

Agricultural Outlook Forum 2004

Presented Thursday, Feb 19, 2004

## GLOBALIZATION FORCES RURAL AMERICA TO BLAZE A NEW TRAIL

Jason R. Henderson  
Economist  
Center for the Study of Rural America  
Federal Reserve Bank of Kansas City

The rural economy has collided full force with globalization. Many rural communities are struggling as low-cost global competitors challenge rural America's commodity industries. Many are searching for new competitive advantages for a new rural economy. Rural America's new economic frontier may require a new business model, a new policy model, and a new financial model for new opportunities that are being built on technology and developed by entrepreneurs.

This paper discusses the impacts of globalization on the rural economy. It begins by describing the challenges of globalization confronting the rural economy. The paper then discusses a new frontier for the rural economy; a frontier built on technology and developed by entrepreneurs. The paper concludes by examining the need for partnerships, regional competitiveness and equity capital as rural communities blaze a new trail in search of new competitive advantages in a new rural economy.

### **Rural Commodity Industries Struggle in a Global Economy**

The traditional rural economy is fueled by commodities. Agricultural commodity production is the tradition cornerstone of most rural communities. Others have been based on the ability to extract minerals and other natural resource commodities. Many rural manufacturers are focused on the production of industrial commodities.

Success in a commodity industry is defined by a single mantra: be the low-cost producer. Increased efficiency and productivity are the economic drivers in a commodity environment. The result has been a consolidating economic map. In agriculture, the necessity to become the low-cost producer has led the drive for economies of scale among farm operations. Over time, farm sizes have become larger while the number of farmers has shrunk.

Competing in commodity based industries was a successful strategy when rural America was competing against its metro counterparts. Rural places have a competitive advantage over metropolitan places when it comes to low-cost production. Rural America is characterized by comparatively abundant natural resources, low-cost land, and low-cost labor. These characteristics are essential in commodity industries where success is defined by being the low-cost producer.

In a global economy, rural America does not necessarily have these competitive advantages. Third-world countries are striving to economic advancement by implementing development strategies based on the availability of undeveloped natural resources and low-cost land and labor. The result has been a decline in rural America's commodity industries. In agriculture, the U.S. accounts for less than 40 percent of world soybean production down from 50 percent in the 1980s. In 2002, U.S. soybean production fell below the combined production of Brazil and Argentina (fig. 1). The U.S. share of world

wheat trade has fallen from roughly 42 percent in the 1970s to roughly 20 percent today (fig.2). Outside of agriculture, many rural factories are closing their doors and moving their operations to other countries. The effect has been a sharp rise in rural mass layoffs due to factory closures. Since 2001, roughly 40 percent of rural mass layoffs were due to factory closures (fig. 3).

### **New Opportunities in a Global Economy**

The challenges in dealing with globalization have left many rural communities in search of a new competitive advantage not based on low-cost land and labor and abundant natural resources. In many cases, the search leads rural places away from traditional commodity production and towards new product-based opportunities – opportunities build on technology and developed by entrepreneurs.

The new frontier of opportunity for rural America will come from new technologies – new technologies that diminish distance, create new value, and launch new products. Technology has always made its impression on rural America. But, technology has traditionally focused on increasing the efficiency of commodity production not developing new products. In economic terms, new technologies have been supply-driven not demand-driven. For example, through improved technologies, the hours required to produce 100 bushels of corn have plummeted from 82 hours in 1850 to less than 2 today (fig. 4).

Increasing the productivity of U.S. agriculture has produced tremendous benefits (lower food costs, opening rural labor pools for industrial production). But, supply-driven technologies may not always lead to total revenue gains. Economic theory tells us that if technology is used to expand supply, a new market equilibrium is established where the quantity sold increases, but at a lower price. Total revenue may rise or fall depending on how demand changes to the new supplies (the elasticity of demand) (fig. 5). Economic theory also tells us that if technology is used to create new products and boost demand, prices will rise along with the quantity sold. Total revenue always expands, regardless of the price elasticity of supply or demand (fig. 6).

New demand-driven technologies that create new products are emerging in agriculture. They cover a broad spectrum ranging from new uses for existing commodities to the creation of new “high-value” products. Ethanol represents a new use for agricultural commodities that is boosting demand. In Blair, NE, the manufacturing of bio-plastics from corn is another example of a company using new technology to boost demand for agricultural commodities. At the other end of the spectrum, the production of proteins for human drugs in agricultural crops is an example of new technologies creating new “high-value” products. U.S. export activity clearly demonstrates the ability of product agriculture to compete more effectively than commodity agriculture in a global economy. Since 1996, value-added or product agricultural exports have risen 6.3 percent compared to a 32 percent fall in commodity agricultural exports (fig. 7).

The new economic frontier for rural America emerging from these technologies will be developed by entrepreneurs, the pioneers of tomorrow. Entrepreneurs are thinking and acting outside the traditional box. They are creating new products, new markets, and new opportunities in rural places. We know that entrepreneurs can survive in rural America. In the state of Nebraska, 60 percent of the businesses started in 1996 in small Nebraska towns were still in business in 1999, the same percentage as in Lincoln and Omaha (fig. 8). The challenge for rural places is the creation of high-growth entrepreneurs that boost incomes, create jobs, and add wealth to the community. Studies have shown that smaller, more sparsely populated areas have fewer high-growth entrepreneurs (fig. 9).

## **Blazing a New Trail in the Rural America**

Because of the challenges, rural places are blazing a new trail as they seize the new economic frontier. The new trail requires change. It requires adjustments to how we do business, how we organize ourselves and how we finance our firms. Many rural places have found it necessary to use a new business model, a new policy model, and a new financial model to grow a new rural economy.

Many of the new opportunities in the new frontier require a new business model organized around partnerships. The small size of rural firms is a primary challenge. Research indicates that small firms are more competitive when they operate in networks or clusters. Networks or clusters allow these firms to organize formal or informal partnership that foster the sharing of knowledge and leveraging of resources. Partnering is a challenge for rural America because it goes against the idea of independence that is instilled into rural populations. But, many successful rural businesses never did it alone. Many of these business owners had support systems, mentors, or partners that shared knowledge, wisdom and resources that helped their firms grow.

These new opportunities also require a new policy model based on regional competitiveness. Rural firms are not only small, but so are rural communities. Thus, rural communities need to think regionally and work together to leverage scarce resources. Rural economies are already integrated with themselves and metro neighbors. Commuting flows demonstrate the integration of economic activity in rural places. The challenge is to overcome the Friday night football rivalries that separate communities and keep them from working together.

Thinking regionally is also important because rural America is diverse. The High Plains are not the Delta. These regions have a different set of resources, a different culture and a different set of opportunities at hand. As a result, economic opportunities will define region and regions will come in a variety of sizes because economic opportunities do not observe city limits, county lines, or state boundaries.

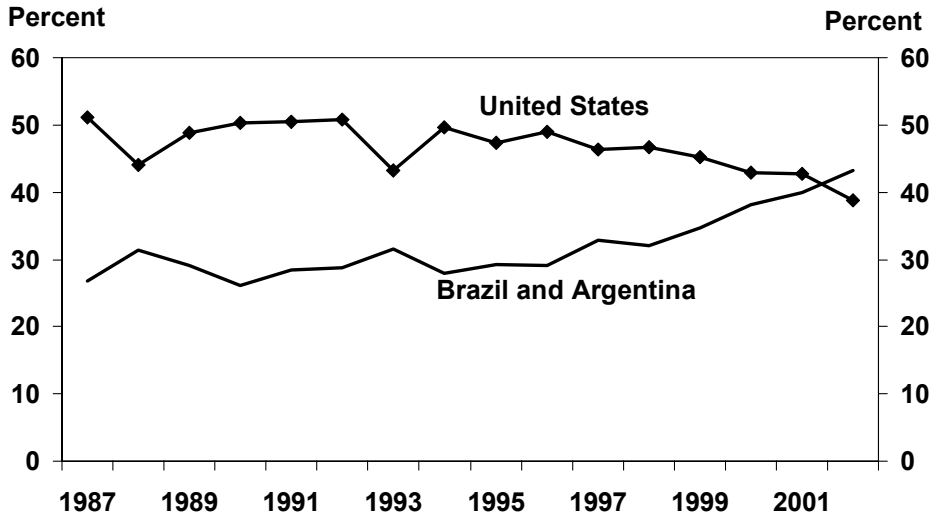
New regions are forming. In the Four-Corners region of the Southwest, regional cooperation had led to the creation of high-growth entrepreneurs. Between 1991 and 1996, this region ranked third in the U.S. in the creation of high-growth entrepreneurs. Appalachian Ohio is striving to stimulate entrepreneurs. The Prairie States Center for Entrepreneurial Leadership is striving to generate entrepreneurial activity in the Great Plains. This group was initially formed to preserve the lesser prairie chicken but discovered they were in the same economic boat. In Iowa, a six-county region surrounding Waterloo has been formed to create new opportunities in the region. The ability to grow No. 2 yellow corn and produce farm machinery with green paint is not enough to sustain let alone produce new economic opportunities in their communities.

New technologies and entrepreneurs need a new financial model based on equity capital. Over the past 100 years, rural America has developed an elaborate debt financing network. Yet, many new rural enterprises struggle with financing because their opportunities do not lend themselves to collateral based lending. The U.S. economy is becoming more knowledge-based where success is based on intellectual capabilities that are difficult if not impossible to turn into collateral. Knowledge based activities are more conducive to equity financing instead of debt financing. But, rural America does not have an elaborate equity capital network. Despite possessing 20 percent of the business establishments in the nation, rural America has only claimed 2 percent of the nation's venture capital investment (fig. 10). While new equity capital networks are emerging, they are few and far between.

## **Conclusion**

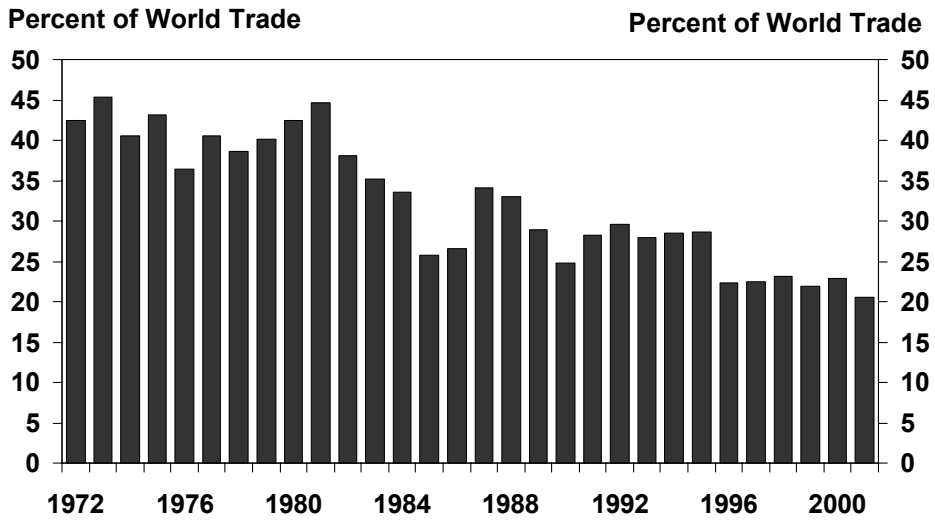
Globalization presents new challenges to the rural economy. The challenges are especially intense for commodity industries that are no longer the lowest cost producers. Rural America needs new sources of competitive advantage that emerge from demand-driven technologies that produce new products developed by entrepreneurs. Seizing these opportunities may require rural America to blaze a new trail of partnership, regional competitiveness and equity capital in the 21<sup>st</sup> century.

**Figure 1: World Soybean Production**



Source: USDA

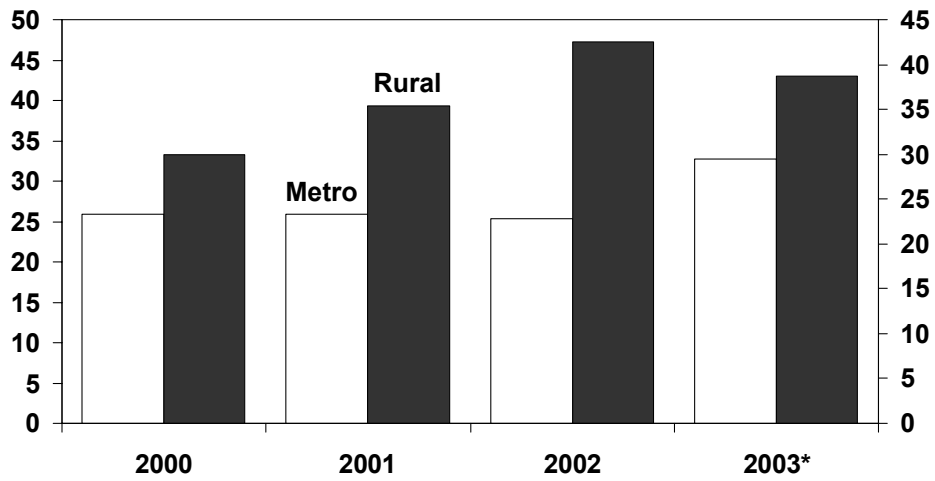
**Figure 2: U.S. Wheat Trade**



Source: USDA

**Figure 3: U.S. Manufacturing Mass Layoffs**

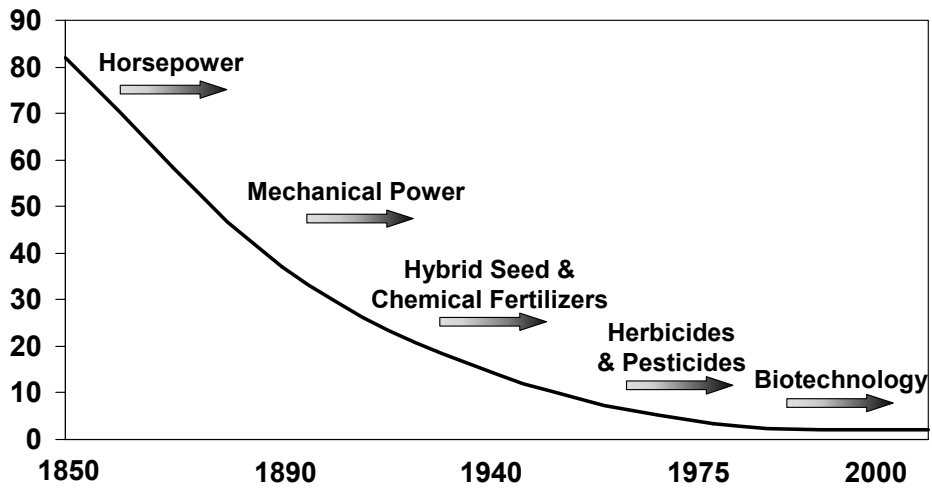
Percent of mass layoffs due to factory closures



Source: BLS  
 \* Data through second quarter

**Figure 4: Corn Production Labor**

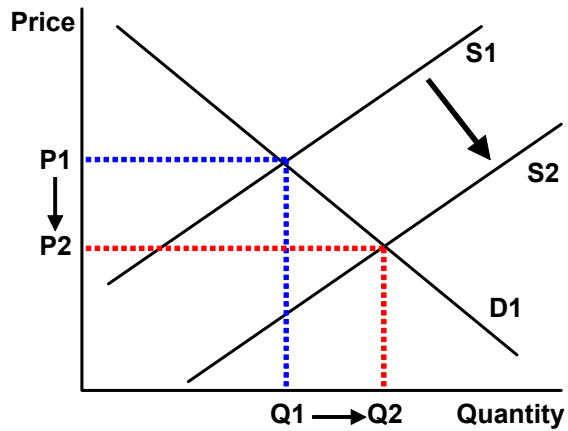
Hours needed to produce 100 bushels of corn



Source: USDA

**Figure 5: Technologies of the Past**

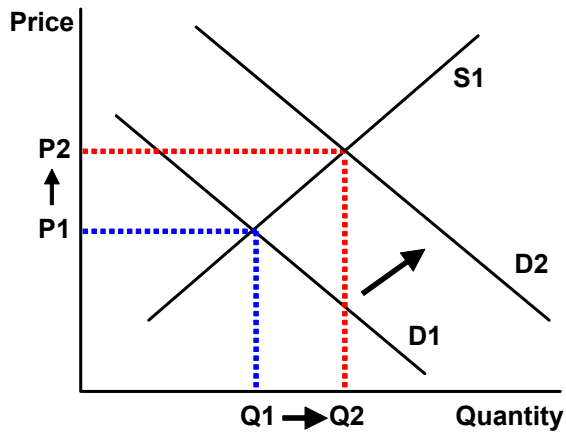
*Focused on reducing cost: shifting supply*



*Does total revenue grow by shifting supply?*

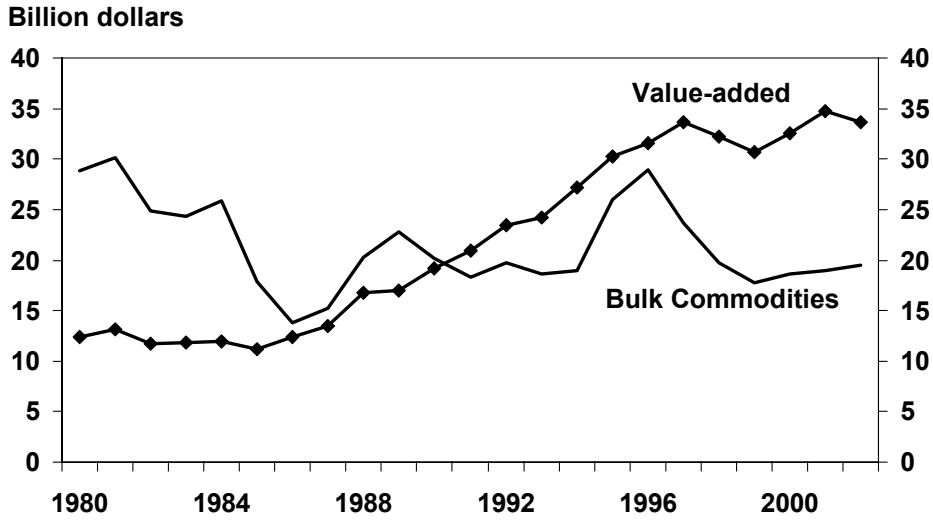
**Figure 6: Technologies of the Future**

*Focused on creating new products: boosting demand*



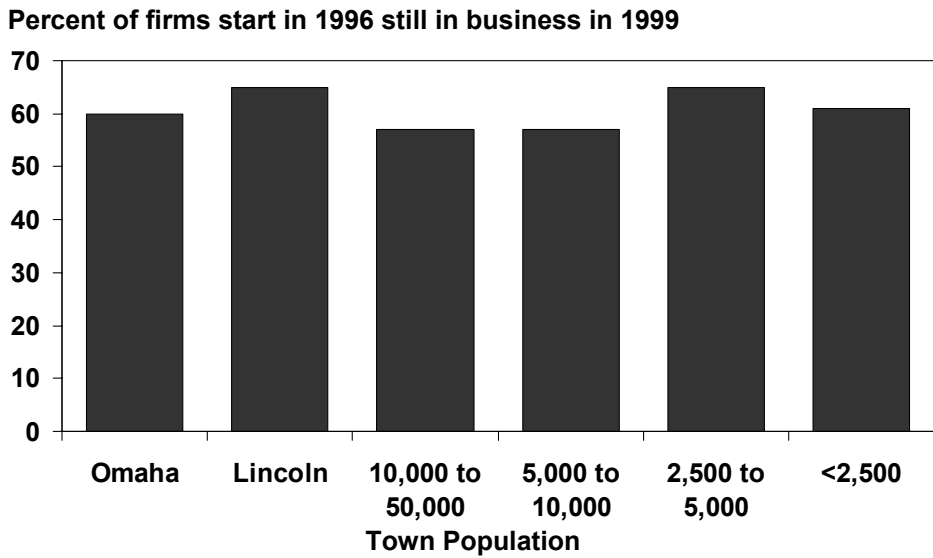
*Total revenue always grows*

**Figure 7: U.S. Agricultural Exports**



Source: USDA

**Figure 8: Survival of Nebraska Business Starts**

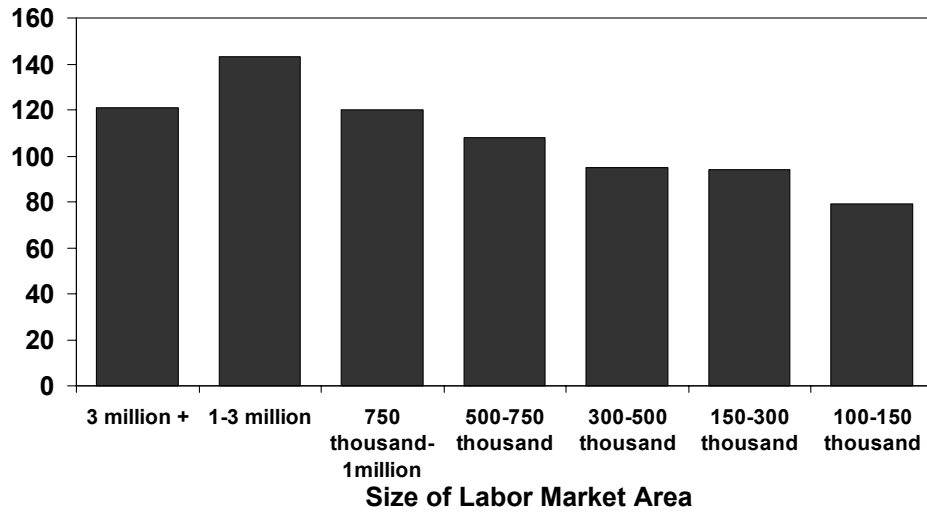


Source: *Business in Nebraska*, April 2002



**Figure 9: U.S. High-Growth Entrepreneur Index**

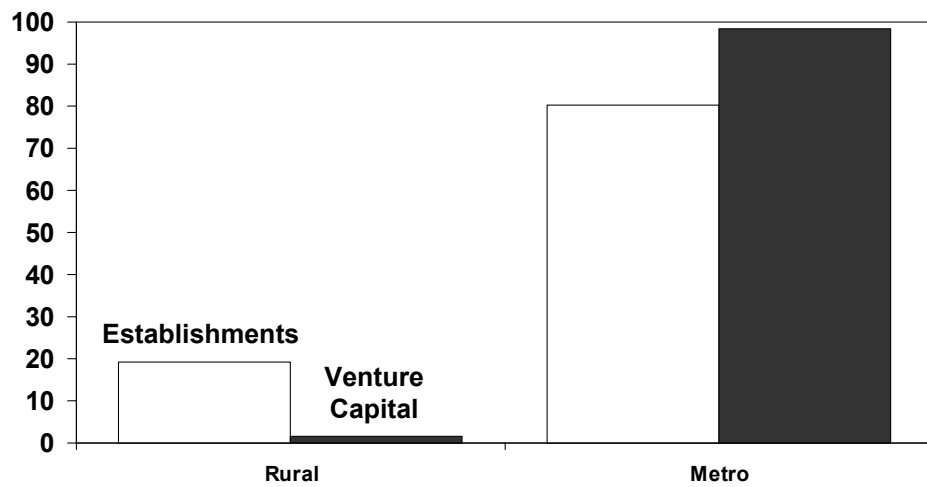
Index (1991 to 1997)



Source: National Commission on Entrepreneurship, 2002

**Figure 10: U.S. Establishments and Venture Capital**

Percent



Source: McDaniel, Kendall. "Venturing in Rural America", Main Street Economist, Center for the Study of Rural America, Nov. 2002



# **Globalization Forces Rural America to Blaze a New Trail**

**Jason Henderson**

**Center for the Study of Rural America  
Federal Reserve Bank of Kansas City**

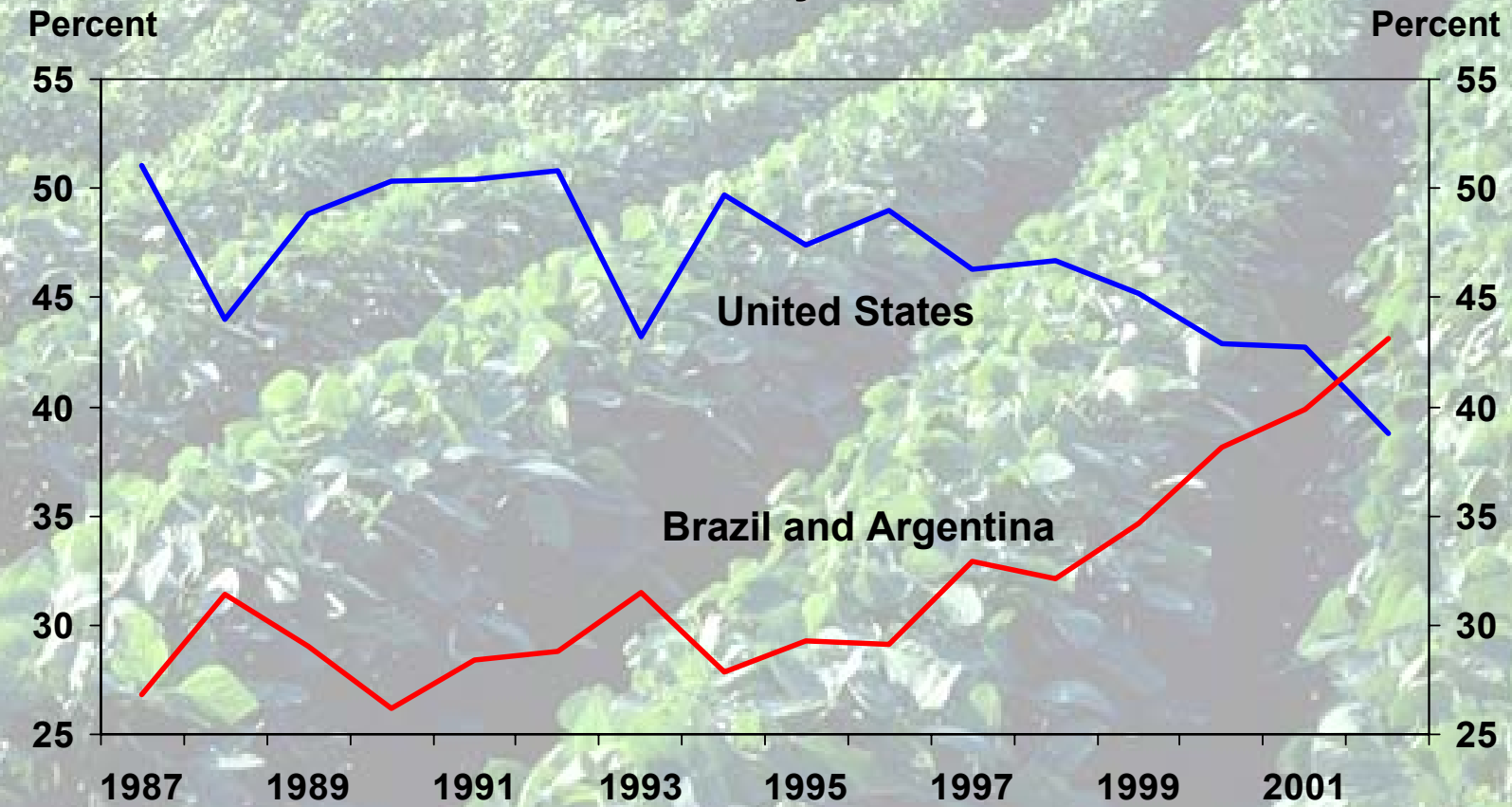
# A Global Collision in the Rural Economy

- The old rural economy is fueled by commodities  
*Agricultural, industrial, mineral, timber.*
- Traditional sources of competitive advantage  
*Abundant natural resources*  
*Low-cost land*  
*Low-cost labor*
- Globalization creates a new imperative  
*Be the low-cost producer.*

**In a Global Economy,  
Does Rural America  
Still Have These  
Competitive Advantages?**

# ***Globalization changes everything for producers of agricultural commodities...***

## **Share of World Soybean Production**

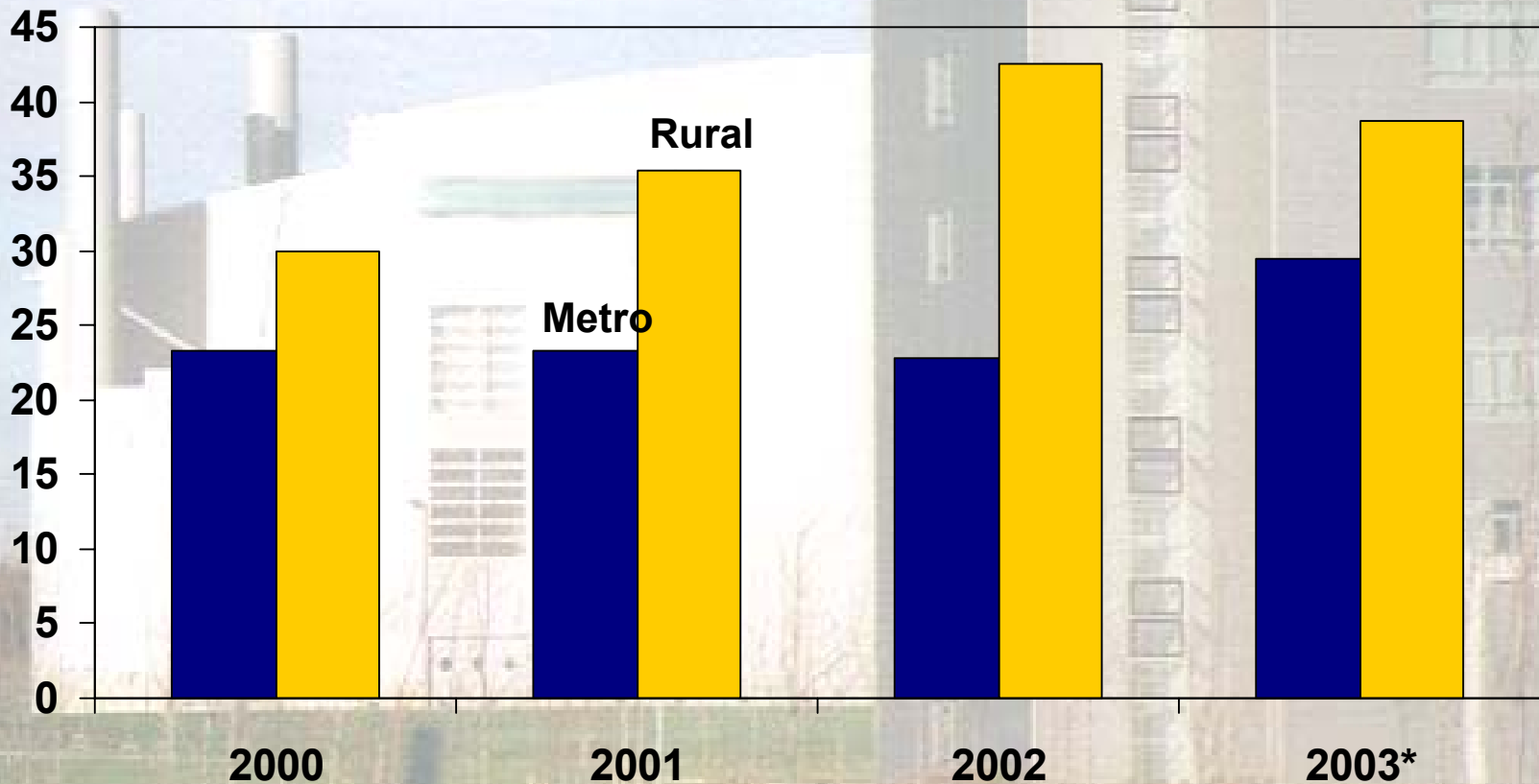


Source: USDA

# ***And industrial commodities.***

## **Metro and Rural Plant Closures**

**Percent of mass layoffs due to factory closures**



Source: Bureau of Labor Statistics  
2003 data through the second quarter

# **Blazing a New Trail in Search of New Competitive Advantages**

- **Moving away from commodities...**
- **Moving beyond low-cost land and labor...**
- **Producing new competitive advantages ...**
- **But away from the comfort zone.**

# **New Competitive Advantages**

**Opportunities built on technology that**

**Diminishes distance...**

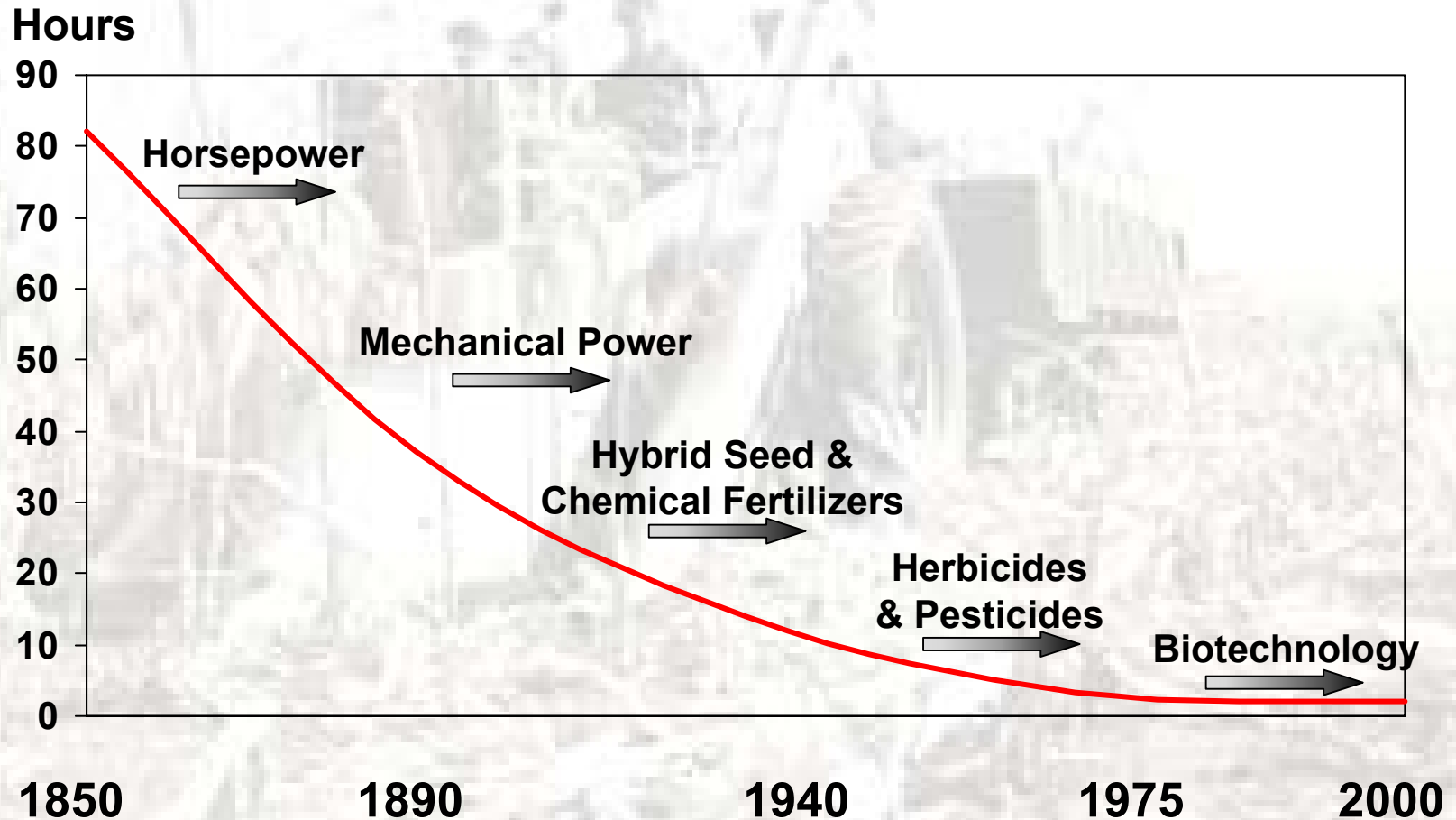
**Creates new value...**

**And launches new products.**



# Technology has always been a part of Rural America.

## Labor to Produce 100 Bushels of Corn





# **The Opportunities of Product Agriculture**

**From “new-use” commodities**

- **Ethanol**
- **Bio-plastics (Blair, NE)**

**To new “high-value” products**

- **Farmaceuticals**

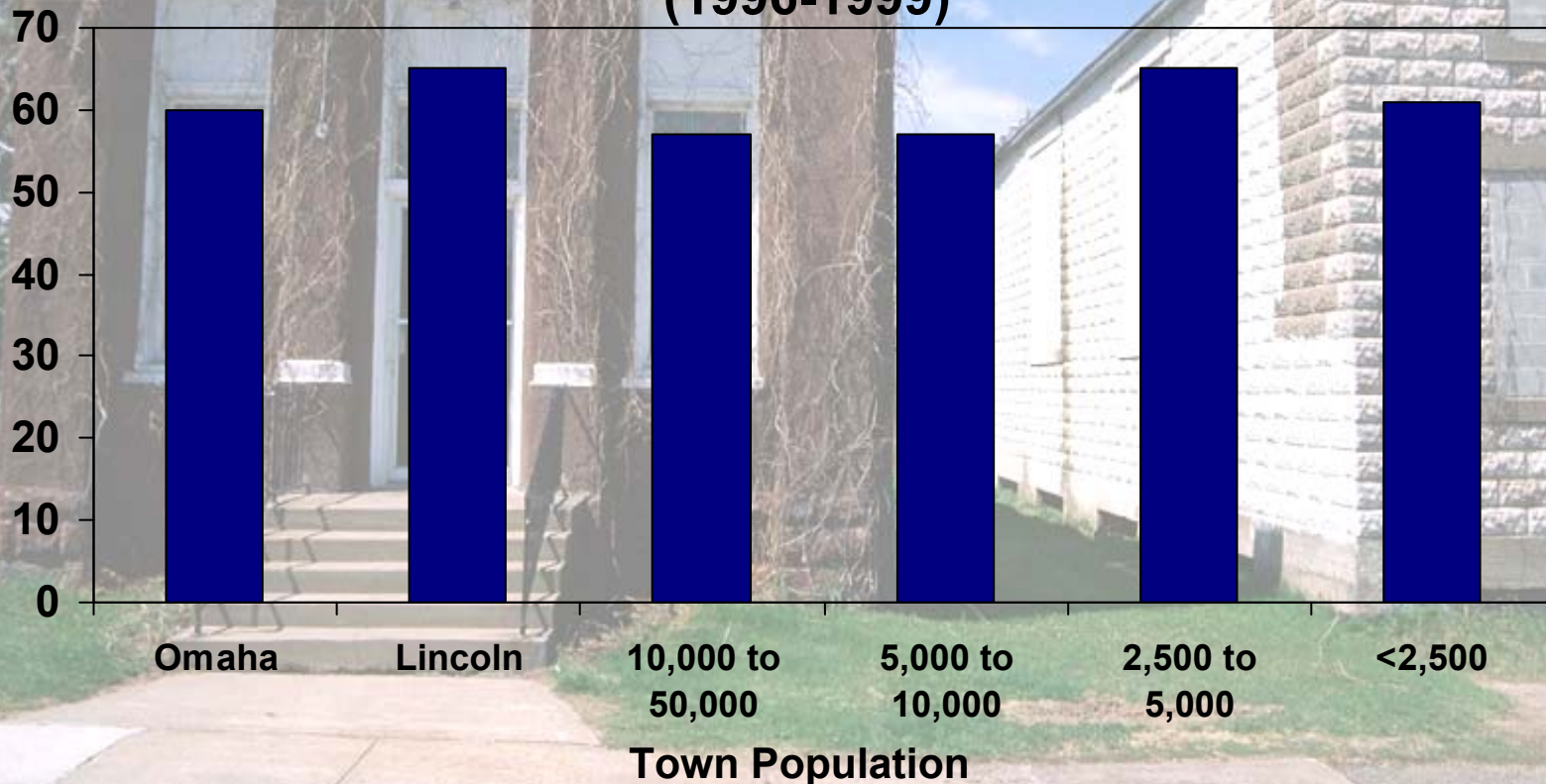
# **New Economic Frontiers**

A man in a dark suit and pink shirt is sitting on a black wrought-iron park bench. He is looking down at a smartphone in his hands. The ground is covered in fallen yellow and orange leaves, and the background shows trees with autumn foliage. The overall scene is outdoors in a park-like setting during the fall season.

- **Opportunities built on Technology.**
- **Developed by Entrepreneurs.**

# *Start-up Businesses Can Survive in Rural America*

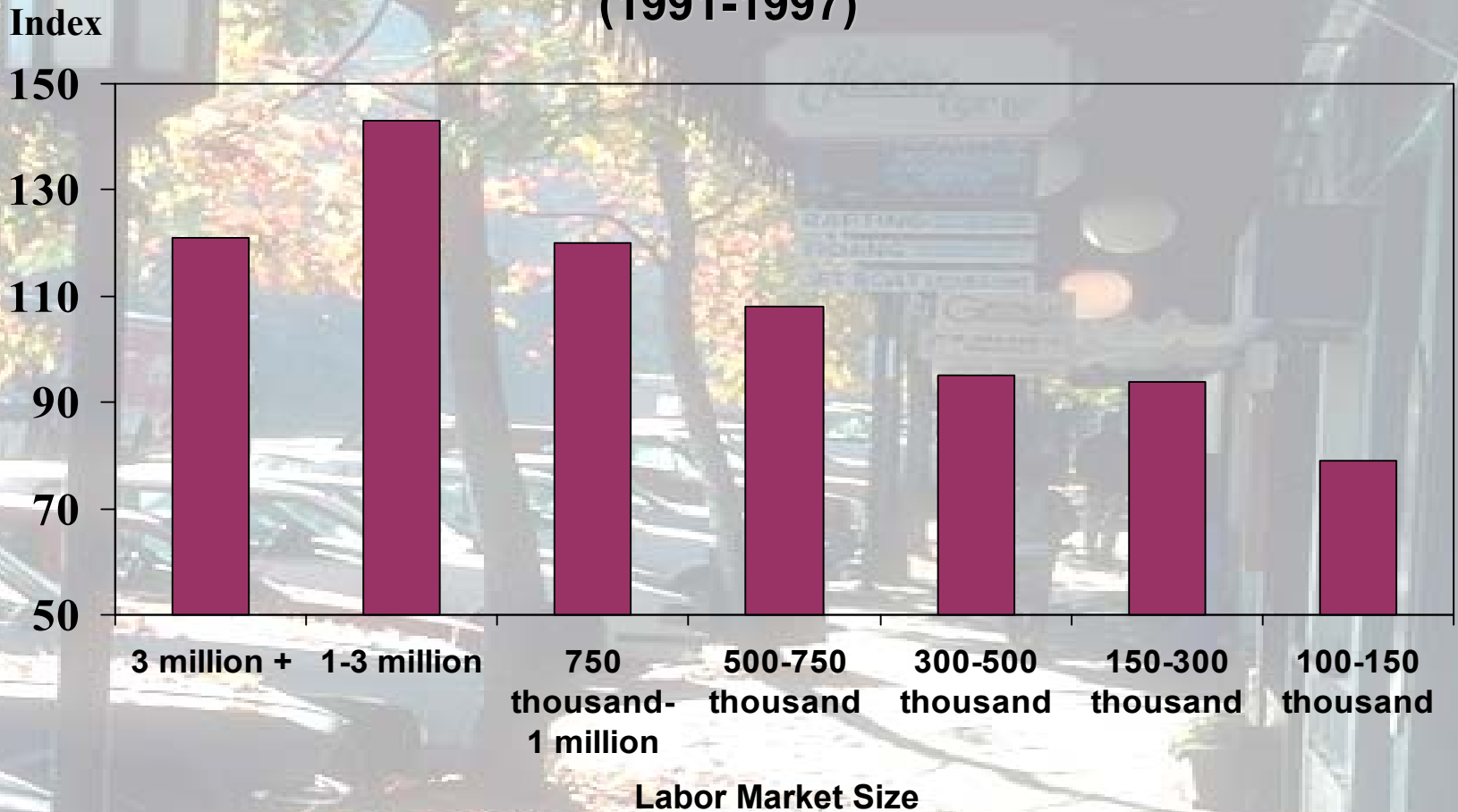
**Survival Ratio of Nebraska Business Starts  
(1996-1999)**



Source: *Business in Nebraska*, April 2002

# *The Rural Challenge is to Develop High-Growth Entrepreneurs.*

**High-Growth Company Index  
(1991-1997)**



Source: National Commission on Entrepreneurship, 2002

Center for the Study of Rural America, FRBKC

# **New Business Model: Partnering**

## ***Why Partnering?***

- **Most rural firms are small**
- **Clusters or networks make small firms competitive**
- **The “co-op” principle**
- **A clear focus of rural development globally.**

# A New Policy Model: Regional Competitiveness

*What is a region?*

Region is defined by the economic opportunity.

For some... **a few counties.**

For others... **a score of counties.**

For yet others... **a few states.**

*21st century economic regions are no  
respecters of 19th century surveyors.*

# ***New regions are forming...***

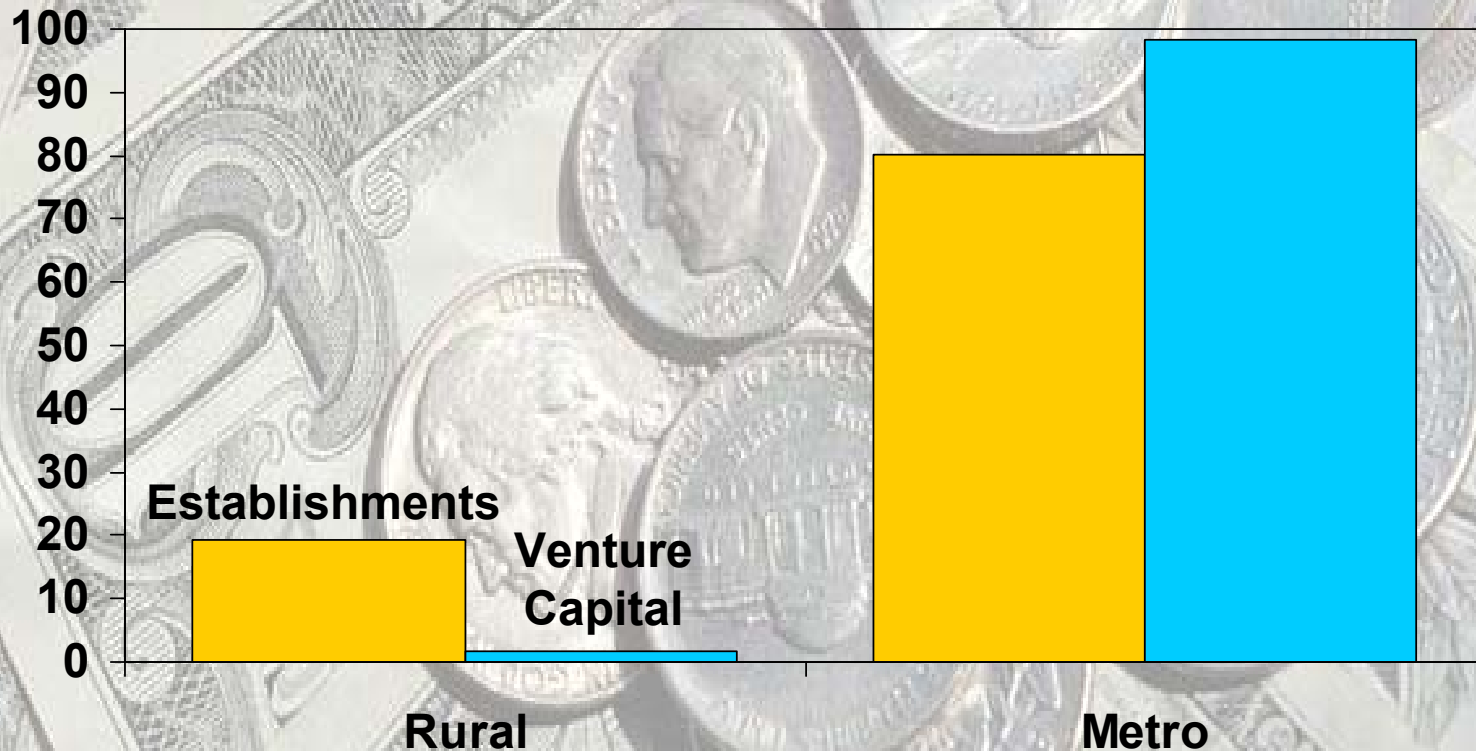




# A New Financial Model: Equity Capital

## U.S. Establishments and Venture Capital

Percent of U.S. Total



Source: McDaniel, Kendall. "Venturing in Rural America", Main Street Economist, Center for the Study of Rural America, Nov. 2002

# **Globalization Forces Rural America to Blaze a New Trail**

- 1. Globalization is The New Challenge**
- 2. New Opportunities are Emerging.**
  - Based on Innovations in Technology.**
  - Developed by Entrepreneurs.**
- 3. The Trail of Opportunity Might be based on:**
  - Partnership**
  - Regional Competitiveness**
  - Equity Capital**