opportunity by making it available to the masses in a variety of fields and areas including, but not limited to, agriculture and the mechanic arts (engineering). The Morrill Act emphasized liberal education as opposed to classical education in religion, law and medicine, which was common at the time and available only to the upper classes or elite.

More important, the Morrill Act of 1862 and subsequent legislation integrated education, research and engagement into the land grant mission. Interestingly, some argue that at the time leaders in Congress were concerned with economic development and saw the sale of public lands as direct revenue. But with great wisdom, they saw the donation of public lands as a magnificent indirect revenue: when the people are well educated, they will prosper (Key, 1996). When the people prosper, the state and the nation prosper. And the land was given to the states for colleges to educate the people.

**Hatch Act of 1887.** In 1887 the Hatch Act was passed. This act authorized federal funding ($15,000 annually) for an agricultural experiment station in connection with each land grant institution. The act, which created experiment stations at the land grants, has caused much of the confusion over the purpose of the land grants and is the basis from which many argue that the predominant purpose of the land grant institution is agricultural. This conclusion is not historically accurate.

**Morrill Act of 1890.** In 1890 the second Morrill Act was passed. The purpose of this Act was two-fold: first, to increase funding from $15,000 to $25,000 annually per school, and secondly, and consistent with the then recent decision of *Plessy v. Ferguson*, to establish separate (but equal) land-grants for blacks in the South. These institutions came to be known as the “1890 land grants.”

**Smith-Lever Act of 1914.** The legislation authorized extension services, independent of land grants, to “aid in diffusing among the people of the United States useful and practical information on subjects relating to agriculture and home economics, and to encourage the application of same” (USC, 1914). The partners in establishing the extension services were the Department of Agriculture and state agricultural colleges, some of which were land grants. States were required to match the federal funding to produce the revenues needed to support the extension services.
This act, perhaps more than those that came before, tied land grant institutions to an agricultural and outreach mission—at least in rural America. It is clear that the scope of land-grant colleges is much broader than this limited role and that the Smith-Lever Act of 1914 was adopted to add this mission to the existing mission of land grant colleges.

**Refreshing the Land Grant Mission**

In the 52-year span that produced this series of federal legislation, the United States was still young. It relied upon its agrarian base for economic growth and opportunity for the citizenry from coast to coast. With the production of food came the need to educate citizens on the preservation, storage and preparation of food and related farm and household tasks. Nutrition, food safety and management were central to the notion of home economics.

Now, the country has evolved from its initial reliance on the natural resource base to industrialized manufacturing to technological innovation for economic growth and development. The country functions as a knowledge economy— or creative economy (Florida, 2002) – that thrives on not only agriculture, engineering and manufacturing, but also biosciences, social sciences, high technology, artistic and cultural endeavors and innovation in all forms. This core innovation touches the individual and society.

The transformation of the U.S. economy, paired with the untapped potential across the states and the land grant system necessitate a refreshed understanding of the public mission of the land grant institution. The meaning of legislation that highlighted ‘agriculture,’ ‘mechanical arts’ and ‘home economics’ has changed just as the challenges to our society have changed. Challenges involve food and health, environmental quality and renewable energy, biosciences research and its translation to daily life, the enrichment of arts and humanities and the ability to beneficially apply technologies across the range of issues.

The research mission of the land grant university uniquely positions it to address the complex, interdisciplinary issues that challenge the state and the world.

Research is at the core of:

- Quality education and experiential learning for undergraduate students;
- Quality education and preparation of graduate and professional students who pursue studies at a land grant and then stay and contribute to the state economy; and
- Engagement, through direct and intentional research linkages, to create research-based solutions to complex problems. (Engagement with citizens and outreach is being transformed, in part, through the restructuring of Extension Services. Importantly, engagement is also integrated into all aspects of university research and education through its interdisciplinary centers, consortia and special programs.)
And these elements, in turn, assure the continuous flow of human capital that is the essential ingredient of economic development.

The land grant in each state – via its contribution of human capital – is critical infrastructure that:

- Creates and assesses knowledge, translates research innovation and continuously develops and enhances human capital;
- Democratizes education by presenting opportunities for all, across socioeconomic, geographic and demographic ranges;
- Stimulates economic development at the edges of innovation;
- Emphasizes partnerships of all types; and
- Encompasses a broad range of fields and sectors in an integrated, interdisciplinary way to address the current and future challenges to the state and nation.

In sum, the Morrill Acts and related legislation were not restrictive in their historical context. The definitions of words such as agriculture and home economics have changed; the intent of the legislation has not. The language gave broad license to offer the range of educational opportunities that would support the ability of citizens and their endeavors to prosper, ensuring economic growth and quality of life across states and the nation. It was the mission of the land grant university a century ago. It is the mission now and for the future.

Transition: People in the New Paradigm

In the midst of change, it is instructive to discuss the long-standing relationship of the land grant institution with the agricultural sector and rural America. Agriculture has experienced dramatic change and provides an example of how transformations might ultimately occur in a new paradigm.

The signposts of change have been posted periodically over the past 50 years. They have not always, however, been met with understanding and new action by citizens or leaders. There is no choice now but to embrace change – to seize change as an opportunity to innovate on the rural landscape, to take advantage of the inseparable relationships among rural, urban and suburban communities and to take actions toward improving regional economies and the quality of life for citizens. Land grant institutions have unique strengths that can help people and places through change: The historic commitment to the research and educational needs of citizens, a culture that supports the value of public engagement, breadth and research innovation.

Economic development is commonly described as the creation of jobs and wealth, and the improvement of quality of life. A single definition cannot capture the complexities of economic development for a new future. It generally encompasses three major areas, according to the International Economic Development Council (2005): (1) governmental policies that address inflation, employment levels and sustainable growth; (2) services
including infrastructure, such as highway construction; and (3) policies and programs that improve business climate. Land grant institutions must help expand the definition of economic development from the more traditional to include health care, pre-K-12 education, higher education, community leadership, entrepreneurship, design, partnership opportunities, creative financing, translation of research, digital technologies, communications and active citizenship.

In his recent article “A Review of the Federal Role in Regional Economic Development,” Mark Drabenstott (2005) describes the three eras of regional economic development: (1) the industrial recruiting approach of the 1950s to the 1980s, (2) the cost competition approach from the 1980s to the 1990s, and (3) the current regional competitiveness approach. He emphasizes that today’s approach focuses on innovation and entrepreneurship, and concludes, “If innovation is the fuel for the regions to reinvent their economies, higher education is a critical source of that fuel.”

Land grant institutions by their nature and core mission are about people, human capital. They provide the opportunity for personal growth and potential; they also provide the people power to improve quality of life for many and support the public good. These institutions must change to support change. Three areas of opportunity that address regional economic development are detailed below. They include (1) a reorientation from traditional production agriculture to comprehensive programming and the extension of research-based information to communities, (2) a research-based regional approach that emphasizes complementary strengths of communities in a region rather than competition, and (3) an overall focus on human capital as the critical factor for success.

Rural: More than agriculture

Rural America comprises 2,052 counties, contains 75 percent of the nation's land, and is home to 17 percent (49 million) of the U.S. population based on the 2003 federal definitions of nonmetropolitan counties, according to the Economic Research Service (ERS-USDA, 2005).

Many citizens and policymakers believe that rural is agriculture, that rural policy is agricultural policy. Belief is one thing; but the facts have described an entirely different picture over several years. According to calculations based on Bureau of Economic Analysis data reported by Henderson and Weiler (2004), in 1970 agriculture accounted for 15.2 percent of employment in nonmetro counties, but by 2000 agriculture’s share of nonmetro county employment had dropped to only 8.2 percent. Over the same time frame, the service sector’s share of total employment increased from 34.2 percent to 46.0 percent.

Distinctions between urban and rural communities are also blurring as urbanization moves into once rural areas, and the new urban communities are growing rapidly. Henderson and Weiler (2004, p. 2) note that, “More than 500 rural counties have been reclassified as metro counties since 1970. These formerly rural (nonmetro) counties grew 80 percent in
population during from 1970 to 2000, dramatically outpacing the 32 percent growth in already established metro counties.”

Change has resulted from the success of new technologies and equipment, and the increases in agricultural productivity have freed up more labor for nonfarm employment. Communications, transportation, globalization and changes in demographics will continue to revise the rural landscape. Traditional agriculture continues to have a decreasing impact in rural America.
The “New Agriculture”

Agriculture, even with its decreasing impact, will remain an important element on the rural landscape. However, it must be placed in a broad context that not only serves rural economies, but also links closely to the priorities of urban and suburban citizens.

Rural economies in transition can benefit from an expanded definition of a “new agriculture,” one that more accurately addresses current and future needs, interests and goals. It is healthy people, healthy environment and healthy economy. The “new agriculture” is healthy people. It is based upon research that improves nutritional and disease-preventing constituents in horticultural crops; addresses obesity prevention; reduces the incidence of diet-related chronic diseases such as diabetes, heart disease, cancer and stroke; enhances food security and food safety; and informs lifestyle and consumer’ behaviors for healthful living. The “new agriculture” is a healthy environment. It is research that leads to the development of crop plants as new energy sources, assesses the economics and potential for processing facilities adjacent to renewable resources in rural regions and incorporates the ability to manage soil and water quality into profitable renewable energy enterprises in or near rural communities. The “new agriculture” is a healthy economy. It is committed to economic growth. It is based upon research that supports opportunities for rural entrepreneurs and new immigrant families, technology transfer, distance education enhancements, expanded healthcare systems, early childhood emphases and the baseline and ongoing data that creates a clearer picture of options for policy makers that lead to growth and economic development.

More important, the “new agriculture” is not limited to rural regions. It addresses the issues that are important to citizens whether they live in a metropolitan area, the suburbs, regional centers or in sparsely populated rural areas. Despite geography, citizens are attentive to developments that address diet and health, energy resources and costs, and clean air and water, for example. The “new agriculture” provides coherence for a state rather than fragmentation. It leads to research-based enhancements that improve quality of life for citizens while contributing to a healthy state economy.

The “new agriculture” is a sound livelihood and quality of life for citizens and their families. It includes convenient health care services, quality local schools, internet services, non-farm jobs at a living wage and natural and community amenities. This “new agriculture” cannot be distinguished from the regional economy.

Rural: Towns as neighborhoods

Given the dramatic change in regional economies, it is no surprise that rural communities are changing, too. Improved transportation and communications technologies – and the fact that small town dwellers are willing to commute substantial distances to work and shop – have changed the mix of local goods and services that were traditionally available in nearly every town. Some storefronts on main street are now empty, and the visual
impact of boarded windows at the town center alone has sent community members in search of options to save their towns. But the loss of a local business does not necessarily predict the demise of a small town. It is only a signal that the community’s future role in the regional economy is being redefined.

Today’s rural communities should be viewed as spatially separated neighborhoods (Stinson, 1989). They can no longer be separate, economically independent units. Indeed, they may never have been so. The spatially separated neighborhood model stresses the interdependence of groups of communities (perhaps adjacent to a regional center). The model emphasizes the fact that employment, quality pre-K-12 education, retail opportunities and health care services are shared across communities, rather than specific products in each community.

The history of our inner city cousins is useful to remember. The challenge of the suburban mall did not destroy urban neighborhoods. When citizens in urban areas, too, chose to drive rather than walk to stores, banks and schools, the neighborhood did not disappear. It simply evolved.

Urban neighborhoods and their unique identities remained and are valued and enhanced by residents. In a sense, the evolution of small towns in rural areas can be thought of as the urbanization of the countryside. Communities will be different. They can offer amenities; respite, safety and comfort; and valued quality of life. But they will be very different from the rural community of 50 years ago.

The neighborhood analogy emphasizes the most powerful characteristic of any community – its people. A vibrant community will be defined by its active citizens, not by its buildings or businesses.

**Rural: People are primary**

The physical capital in communities and regions traditionally draws the focus of economic developers and elected officials. It is, in fact, the human capital – people who have access to quality education, leadership experiences and team-building skills for active citizenship -- that determines outcomes for healthy communities. A focus on people includes strengthening institutional relationships – partnerships in regions with higher education (two-year, four-year and top-tier research institutions), non-profit organizations that can help leverage opportunities to launch pilot programs, foundations, the business community and state agencies.

People dwell at a local level; however, they function at many interrelating levels based on where they work, where they seek health care and where family members seek educational opportunities. The transition and transformation of regional economies will take into account not only transportation or business development alone, but the important factors of health care, early childhood development, K-12 education, higher education, lifelong learning, entrepreneurship, applications of new technologies, workforce
development, service sector developments and others. A well-educated citizenry is at the core of new opportunities for communities and regional economies.
Action Agenda

Land grant universities strive to meet the regional needs across their states through a combination of coordinate campuses, regional experiment stations or research and outreach centers, Extension Service offices and centers, regionally located personnel and infrastructure. Given the national trends of decreasing public support for public universities, the traditional medley of resources to meet citizens’ needs must be recast, consistent with a refreshed understanding of the land grant mission. Resources should be marshaled in a cohesive framework to:

- Address opportunities to strengthen state and regional economies,
- Employ new technology for increased communication, enhanced learning and delivery efficiencies,
- Align with other entities in the state including other public and private higher education institutions, state agencies and foundations, for example,
- Increase collaboration with other land grant universities, and
- Focus on national needs as well as the local effects of globalization.

Reinventing the Regions

Many scholars have written on the effects of globalization and the transformational outcomes of advanced communications and other digital technologies. Drabenstott (2003) has articulated strategies that squarely position regional economic development in the milieu of global markets and new technologies. He suggests ten specific steps toward reinventing regions, with a focus on competitive advantage.

1. Define a region based on common needs. It should be durable enough to have a home location.
2. Find the region’s unique competitive niche.
3. Develop high-growth entrepreneurs. They will need coaching and services.
4. Create clusters in the region around core niche. Newly identified synergies can benefit adoption of new technologies, worker training and business models.
5. Improve and leverage local amenities.
7. Enrich the region’s supply of equity capital. The public and private sectors can play very different and important roles.
8. Tap technologies suited to the region. In many regions, they might include:
   - Production agriculture that includes renewable energy and new bio-based materials from crop plants,
   - Advanced manufacturing, and
   - High-skill services based on information technologies that are not location dependent.
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9. Invest in 21st century infrastructure. This includes quality-of-life infrastructure such as community centers, education and distance education options, and well-designed public and recreation areas as well as telecommunications infrastructure, for example.

10. Reinvent regional governance to make decisions as a region instead of as independent jurisdictions.

And how best can land grant institutions help the states and nation reinvent regions? The steps that Drabenstott (2005) recommends for the federal government have been modified here to apply to the land grants, given their national networks and relationships to federal agencies. The accompanying questions can provoke discussion of ways to best fulfill the land grant role in economic development:

• Make regional competitiveness a goal of the land grant partnership with its state, and align institutional research and programs accordingly. Can disciplinary and departmentally based efforts be integrated to address the complex, interdisciplinary challenges facing citizens and communities? Are Extension and outreach programs addressing change and incorporating interdisciplinary initiatives into research-based programming?

• Design new interdisciplinary efforts to help regions seize innovations and grow entrepreneurs. Communities that think only locally are likely to make ill-fated economic policy decisions, while those that fail to think locally are unlikely to recognize and cultivate their comparative advantage. Can university research provide the data on demographic and economic trends by region, better inform educational policy, workforce development, business development, support of local entrepreneurs and infrastructure investment? Can the university in partnership with communities assess the potential connections among communities given commuting flows, shopping patterns, health care services, youth opportunities, and flows of public expenditures and tax revenues?

• Create a more effective delivery system for taking programs to regions around the nation. How are Cooperative Extension Services innovating to meet regional needs? How are components of university research that have not traditionally been a core strength of Extension being incorporated into Extension and other engagement programs (medicine and public health, arts and culture, and others).

The land grant mission encompasses economic growth and development, broadly defined. To best serve the regions, the states and the nation, the land grant institutions must make the changes that build upon the interdisciplinary strengths at each institution. Each institution must bring research from the breadth of colleges and departments to apply to the goals and needs of communities – from business schools, dentistry, education, engineering, natural resources, food and nutrition, applied economics, public health, landscape design, agriculture and others. In the evolution from traditions of the past, it is essential to understand that agriculture is a necessary – but not sufficient – element to address in the regional economic development equation.
Most important, land grant universities can help citizens and communities manage change. It is a land grant responsibility to help position communities and people – urban, suburban and rural – in a new paradigm of future success.

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References


Smith-Lever Act, 7 U.S.C § 341 et. seq. (1914).


