
Building the Rural Economy With High-Growth Entrepreneurs

By Jason Henderson

Entrepreneurs create economic growth in their communities by forming new firms. Each year during the past decade, more than half a million businesses were started that added new jobs in the United States. In the 1990s, during the longest economic expansion in the United States economy, the majority of new jobs were created by small and medium-sized entrepreneurs operating high-growth businesses. Because entrepreneurs are such a wellspring of growth in the economy, many rural policymakers have shifted their long-time focus of recruiting existing firms, such as branch plants, to developing new entrepreneurs.

Most policymakers recognize that entrepreneurs usually start out with limited financing as small or medium-sized firms operating in a variety of industries and places. As a result, policies generally support a wide range of entrepreneurs. However, policies often fail to recognize that the benefits of entrepreneurs can vary dramatically, depending on the entrepreneur's desire to build a high-growth business. And rural areas often lack these high-growth entrepreneurs.

This article presents a fresh review of entrepreneurial activity in rural America and discusses some of the new ways policymakers are beginning to encourage high-growth entrepreneurs in their communities. The first

Jason Henderson is an economist at the Federal Reserve Bank of Kansas City. This article is on the bank's website at www.kc.frb.org.

section discusses the benefits entrepreneurs offer communities. The second section examines the pattern of entrepreneurship in rural areas and the difficulties many rural communities face in supporting high-growth entrepreneurs. The third section discusses some of the policies supporting the startup and growth of this valuable resource.

I. THE VALUE OF ENTREPRENEURS TO A COMMUNITY

Entrepreneurs add great value to local economies. This conclusion is widely evident in the number of communities that have initiated entrepreneurial development strategies over the past two decades. To be sure, less than half of all new firms survive the first few years of operation, and far fewer become high-growth businesses (Malecki 1988; “Entrepreneurs” 2002). Still, entrepreneurs are now recognized as vital sources of economic growth to local communities, and that has spawned the new entrepreneurship programs. Until 1990, such programs were concentrated in the industrial Northeast and Midwest. But since then programs have spread across the United States (Leicht and Jenkins).

The value of entrepreneurs is evident at both the national and local levels. At the national level, nations with more entrepreneurial activity have stronger GDP growth. Entrepreneurship accounts for one-third of the difference in the economic growth rates between countries (Reynolds, Hay, and Camp).¹ The relationship between entrepreneurship and growth is stronger in countries dependent on international trade (Reynolds and others). Throughout the world, small and medium-sized firms operating high-growth businesses provide the majority of new jobs (OECD).

At the community level, entrepreneurs create new jobs, increase local incomes and wealth, and connect the community to the larger, global economy. But these benefits vary substantially across different types of entrepreneurs. Some entrepreneurs start firms to help them capture a certain quality of life. Many times, these smaller businesses radiate a quaint charm that attracts people to America’s Main Streets.

Other entrepreneurs start firms that will become high-growth businesses. While many new firms fail, those that succeed often add jobs, lift incomes, and generate new wealth in a community.

How entrepreneurs benefit communities

Over the past 200 years, the definition of entrepreneurship has evolved into a complex set of ideas.² Put simply, entrepreneurship is the creation of a new firm. Ultimately, entrepreneurship is “the process of uncovering or developing an opportunity to create value through innovation...” (Kauffman Center).

A common thread runs through most definitions of entrepreneurship: innovation. Innovation creates something new or unusual that initiates change in the competitiveness of the market, mainly through new firm formations. These new firms are an expression of the creativity of the entrepreneur, allowing new products and new ways of doing business to add value to an economy and improve the quality of life in communities. New technologies, products, and services are brought to market every year by small entrepreneurial firms—major innovations like the heart valve, safety razor, and soft contact lens, to name just a few (Table 1).

Today, many state and local governments recognize the value of innovative entrepreneurs and are shifting their focus from recruiting firms from other places to growing their own. Unlike manufacturing recruitment strategies, which typically lure existing businesses to a community, entrepreneurship leads to new firm formations that create jobs (Leicht and Jenkins). Over the past decade more than 500,000 new firms were established each year that provided job opportunities for Americans (SBA). And, small entrepreneurial firms created roughly three-fourths of these new jobs. Firms like Wal-mart and Microsoft were started by entrepreneurs.

In addition to creating jobs, entrepreneurs often raise local incomes and add to local wealth. According to data from the U.S. Department of Labor, the earnings of self-employed entrepreneurs are almost one-third higher than the earnings of wage and salaried workers—and the earnings of entrepreneurs with incorporated businesses are much higher

Table 1

MAJOR INNOVATIONS IN THE 20th CENTURY BY U.S. SMALL FIRMS

Acoustical suspension speakers	Gyrocompass
Aerosol can	Heart valve
Air conditioning	Heat sensor
Airplane	Helicopter
Artificial skin	High capacity computer
Assembly line	Hydraulic brake
Automatic fabric cutting	Piezo electrical devices
Bakelite	Prefabricated housing
Biosynthetic insulin	Pressure sensitive cellophane
Continuous casting	Rotary oil drilling bit
Cotton picker	Safety razor
Fluid flow meter	Soft contact lens
Frozen foods	Six-axis robot arm
Geodesic dome	Spectrographic grid

Source: NCOE, *Embracing Innovation: Entrepreneurship and American Economic Growth*

(Devine).³ In addition, unlike branch plants that often send their corporate wealth back to metro areas, local entrepreneurs are more likely to reinvest their wealth locally (“*A conversation*”).

Entrepreneurs are also taking leading roles in connecting their communities to the global economy. In the United States, small entrepreneurial firms are the fastest growing segment of exporting firms (NCOE, *Embracing Innovation*). From 1987 to 1997, both the number of small business exporters and the value of small business exports tripled. Growth in both the number of exporters and value of exports was strongest in the smallest businesses, those with less than 20 employees.

Types of entrepreneurs

Entrepreneurs are a unique group of people. They are owner-managers who assume risk, manage the business’s operations, reap the rewards of their success, and bear the consequences of their failure. As managers, they decide when to be innovative, what innovations to adopt, and how to acquire and bundle resources to initiate change and

build competitive advantages in the marketplace. Still, there are important differences among entrepreneurs. Different types of entrepreneurs yield different benefits to their community.⁴

According to the Kauffman Center for Entrepreneurial Leadership, there are basically two kinds of entrepreneurs—lifestyle and high growth. *Lifestyle* entrepreneurs start new firms to provide a family income or support a desired lifestyle. These entrepreneurs typically seek independence and control over their own schedule. In some cases, lifestyle entrepreneurs sacrifice growth for lifestyle choices. These entrepreneurs generally hire few people. Classic examples are “mom and pop” stores, such as the family-owned grocery store, the local hardware store, or the home-based consultant.

Because of their lifestyle focus, the benefits of these entrepreneurs relate primarily to the quality of life in local communities. Lifestyle entrepreneurs provide many of the services needed by local residents, and, perhaps most important, they add to the personality and charm that characterize Main Street economies. This charm attracts many people to shop and live in rural communities.

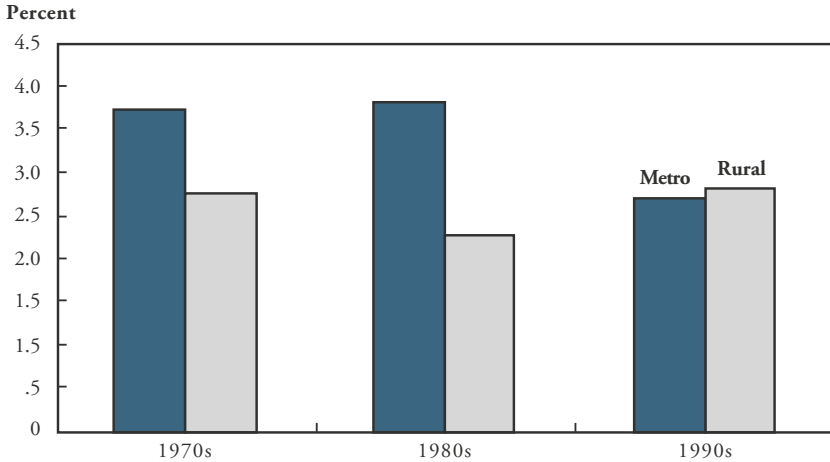
Distinct from lifestyle entrepreneurs, *high-growth* entrepreneurs are typically motivated to start and develop larger, highly visible, and more valuable firms. These entrepreneurs commonly focus on obtaining the resources necessary to fuel growth. Many seek to take the business public after obtaining some degree of success. The presence of a significant innovation that has dramatically changed the competitive climate of the market characterizes many high-growth entrepreneurial firms.

In the minds of many community leaders, high-growth entrepreneurs provide the biggest economic benefit to their communities (“*A conversation*”). In addition to creating more jobs, more income, more wealth, and a larger tax base for their communities, high-growth entrepreneurial companies often invest in their communities through schools, community service, and philanthropy. When benefits like these outweigh the costs of supporting high-growth entrepreneurs, fostering more high-growth entrepreneurs is viewed as a sound strategy for adding economic value to communities.

Many of today’s high-tech companies are good examples of firms started by high-growth entrepreneurs. For example, Gateway Company was founded in an Iowa farmhouse in 1985. Many such high-growth

Chart 1

RURAL AND METRO SELF-EMPLOYMENT GROWTH



Source: Department of Commerce

companies have become the cornerstones of their rural communities. Pella Corporation in Pella, Iowa, has grown into one of the world's largest window manufacturers and has been identified as one of the 100 best companies to work for by *Fortune* magazine.

II. THE STRUCTURE OF ENTREPRENEURSHIP IN RURAL AMERICA

Many rural public officials have set their sights on entrepreneurs as a way to generate economic value in their communities, but not all have been successful. One way to gauge their success is to look at the number of self-employed workers in an area, which is a simple measure of the number of entrepreneurs (Blanchflower and Oswald).⁵ After slowing in the 1980s, the growth of self-employed workers in rural areas rebounded in the 1990s, rising to 2.9 percent and outpacing growth in metro areas (Chart 1).⁶ Self-employed workers received higher personal income

levels than other rural workers. In 2001, the average self-employed rural worker reported personal income of roughly \$33,000, compared with \$27,000 and \$30,000 by rural private and government workers.

While entrepreneurs play a vital role in the prospects of many rural places, the success of entrepreneurs is variable. Rural areas in general often find it difficult to build high-growth entrepreneurs as the size and remoteness of rural places often limit the ability of entrepreneurs to get the resources they need to build high-growth businesses.

Where are the rural entrepreneurs?

While entrepreneurs do business in virtually every rural community, some rural communities have enjoyed stronger entrepreneurial growth than others. Rural entrepreneurship varies according to two general factors: industry and geography. Because some industries are more conducive to entrepreneurship, growth varies according to the industry mix of the local economy. Moreover, rural communities better suited to overcome the geographic limitations of small size and remoteness enjoy higher levels of entrepreneur growth.

Industry. While rural entrepreneurs operate in all industries, most operate in the same industries as their metro counterparts. Both rural and metro entrepreneurs concentrate in three industries: services, retail trade, and construction (Table 2). Services account for the largest share of rural entrepreneurs, as more than one in three rural entrepreneurs worked in the service sector in 2001. But, unlike metro entrepreneurs, rural entrepreneurs also operate in the nonfarm agricultural and natural resource industries (agriculture, forestry, and fishing). In 2001, these industries accounted for almost 10 percent of rural entrepreneurs, compared with only 3.2 percent of metro entrepreneurs.

This variation in activity reflects the ability of various industries to support new ventures. Some industries provide more opportunities for new ventures because they produce a broader range of products (Malecki 1994). For example, the variety of retail products allows many entrepreneurs to find niche markets in specialty shops. Other industries provide more opportunities because they have lower start-up costs, which reduce the barriers to new firm entry and encourage entrepreneurial activity. For example, restaurants provide much lower start-up costs than food pro-

Table 2
**INDUSTRY SHARE OF RURAL NONFARM
 WORKERS, 2001**

(Percent of workers)

Industry	Rural		Metro
	Private workers	Self-employed	Self-employed
Agriculture ¹	3.0	9.9	3.2
Mining	1.3	0.7	0.1
Construction	6.7	19.0	13.9
Manufacturing	25.2	6.5	5.3
TCPU ²	6.3	5.6	4.5
Wholesale trade	4.3	3.3	4.5
Retail trade	21.5	15.9	13.9
FIRE ³	4.4	4.6	9.0
Services	27.4	34.5	45.7
Total	100.0	100.0	100.0

¹ Agriculture, forestry, and fishing

² Transportation, communications, and public utilities

³ Finance, insurance, and real estate

Source: Current Population Survey, March 2001 Supplement, weighted data

cessing firms and thus more opportunities for entrepreneurs. Moreover, industries enjoying faster growth or those with higher levels of technological change can present more opportunities for start-ups (Dean and Meyer). The fast pace of technological change was, of course, one of the factors supporting the explosion of dot.com entrepreneurs in the last half of the 1990s.

Because rural entrepreneurial activity varies so much by industry, the potential for growing new entrepreneurs depends dramatically on the economic base of rural regions. Given the industry mix of entrepreneurs, it is not surprising to find stronger entrepreneur growth in rural communities with service-based economies and natural amenity areas that attract vacationers and retirees. In the 1990s, growth in service-based rural areas outpaced the growth in all other rural counties (Table 3). For instance, recreation and retirement-destination rural counties attracting vacationers and retirees benefited from stronger growth than other rural counties. The most scenic rural areas, which often serve as recreation and retirement destinations, enjoyed growth of almost 4 percent, while the least scenic rural counties grew barely half that.

Table 3
RURAL NONFARM SELF-EMPLOYMENT GROWTH

(Annual percent change)	<u>1970s</u>	<u>1980s</u>	<u>1990s</u>
Total	2.8	2.3	2.9
<i>Growth by county economic type</i>			
Service-based	3.7	2.9	3.2
Other 2.2	2.1	2.8	
Recreation	4.7	3.8	3.8
Other 2.1	1.9	2.7	
Retirement destination	5.4	4.1	4.2
Other 2.2	2.0	2.7	
Persistent Poverty	2.0	1.7	2.9
Other 2.6	2.4	2.9	
<i>Growth by natural amenity rank</i>			
High amenity rank (7)	6.8	4.8	3.9
(6)	5.8	3.8	4.2
(5)	4.3	3.7	4.0
(4)	2.8	2.7	2.8
(3)	1.9	1.7	2.5
(2)	1.5	1.2	2.7
Low amenity rank (1)	0.3	1.1	2.1
<i>Growth by proximity to metro area</i>			
Next to large MSA	2.7	2.8	3.4
Next to small MSA	2.4	2.4	2.9
Nonadjacent to MSA	2.5	2.0	2.7

Calculations based on BEA, REIS data and USDA classifications

Geography. In addition to scenic areas, rural areas with the strongest entrepreneurial growth were those that overcame the twin geographic problems of size and distance. Communities that are both small and remote make it hard for rural entrepreneurs to build economies of scale. The local demand for products is limited and resource acquisition is difficult (Dabson). Rural communities that serve as regional economic centers have larger and more diverse economies to combat the problem of being small. Other rural communities that are close to metro areas have better access to services and larger markets. In the 1990s, entrepreneur growth in rural counties next to large metro areas averaged 3.4 percent, compared with 2.9 percent in rural counties next to small metro areas, and 2.8 percent in rural counties not adjacent to a metro area (Table 3).

Table 4
FIRM SIZE AND ENTREPRENEUR INCOME, 2001

	Rural	Metro
Firm size	(percent of self-employed)	
Less than 10 employees	85.0	78.9
10-24 employees	6.3	7.3
25-99 employees	3.3	4.6
100-499 employees	1.6	3.4
500-999 employees	.7	.9
1000 or more employees	3.2	5.0
Personal income	(thousand dollars, per capita)	
Total firms	33.2	56.0
Incorporated	52.1	82.8
Unincorporated	27.0	42.3

Source: Current Population Survey, March 2001 Supplement, weighted data

Still, entrepreneur growth could be found in counties usually thought to have some of the most limited economic opportunities. Rural counties with persistent poverty had entrepreneur growth rates equal to those in other rural counties (Table 3). This result is not altogether surprising, given that residents in lagging rural economies often face limited job opportunities outside of self-employment. In many cases, “self-employment is an alternative, not to employment in a large firm, but unemployment” (Friedman).

Where are rural America's high-growth entrepreneurs?

While rural America is growing more entrepreneurs, a closer look at the data reveals relatively few high-growth entrepreneurs. Simply put, rural entrepreneurs tend to build smaller firms and generate lower incomes. It appears that small communities and their remoteness severely limit access to the resources they need to create high-growth businesses. And, these challenges appear to pose greater difficulties in the rural service industry, which accounts for much of the entrepreneurial activity in rural America.

Smaller, more remote areas have fewer high-growth firms than large metro areas (NCOE 2001b; Acs). In 2001, 85 percent of rural entrepreneurs operated firms with less than ten employees, compared with 79 percent of metro entrepreneurs (Table 4). Moreover, only 5.5 percent of rural entrepreneurs worked in firms with more than 100 employees, roughly half the level of metro entrepreneurs. In 2001, rural entrepreneurs earned about 42 percent less than metro entrepreneurs.

The lack of high-growth entrepreneurs in rural areas is reflected in the differences between incorporated and unincorporated entrepreneurs. Incorporated entrepreneurs tend to have larger incomes and larger firms, indicators of high-growth firms.⁷ In 2001, the personal income level for incorporated rural entrepreneurs was almost double the income of rural unincorporated entrepreneurs (Table 4). But in 2001, incorporated entrepreneurs accounted for just one-fourth of all rural entrepreneurs, compared with one-third in metro areas.

Rural service industries have an especially hard time growing high-growth entrepreneurs. Rural service industry entrepreneurs are more likely to operate smaller firms with less income than their metro counterparts. In 2001, over 90 percent of rural service entrepreneurs operated firms with less than ten employees, compared with 80 percent of metro service entrepreneurs. Less than 25 percent of rural service industry entrepreneurs were the larger incorporated firms that generate higher incomes, compared with 40 percent in metro areas.

Given that new entrepreneurs are emerging in rural areas, why are rural communities having such a difficult time generating high-growth entrepreneurs? First, of course, size and distance present daunting challenges in rural areas. And, entrepreneurs in rural areas find it harder to access venture capital. Accessing technology can also be more difficult. Finally, rural entrepreneurs often lack the technical or managerial know-how necessary to create high-growth businesses.

Smallness and remoteness of rural areas make it difficult to develop economies of scale and critical mass. The results are higher prices for goods and lower demand for services (Dabson; Malecki 1994). The lack of transportation infrastructure, such as airports or interstates, makes it difficult to transport goods and link to outside markets. These reduced linkages also limit the knowledge and technology transfer between remote rural areas and their economic partners.

Accessing venture or equity capital may be the most important hurdle hindering rural entrepreneurship. In many rural places, equity markets either do not exist or are unorganized at best (Markley 2001). The lack of information and high transaction costs limit venture capital access for rural entrepreneurs. As a result, from 1995 to 1998, rural entrepreneurial firms acquired a disproportionately small share of U.S. equity financing (Brophy and Mourtada).

Accessing technology is still a major challenge, even though technological advances such as the Internet are helping some rural areas to overcome this limitation. Internet access is commonly identified as a key part of the equation supporting rural economic development (Dabson; Malecki 2001). Rural areas have Internet access, but they usually lack high-speed broadband access, which is vital to e-commerce development. As a result, compared to their metro peers, fewer rural entrepreneurs report using the Internet at work in 2001.⁸

Lower skill levels of rural entrepreneurs can also limit the growth of high-growth entrepreneurs. More advanced education can give entrepreneurs the technical or managerial know-how they need to become high-growth entrepreneurs. Rural incorporated entrepreneurs, who operate larger firms and receive higher incomes, typically have higher education levels than their unincorporated peers. But rural entrepreneurs on average tend to have less education than their metro counterparts. Less than one-third of rural entrepreneurs have earned an associate, bachelor, or graduate degree, compared to almost half of metro entrepreneurs.⁹

Despite all the challenges, high-growth entrepreneurs sometimes emerge in rural areas. In Nebraska towns with less than 10,000 people, 60 percent of the firms started in 1996 were still in business in 1999, that same rate as in Omaha (Fitzsimmons). These surviving rural firms created 8.1 jobs per 1,000 people, slightly less than the 8.4 jobs per 1,000 people created by Omaha's surviving firms. The rural labor market area surrounding Farmington, New Mexico, generated the third-highest share of high-growth entrepreneurs in the United States in the first half of the 1990s (Acs). The strong growth arose from all types of industries. One key to the success of Farmington, New Mexico, was the ability of community and business leaders to overcome the challenges facing rural economic development by partnering with other

rural communities in the region. By working together, these communities were able to build economies of scale, access technology and other resources, and overcome political boundaries to generate entrepreneurial and economic growth (Anesi, Eppich, and Taylor).

III. ENTREPRENEURSHIP IN RURAL DEVELOPMENT POLICY

Rural policy makers are turning to entrepreneurial development strategies to stimulate economic growth. In many respects, by making entrepreneurship a cornerstone of economic development, these new endeavors are forging a new policy frontier. However, the impacts of these activities are largely unknown. Going forward, the impacts must be monitored to ensure the benefits outweigh the costs.

Policymakers across the United States have initiated three types of entrepreneurial development policies. Some of these strategies aim to improve the skills of individual entrepreneurs. Other strategies seek to strengthen community resources for entrepreneurs. And others create networks to help entrepreneurs capture the resources they need.¹⁰ While not all of these policies were designed specifically for rural areas, they address the challenges that rural areas typically face in developing high-growth entrepreneurs.

Developing skills of individuals

Recognizing that business success is largely determined by the entrepreneur, many entrepreneur development programs focus on improving the skills of individuals.¹¹ Many programs emerge from partnerships between government and nonprofit organizations. These programs often aim to develop the technical and managerial know-how of individual entrepreneurs to give small business owners and aspiring entrepreneurs the tools they need to become high-growth entrepreneurs.

Small business development centers (SBDCs) are one of the most common development programs in the United States. SBDCs were not designed specifically as a rural initiative, but many states have branch

offices in rural areas to give various types of assistance. To develop management skills, they help with tasks that range from business planning to financial and market analysis.

SBDCs tend to have close relationships with universities and community colleges that are becoming more involved in improving the skills of entrepreneurs. Many colleges are designing complete curriculums for entrepreneurship training. For example, Fairleigh Dickinson University, through its Rothman Institute of Entrepreneurial Studies, offers an undergraduate major, a masters degree in business administration (MBA), and a post-MBA program certificate in entrepreneurship (Kayne). According to the Harvard Business School, the number of business schools offering entrepreneurship courses rose from six in 1967 to 370 in 1993. In 1997, the Harvard Business School opened an outpost in Silicon Valley to support research on entrepreneurship.

At land grant universities, extension services are working to build the technical skills of entrepreneurs. For example, the University of Minnesota extension service has developed the Access Minnesota Main Street program to improve the Internet and e-commerce skills of small and medium-sized businesses in Minnesota. This program has had some success and is being used as a model by the extension services at the University of Nebraska-Lincoln and Penn State University.

Some development programs recognize the importance of nurturing entrepreneurial skills in America's youth with entrepreneurial education in K-12 schools. The Kauffman Center for Entrepreneurial Leadership has developed the Mini-Society program, which operates in schools in 43 states. In this program, America's youth learn through experience and role-playing. In Massachusetts, the Youth Tech Entrepreneurs program helps high-school students learn skills by maintaining computer networks and by giving technical support to local companies.

Creating a community environment

While success is determined by the entrepreneur, the opportunity for success must be fostered by the community environment. The availability of resources in a community, especially venture capital, is a key to developing high-growth entrepreneurs.¹² In rural areas, social

support also fosters growth in entrepreneurial activity (Dabson). As a result, the focus of many policies is providing venture capital and building an entrepreneurial culture.

The discovery and growth of angel investors is quickly becoming a common way to provide venture capital. Angel investors are wealthy individuals willing to provide start-up money for entrepreneurs. They typically provide smaller amounts of venture capital to entrepreneurs compared to other venture capitalists, but the seed money is often an important bridge to other sources of capital. Most angels invest locally within a day's drive of their residence (Freear, Sohl, Wetzel). While angels remain concentrated in the Silicon Valley and New England, they have been emerging in other parts of the country. For example, in Minnesota the Lakes Venture Group is a group of angels who provide equity capital in addition to management expertise for start-up or early development companies in rural parts of the state.

New venture capital funds are also being developed in rural areas to meet the venture capital needs of rural entrepreneurs.¹³ Nontraditional venture capital institutions operate outside of traditional markets by providing funds to underserved specific geographic regions or industrial sectors. Many have a dual bottom line, where they will accept lower rates of return on investment in exchange for social and economic benefits to the service area. These funds can be publicly or privately funded and managed. The success of nontraditional venture capital funds has been mixed (Barkley and others). The most successful funds have carefully considered the need for venture capital in their targeted region and the potential for success of the fund. They have also rewarded managers for a job well done and isolated the investment fund from political influence.

Entrepreneurship programs are trying to overcome the cultural attitudes in rural areas that limit the appreciation of entrepreneurship as an economic development strategy. One way in which attitudes change is through the increased recognition of entrepreneurs. Several states now have small business or entrepreneur-of-the-year awards that highlight the importance of entrepreneurial activity in local economies. Many universities, centers for entrepreneurship, and state governments sponsor business plan competitions that encourage entrepreneurial development. The Center for Rural Entrepreneurship has also initiated

a monthly series of stories highlighting entrepreneurial rural communities and individuals. All of these initiatives recognize the importance of entrepreneurship in rural communities.

Building support networks

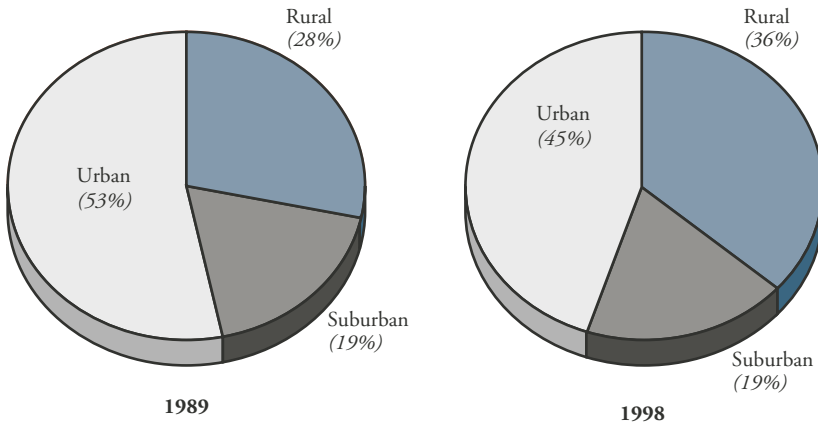
The secret to developing an entrepreneurial community often lies in the effectiveness of support networks (Dabson; Malecki 1994; NCOE 2001a).¹⁴ Networks are informal or formal groups of peers or organizations that link entrepreneurs with the social, business, and strategic resources they need to grow (Malecki 1994). Networks can provide links to new sources of capital, employees, partnerships, and business services. Many seek to provide a support group of peers to generate an entrepreneurial environment. Rural networks are emerging in many forms—as incubator networks, angel investor networks, and other technical assistance network organizations.

Incubator networks are quickly emerging as one of the most common programs to develop entrepreneurs. An incubator is an organization that provides business, management, and marketing resources to start-up firms, along with rental space, shared office services, technology support, and financing assistance. By housing multiple startups in a single location, networks emerge as entrepreneurs interact with one another, obtain resources, and grow in an entrepreneurial climate. The goal is to help firms become financially viable and graduate into a free-standing business. Most incubators are sponsored by government, nonprofit organizations, or academic institutions. But an increasing number are being run by for-profit private investment groups. The National Business Incubator Association (NBIA) indicates that for each new job created in a publicly supported incubator it costs about \$1,000, far less than many other job creation strategies.

Incubator programs are one of the most successful initiatives supporting high-growth firms (Acs). According to the NBIA, the number of business incubators jumped from 12 in 1980 to over 900 in 2002. In 1998, 36 percent of the incubators affiliated with the NBIA were located in rural areas, up from 28 percent in 1989 (Chart 2). Almost 90 percent of NBIA incubator graduates were still in business in 2002, with 84 percent staying in their local communities.

Chart 2

LOCATION OF U.S. BUSINESS INCUBATORS



Source: National Business Incubator Association

Networks are also being used to support the development of angel investors. In Minnesota, the Rural Angel Investor Networks (RAIN) is being established to locate and support angel investors in rural areas that are willing to provide money for rural entrepreneurs. To overcome the limitations of distance and location, SBA's Angel Capital Electronic Network (ACE-Net) allows entrepreneurs to submit their business plans online to potential investors.

Other intermediary organizations are becoming increasingly important in the support of entrepreneurship in rural areas by providing a wide range of assistance programs. For example, the Appalachian Regional Council (ARC) has started an Entrepreneurship Initiative focused on the development of entrepreneurial education and training, entrepreneurial networks and clusters, technology transfer, access to capital and financial assistance, and technical and managerial assistance (Dabson). As of November 2000, ARC had funded over 169 projects, spending over \$17.5 million. While high-growth entrepreneurs remain relatively scarce in the region, significant strides have been made. For

example, business retention rates are higher as business out-migration is low and survival rates of new firms started in 1996 were higher than the national average (Brandow).

In Minnesota, Minnesota Rural Partners is building a Virtual Entrepreneurial Network (VEN) to spur entrepreneurship by providing an online network of peer support. VEN will also provide access to advance technology tools and encourage the use of advance communication services. The development of VEN is scheduled to be completed in 2004.

IV. CONCLUSION

Creating opportunities for high-growth entrepreneurs is becoming increasingly important in rural America. Rural policymakers, who once followed traditional strategies of recruiting manufacturers that export low-value products, have realized that entrepreneurs can generate new economic value for their communities. Entrepreneurs add jobs, raise incomes, create wealth, improve the quality of life of citizens, and help rural communities operate in the global economy. Each year, high-growth entrepreneurs create the bulk of new jobs in the United States. Nevertheless, rural America is creating relatively few high-growth entrepreneurs.

To develop more high-growth entrepreneurs, rural communities must overcome the challenges of being small and remote. Rural communities must help entrepreneurs tap venture capital markets to finance growth. They must help entrepreneurs gain access to the knowledge and innovation outside rural areas needed to spur growth. And they must help entrepreneurs acquire the technical and managerial know-how to cultivate that growth. These are just a few of the challenges limiting the emergence of high-growth entrepreneurs.

Rural policymakers are responding to these challenges by making entrepreneurship the cornerstone of many economic development strategies. As policymakers start programs to build the skills of entrepreneurs, develop community resources, and create support networks, the variety of these programs reflect the many factors that influence the success of entrepreneurial firms. In many respects, these programs are helping to extend the frontier of entrepreneurial development. As

policymakers stretch this frontier, the impacts of these programs will need to be assessed to identify the costs and benefits of supporting high-growth entrepreneurs in rural America.

APPENDIX: DATA SOURCES

Several studies have used data on self-employed to study entrepreneurship (Evans and Leighton; Evans and Jovanovic; Kuhn and Schuetze; Folster; Fairlie and Meyer; Devine). Self-employment data are available from the federal government in multiple publicly available formats. The U.S. Department of Labor through the Bureau of Labor Statistics provides household, personal, and family information on the self-employed in the Current Population Survey. The U.S. Department of Commerce through the Bureau of Economic Analysis provides self-employed (proprietorship) data at the county level in its Regional Economic Information System. Both of these sources of data were used in this study of rural entrepreneurship.

The Current Population Survey (CPS) is a primary source of data on the self-employed. To gather information about the status of employed persons, the survey asks the following question: “Were you employed by government, by a private company, or were you self-employed (or working in a family business)?” Those responding as self-employed were further asked whether the firm was incorporated or unincorporated. The CPS also collects data on the industry of the self-employed person, demographic information, geographic information, household information, and some limited business information such as the number of employees in the business they are working. CPS data used in this study were obtained from the 2001 March Supplement to the survey and limited to persons 16 years or older that indicated they were nonfarm self-employed in their main occupation. CPS data and detailed methodology are available at www.bls.census.gov/cps/.

The Regional Economic Information System (REIS) is another source of information on self-employed through proprietorships. The total number and income of farm and nonfarm proprietors are presented at the county level. Information on proprietorships is mainly collected through income tax data. The Bureau of Economic Analysis (BEA) uses federal tax form information to derive estimates on the number self-employed. Self-employed are total full and part-time self-employed but exclude limited partners in partnerships. BEA takes the national data and estimates county level estimates of proprietorships

and their income with additional adjustments based on other data collected by the U.S. Department of Commerce. REIS data and detailed methodology are available at www.bea.gov/bea/regional/data.htm

ENDNOTES

¹ However, more recent analysis (Reynolds and others) indicates a less significant relationship that is more complex than previously presented. Complexity arises from two sources of entrepreneurship. Opportunity entrepreneurship arises when an entrepreneur engages in activity “to take advantage of a unique market opportunity.” Necessity entrepreneurship arises because it is the “best option available for employment, but not necessarily the preferred option.” Necessity entrepreneurship was found to be positively correlated with economic growth.

² See Formaini, Malecki (1994), and Dabson for the history of entrepreneurial theory and definitions.

³ The higher earnings of self-employed arise from the risk premium of entrepreneurial activity. These earnings are for successful self-employed workers and do not include the earnings of failed self-employed that have exited self-employment. The earnings figure for self-employed workers is expected to be lower if the earnings of the failed entrepreneurs were included in the calculation.

⁴ Woo, Cooper, and Dunkelberg recognize the variation in entrepreneurs and group them into different types.

⁵ Yet, a pragmatic reason for analyzing the self-employed is the availability of public data that has been used in studies of entrepreneurship across the globe (Evans and Leighton; Evans and Jovanovic; Kuhn and Schuetze; Folster; Fairlie and Meyer). However, it is important to remember that the self-employed are *not* the only entrepreneurs. Aspiring entrepreneurs would not be identified as self-employed because they have not started a business to employ themselves. In some cases, entrepreneurs start by doing part-time business before becoming fully self-employed. See Appendix A for a brief data description.

⁶ According to Regional Economic Information System (REIS) data from the U.S. Dept. of Commerce, entrepreneurs accounted for almost 20 percent of rural employment in 2000, up from 15.7 percent in 1970.

⁷ Bregger points out that self-employed persons usually start out working on their own account. But as their small businesses grow, they incorporate their businesses. This suggests that incorporated entrepreneurs are more likely to be high-growth entrepreneurs compared to their unincorporated counterparts.

⁸ Computer and Internet Survey, Current Population Survey, 2001, U.S. Dept. of Labor.

⁹ Current Population Survey, 2001, U.S. Dept. of Labor, March Supplement.

¹⁰ For more information on entrepreneurship development programs, see Kayne; Macke and Kayne; Wortman; and Dabson. Kayne provides a summary of state entrepreneurship policies and programs. Macke and Kayne list best practices in rural entrepreneurship. Wortman also summarizes rural entrepreneurship programs. Dabson provides multiple examples on rural entrepreneurship policies.

¹¹ Understanding the characteristics of entrepreneurs and the relationship to firm success has been a focus of past research. Low and MacMillan discuss the “strategic adaption” perspective of entrepreneurial research. In this perspective, research has focused on the key success factors that boost the chances of start-up or survival. Dean and Meyer identify supply factors that contribute to entrepreneurship. Again, the supply factors are based on the characteristics of the entrepreneur

that motivate firm creation. Van de Ven, Hudson, and Schroeder identify an entrepreneurial approach of looking at new business start-ups, where the main focus is also on the characteristics of the entrepreneur.

¹² Research has identified the importance of environmental factors on entrepreneurial growth. Dean and Meyer discuss the demand factors that are “the conditions defining the potential opportunity structure.” They are the resources in the community that encourage entrepreneurial growth. The population ecology approach to entrepreneurship focuses on the role the environment plays in firm success (Low and MacMillan; Van de Ven, Hudson, and Schroeder). The ecological approach focuses on the influences of structural, political, and economic conditions that lead to new venture formations (Van de Ven, Hudson, and Schroeder).

¹³ See Barkley and others for a case study of 23 nontraditional venture capital institutions across the United States.

¹⁴ See NCOE (2001a) for a primer on developing entrepreneurial networks.

REFERENCES

- Acs, Zoltan J. 2001. "Endogenous Technological Change, Entrepreneurship and Regional Growth," in Manfred M. Fischer and Josef Frohlich, eds., *Knowledge, Complexity, and Innovation Systems*. Heidelberg and New York: Springer, chapter 12, pp. 228-47.
- Anesi, Greg, David Eppich, and Tom Taylor. 2002. "Lines in the Sand: Four Corners Regional Cooperation," in *The New Power of Regions: A Policy Focus for Rural America*. Proceedings of a conference sponsored by Federal Reserve Bank of Kansas City, Center for the Study of Rural America, May 9-10.
- Barkley, David L., Deborah M. Markley, David Freshwater, Julia Sass Rubin, and Ron Shaffer. 2001. "Establishing Nontraditional Venture Capital Institutions: Lessons Learned," Rural Policy Research Institute (RUPRI), pp. 2001-11A.
- Blanchflower, David G., and Andrew J. Oswald. 1998. "What Makes an Entrepreneur?" *Journal of Labor Economics*, vol. 6, no. 1, pp. 26-60.
- Brandow Company, Inc. 2001. "Analysis of Business Formation, Survival, and Attrition Rates of New and Existing Firms and Related Job Flows in Appalachia," paper prepared for the Appalachian Regional Commission.
- Bregger, John E. 1996. "Measuring Self-employment in the United States," *Monthly Labor Review*, vol. 119, nos. 1& 2, January/February, pp. 3-9.
- Brophy, David J., and Wassim Mourtada. 1998. "Equity Finance and the Economic Transition of Rural America: A New Framework for Private-Sector Initiatives and Positive Economic Public Policy," *Equity for Rural America: From Wall Street to Main Street*. Proceedings of a conference sponsored by Federal Reserve Bank of Kansas City, pp. 107-64.
- Center for Rural Entrepreneurship. 2002. "Entrepreneurs and Entrepreneurship," monograph 2, March.
- Dabson, Brian. 2001. "Supporting Rural Entrepreneurship," *Exploring Policy Options for a New Rural America*. Proceedings of a conference sponsored by Federal Reserve Bank of Kansas City, Center for the Study of Rural America, pp. 35-48.
- Dean, Thomas J., and G. Dale Meyer. 1996. "Industry Environments and New Venture Formations in U.S. Manufacturing: A Conceptual and Empirical Analysis of Demand Determinants," *Journal of Business Venturing*, vol. 11, pp. 107-32.
- Devine, Theresa J. 1994. "Characteristics of Self-Employed Women in the United States," *Monthly Labor Review*, vol. 117, no. 3, March, pp. 20-34.
- Evans, David S., and Boyan Jovanovic. 1989. "An Estimated Model of Entrepreneurial Choice Under Liquidity Constraints," *Journal of Political Economy*, vol. 97, no. 4, August, pp. 808-27.
- Evans, David S., and Linda S. Lighton. 1989. "Some Empirical Aspects of Entrepreneurship," *American Economic Review*, vol. 79, no. 3, June, pp. 519-35.
- Fairlie, Robert W., and Bruce D. Meyer. 1996. "Ethnic and Racial Self-Employment Differences and Possible Explanations," *Journal of Human Resources*, vol. 31, no. 4, pp. 757-93.
- Federal Reserve Bank of Minneapolis. 2001. "A Conversation with... Jay Kayne and Don Macke," *Community Dividend*, no. 2, pp. 22-23.

- Fitzsimmons, Edward L. 2002. "Small Cities Abuzz with Business in Nebraska," *Business in Nebraska*, vol. 57, no. 666, April.
- Folster, Stefan. 2000. "Do Entrepreneurs Create Jobs?" *Small Business Economics*, vol. 14, no. 2, March, pp. 137-48.
- Formaini, Robert L. 2001. "The Engine of Capitalist Process: Entrepreneurs in Economic Theory," Federal Reserve Bank of Dallas, *Economic and Financial Review*, Fourth Quarter, pp. 2-11.
- Foster, Nikki. 2001. "Entrepreneurship in Rural Communities," Federal Reserve Bank of Minneapolis, *Community Dividend*, no. 2, pp. 6-12.
- Freear, John, Jeffrey E. Sohl, and William E. Wetzel. 1996. "Creating New Capital Markets for Emerging Ventures," U.S. Small Business Administration, Office of Advocacy, June.
- Friedman, Robert E. 1987. "The Role of Entrepreneurship in Rural Development." Proceedings of the National Rural Entrepreneurial Symposium, Knoxville, Tenn., February 10-12, pp. 1-6.
- Kayne, Jay. 1999. "State Entrepreneurship Policies and Programs," Kauffman Center for Entrepreneurial Leadership, Kansas City, Missouri.
- Kuhn, Peter J., and Herb J. Schuetze. 2001. "Self-employment Dynamics and Self-employment Trends: A Study of Canadian Men and Women, 1982-1998," *Canadian Journal of Economics*, vol. 34, no 3.
- Leicht, Kevin T., and J. Craig Jenkins. 1994. "Three Strategies of State Economic Development: Entrepreneurial, Industrial Recruitment, and Deregulation," *Economic Development Quarterly*, vol. 8, no. 3, August, pp. 256-69.
- Low, Murray B., and Ian C. MacMillan. 1988. "Entrepreneurship: Past Research and Future Challenges," *Journal of Management*, vol. 14, no. 2, pp. 139-61.
- Macke, Don, and Jay Kayne. 2001. "Rural Entrepreneurship: Environmental Scan," Kauffman Center for Entrepreneurial Leadership, Kansas City, Missouri, January 17.
- Malecki, Edward. 2001. "Going Digital in Rural America," *Exploring Policy Options for a New Rural America*. Proceedings of a conference sponsored by Federal Reserve Bank of Kansas City, Center for the Study of Rural America, pp. 49-68.
- _____. 1994. "Entrepreneurship in Regional and Local Development," *International Regional Science Review*, vol. 16, nos. 1 & 2, pp. 119-53.
- _____. 1988. "New Firm Startups: Key to Rural Growth," *Rural Development Perspectives*, February, pp. 18-23.
- Markley, Deborah. 2001. "Financing the New Rural Economy," *Exploring Policy Options for a New Rural America*, Proceedings of a conference sponsored by Federal Reserve Bank of Kansas City, Center for the Study of Rural America, pp. 69-80.
- National Commission on Entrepreneurship (NCOE). 2001a. *Building Entrepreneurial Networks*, December.
- _____. 2001b. *High-Growth Companies: Mapping America's Entrepreneurial Landscape*, July.
- _____. Undated. "Embracing Innovation: Entrepreneurship and American Economic Growth," white paper.

- Organisation for Economic Co-operation and Development (OECD). 2002. *OECD Small and Medium Enterprise Outlook*, Committee on Industry and Business Environment, Directorate for Science, Technology and Industry, July.
- Reynolds, Paul D., Michael Hay, and S. Michael Camp. 1999. *Global Entrepreneurship Monitor*. Kansas City, Mo.: Kauffman Center for Entrepreneurial Leadership.
- Reynolds, Paul D., S. Michael Camp, William D. Bygrave, Erkki Autio, and Michael Hay. 2001. *Global Entrepreneurship Monitor*. Kansas City, Mo.: Kauffman Center for Entrepreneurial Leadership.
- Small Business Administration. 2001. *Small Business Economic Indicators 2000*, Office of the Advocacy.
- Van de Ven, Andrew H., Roger Hudson, and Dean M. Schroeder. 1984. "Designing New Business Startups: Entrepreneurial, Organizational, and Ecological Considerations," *Journal of Management*, vol. 10, no. 1, pp. 87-107.
- Woo, Carolyn Y., Arnold C. Cooper, and William C. Dunkelberg. 1991. "The Development and Interpretation of Entrepreneurial Typologies," *Journal of Business Venturing*, March, vol. 6, no. 2, pp. 93-115.
- Wortman, Max S. Jr. 1996. "The Impact of Entrepreneurship upon Rural Development," chapter in Thomas D. Rowley, David W. Sears, Glenn L. Nelson, J. Norman Reid, and Mervin J. Yetley, eds., *Rural Development Research: A Foundation for Policy*.