Creating an Entrepreneurial Appalachian Region:

Findings and Lessons from an Evaluation of the Appalachian Regional Commission's Entrepreneurship Initiative 1997 – 2005

Evaluation Team:

Deborah Markley, RUPRI Center for Rural Entrepreneurship
Erik Pages, EntreWorks Consulting
Brian Dabson, RUPRI
Thomas Johnson, RUPRI
Sara Lawrence, RTI
Sara Yanosy, RTI
Karen Dabson, RUPRI Center for Rural Entrepreneurship

April 2008

ACKNOWLEDGEMENTS

The Evaluation Team – Deborah Markley, Erik Pages, Brian Dabson, Thomas Johnson, Sara Lawrence, Sara Yanosy, and Karen Dabson – would like to acknowledge the important role played by Catherine Renault on this project. Cathy was involved in developing the proposal and early project design, before returning to her roots in Maine as the Director of the Office of Innovation, Department of Economic and Community Development. She also provided input on the final report. The team would also like to acknowledge the input of the advisory group – Thomas Lyons, Edward Malecki, and Jonathan Potter. Their keen insights and input throughout the project helped to strengthen project design and the final report. The team also benefited from discussions held with ARC staff throughout the project, particularly Greg Bischak and Ray Daffner, as well as a group of advisors who discussed a summary report on key findings.

The senior members of the evaluation team would also like to acknowledge the heroic efforts of two members of the team, Sara Lawrence and Sara Yanosy, to develop and complete the database for the sample projects. They diligently tracked down project leaders to discuss projects that, in some cases, were completed almost 10 years earlier. They shared data and insights that greatly enhanced this evaluation.

Finally, this evaluation would not have been possible without the many individuals throughout the ARC region who shared project data, recollections and insights into the importance of the ARC Entrepreneurship Initiative to their individual rural places and to the broader region. We acknowledge their important contribution and greatly appreciate the time they took to talk with team members about their past and ongoing efforts to build a more entrepreneurial Appalachian region.

EXECUTIVE SUMMARY

From 1997 through 2005, the Appalachian Regional Commission (ARC) invested nearly $43 million in a ground-breaking program to stimulate and support entrepreneurship across Appalachia. The Entrepreneurship Initiative (EI) was the first large scale attempt to give greater focus to homegrown business development as a regional economic development strategy.

The Rural Policy Research Institute (RUPRI), the RUPRI Center for Rural Entrepreneurship, EntreWorks Consulting, and RTI were commissioned by ARC in 2006 to conduct an evaluation of EI in terms both of outcomes achieved by a sample of funded projects and of broader policy impacts across the region. The evaluation team undertook literature reviews, reviewed project files for a sample of 114 projects, conducted phone interviews with 36 stakeholders and experts, developed a metrics framework, completed interviews with project staff associated with 88 projects, made four site visits, and conducted a meta-analysis of the outcomes and impacts. The team's work was informed by a three-person advisory committee of leading academic experts on entrepreneurship – Dr. Thomas Lyons, Dr. Edward Malecki, and Dr. Jonathan Potter.

A review of entrepreneurship trends in the region during the EI provided the context and backdrop for ARC's investments. Over the period of the EI, trends in nonfarm proprietor and microenterprise employment in Appalachia showed increases in line with the nation as a whole, but trends in nonfarm proprietor income showed the region lagging behind the nation and slipping further behind by 2005. Data on the impact of entrepreneurship on the local economy showed that only 15 percent of Appalachian counties saw income increases associated with entrepreneurial activity that were higher than the national rate. It appears that entrepreneurship had greater impact in terms of both employment and income in the southern tier of Appalachian states. This evaluation was not designed to discern cause and effect between EI investments and these trends; however, the context is important for interpreting evaluation findings and understanding the resulting recommendations.

Also of contextual importance is the rapid growth in interest in and adoption of entrepreneurship development policies and programs since the EI began in 1997. A review of current literature provides many insights on the linkages between entrepreneurship and regional development and on the efficacy and impact of different types of entrepreneurship programs. This body of research work was not available to the designers of the EI but was particularly helpful in conducting the evaluation and determining appropriate performance metrics.

The evaluation team identified three goals that were at the core of the EI – to increase the number of entrepreneurs establishing businesses in the region, to increase the survival rate of such ventures, and to increase the proportion that develop into high growth businesses that create jobs and wealth in Appalachia.

These goals were operationalized through five program categories – entrepreneurship education, access to capital, business incubators, sector interventions, and technical assistance and training. There was also a sixth cross-cutting category of community capacity-building.

As identified through the final reports submitted to ARC, the EI led to the creation of at least 9,156 jobs, the retention of a further 3,022 jobs, the formation of 1,787 new businesses, and the provision of services to 8,242 businesses. The cost per job created was $4,693, which compares favorably with other economic development efforts. ARC investments were made in 340 unique projects across the region at an average investment per state of $3.3 million and investment per capita of $1.82. The total ARC investment has leveraged an additional $72.8 million in private investment for those projects that have been closed, a figure that is projected to rise to $109.9 million when all projects in the portfolio have been completed.

Other metrics identified through in-depth investigation of outcomes from the sample of projects expand on this picture. In the 88 projects included in the sample, over 11,500 students and teachers participated in or received training in entrepreneurship education projects, 1,500 entrepreneurs took part in sector-focused activities and another 1,620 received training and technical assistance.

The evaluation team's assessment of qualitative impacts were drawn from interviews with project leaders most familiar with the investments and regional stakeholders and entrepreneurship experts with deep experience both in the region and with entrepreneurship development – key informants. Common themes identified were that ARC investments:

- Raised the profile of entrepreneurship as a development strategy, helping to change the mindset within the region
- Represented "but for" money in the region, providing start-up funding for innovative projects
- Leveraged additional resources that helped some projects achieve scale and impact
- Facilitated networking and collaboration among practitioners
- Helped to change people's attitudes, particularly among youth and their teachers.

There were also a number of lessons gleaned from the many interviews conducted across the region, some of which will benefit those who are actively engaged in implementing entrepreneurship programs – the practitioners – and others which will guide future programs either of ARC or agencies across the country pursuing similar efforts. For the practitioners, the lessons were of three kinds:

- Lessons for Program Leadership
    - Successful entrepreneurship initiatives had sparkplugs or local champions that provided leadership for these efforts.
    - Local capacity was a key to success.

- Lessons for Program Management
    - Program self-sufficiency (sustainability) and success went hand in hand.
    - Entrepreneurship development was recognized to be a long-term process.
    - Successful projects altered their goals and approaches as conditions warranted.

- Lessons for Program Outreach
    - Partnerships and collaborations were important to success.
    - Successful projects celebrated and shared the story of their success.

For program designers and implementers, again the lessons were of three kinds:

- Lessons for Program Design
    - Practitioners and entrepreneurs have unique local knowledge that can be applied to program design and subsequent program refinements.
    - Successful initiatives brought together related investments, in this case, other regional economic development or entrepreneurship-related investments.

- Lessons for Program Implementation
    - Getting EI funds to local partners was dependent upon state leaders, such as governors and program managers, and varied based on the importance assigned to the initiative.
    - The size of ARC grants placed limits on regional impacts.

- Lessons for Program Impacts
    - Building a broader base of support for entrepreneurship investments requires continued efforts to “make the case” to local leaders.
    - Programs can be improved by embracing long-term and locally-driven evaluation of program outcomes and impacts.

Finally, the evaluation team offered three sets of recommendations to ARC. Regarding investments in entrepreneurship development:

- Entrepreneurship development initiatives should include assessment of existing capacity and capacity-building activities as part of the project design.
- Entrepreneurship development initiatives should be made with a focus on the long term.
- Entrepreneurship development initiatives receiving investments should be market-driven and practice continuous improvement.
- Emphasis should be placed on investing in initiatives that demonstrate the ability to form regional partnerships and collaborations.

The second set of recommendations is for creating a “best in class” metrics system:

- “Job creation” is an overused metric, paints an incomplete picture of the outcomes of entrepreneurship development investments, and should be replaced by an “entrepreneurship development metrics portfolio.” In addition to jobs created/retained and new business starts, this system should include outcome measures such as:
  - Change in business profitability (performance) following a capital investment
  - Number of youth considering business creation as a career option after participation in an education program
  - Percent of incubator tenants who graduate and remain in the region
  - Change in total sector sales over time as a result of investment to encourage sector development
  - Number of customers still in business after receiving technical assistance
  - Positive change in perceived community support for entrepreneurship as measured by community pre- and post-surveys.
- A “best in class” metrics system requires investment in a “best in class” evaluation system.

The third set of recommendations focus on program design and management:

- ARC’s initiative process should be regularized so that state program managers can more effectively plan for and promote the use of the resources.
- ARC’s proven experience can be applied to developing and delivering effective, region-wide education programs that help make the case for entrepreneurship as a core economic development strategy for the Appalachian region.
- To build on the momentum created by the EI, ARC should create a *Next Generation Entrepreneurship Innovation Initiative* that will be groundbreaking in its design. A long-term investment is recommended

that incorporates all the learning from the EI and the emerging entrepreneurship development field.

Table of Contents

CHAPTER 1
INTRODUCTION

In 1997, the Appalachian Regional Commission (ARC) began a multi-year initiative to invest in projects designed to build entrepreneurial economies across the region – the Entrepreneurship Initiative (EI). Since that time, ARC has invested almost $43 million (composed of EI funds and dollars from other ARC accounts) in various entrepreneurship development projects. Over 10 years, these projects have created jobs and businesses, supported partnerships and collaborations, and helped leaders at the community and state levels recognize the value of entrepreneurship as an economic development strategy. While ARC has collected select data to describe the outcomes of these investments, these data do not begin to tell the story about the extent to which and how the EI has had an impact on the region. This evaluation was designed to provide a more detailed and nuanced description of the impact of the EI, both in terms of the outcomes achieved by the portfolio of projects and the broader policy impacts across the region. This evaluation, however, must first be placed within the context of the initiative's history.

HISTORY OF THE PROGRAM

The EI emerged in 1997 as a special initiative under the leadership of then-Federal Co-Chairman Jesse White. White had long pushed for economic development strategies focused more on home-grown business development as opposed to business recruitment and attraction. As he told a Federal Reserve Bank of Kansas City symposium in 2000, "[W]e've got to re-instill in rural America the idea, particularly in Appalachia and the Rural South, that job creation, business creation, and, most importantly, wealth creation, occurs as a result of local indigenous business creation."[1] The EI was designed as a test of public policy approaches that sought to achieve this objective.

The genesis for the EI was in the belief that entrepreneurial activity could be encouraged through strategic investments in education, business assistance, and capacity building projects. Areas for strategic investment identified prior to the launch of the EI included:

- Access to capital and financial assistance
- Technical and managerial assistance
- Technology transfer
- Entrepreneurial education and training
- Entrepreneurial networks.

[1] Jesse White, "Overview Panel Comments," Proceedings of Federal Reserve Bank of Kansas City Conference on Beyond Agriculture: New Policies for Rural America (April 2000):193.

The EI was originally funded with $15 million over three years, with additional investments being provided beyond this original total. Through 2000, ARC had invested $17.6 million in 169 projects.[2] Through 2003, ARC had invested $31.4 million in 368 projects. An additional amount of approximately $11 million was invested in subsequent years through the EI or via the use of Area Development funds. Table 1.1 shows ARC investment in entrepreneurship-related activities by source of funds for the period of this evaluation. While all ARC investments in entrepreneurship were not specifically drawn from EI funds, the rationale for making these investments was clearly driven by the goals associated with the EI. Today, ARC continues to fund entrepreneurship development-related projects under the Asset-Based Development Initiative launched in 2005, although the EI is no longer operating as a stand alone initiative. The Asset-Based Development Initiative is building on the foundation laid by the EI, leveraging the new businesses and additional capacity created by EI investments.

Table 1.1 ARC Funds Invested in Entrepreneurship-Related Projects, 1997-2005, by Source of Funds

Source of funds	$ invested
Entrepreneurship Initiative	26,546,366
Area Development	6,698,724
Commission's EI	3,206,803
Distressed Counties	3,052,109
CoChair Fund	2,432,440
Regional Initiatives	868,673
Goal Fund	114,000
New Markets Fund	52,574
TOTAL	**42,971,688**

ORGANIZATION OF THE EI

ARC's special initiatives are traditionally designed to support innovative local projects and also to serve as a demonstration of new regional development strategies and approaches. ARC officials were very explicit about the importance of the EI as a means to demonstrate the viability of entrepreneurship as an economic development strategy. Interviewed experts also emphasized this aspect of the EI.

The EI's organization reflects this dual focus on educating local leaders and on maximizing the effect of local project investments. In pursuing its wider educational goals, ARC recognized the need to form partnerships and engage other institutions in order to achieve sustainable impacts in the region. Through the formation of four advisory committees with significant private sector

[2] For an early review of these investments, see Regional Technology Strategies, Inc., Evaluation of the Early Stages of the Appalachian Regional Commission's Entrepreneurship Initiative, A Report to the Appalachian Regional Commission, December 2001.

participation, ARC was able to tap into national expertise and "best practices" to guide the initiative. Each advisory committee was charged with providing input to ARC in a particular program area – entrepreneurship education, technical assistance, capital access, and sectorally targeted strategies. In particular, these advisory committees helped to organize a region-wide educational effort that augmented the specific project investments made by ARC. Elements of this educational effort included, for example:

- Scholarships to the 16th Annual Entrepreneurship Education Forum and support for three regional entrepreneurship conferences; creation of the Springboard Youth Entrepreneurship Education Awards; creation of the Entrepreneurship Everywhere web-based resource guide[3]
- Support for conferences on sector-based development; a competitive grant program for "strategic sectoral interventions" in the region
- Sponsorship of a workshop on community development venture capital; follow-up regional workshops on equity capital in rural communities; publications on developmental venture capital in the region; creation of an opportunity fund to leverage private investment using the New Markets Tax Credit program
- Funding for four workshops on business incubation "best practices" in the region; a survey on business incubators in Appalachia; creation of a business incubation mentor program.

These region-wide educational efforts were, for the most part, funded outside the EI, using other ARC dollars, such as Commission or CoChair funds. While using distinct funding sources, these projects also contributed to the mission of the EI – to encourage the development of an entrepreneurial economy in the region. In fact, it is not possible to separate the impact of broader ARC investments in entrepreneurship from those specifically identified with the EI. Most of ARC's investments through the EI resulted in project-specific outcomes; the outcomes of their educational efforts were much broader, serving to raise the overall level of regional awareness about specific aspects of entrepreneurship development – education, sector approaches, capital and incubation. The impacts, in most cases, were not confined to particular communities or even states. Instead, the impacts could be measured in terms of increased understanding of several aspects of entrepreneurship development and enhanced capacity to design and implement entrepreneurship activities within the region.

While this evaluation did not seek to quantify ARC's capacity building and education impacts related to entrepreneurship development, this effect was cited in nearly all of the interviews with outside experts and state level officials. During interviews, the evaluation team regularly heard comments such as the EI "opened people's eyes to other possibilities" or "the program got people talking about entrepreneurship." Several other programs, such as the New Markets

[3] Available at <http://www.entre-ed.org/_arc/home1.htm>.

Venture Capital program, built on momentum generated by the EI. In fact, two of the first six New Markets Venture Capital companies operate in Appalachia.

While the EI's impact in terms of building better awareness of entrepreneurship cannot be quantified, it should be included in any full accounting of the EI's outcomes. The EI was designed as a demonstration, i.e., to test new policy models and to encourage Appalachian communities to focus within on nurturing home-grown businesses. Today, nearly all of the Appalachian states are involved in some form of organized efforts to promote entrepreneurial development. While the ARC cannot claim sole credit for this shift in thinking, based on feedback from key stakeholders it is clear that the EI played a role in convincing policy makers that supporting entrepreneurs is good economic development policy.

STRUCTURE OF THIS REPORT

This report presents the findings from an evaluation of ARC's investments in entrepreneurship development from 1997 through 2005. Based on analysis of data collected by ARC, in-depth research into the impacts associated with a sample of ARC-funded projects, and interviews with a broad range of stakeholders, this evaluation provides key insights into the value of the EI to the region. Chapter 2 provides an overview of entrepreneurship development, particularly in terms of the state of the field in 1997, the beginning of the EI. This context is important for understanding how innovative ARC was in launching the EI, plowing new ground in terms of economic development. Chapter 3 lays out the conceptual framework developed to guide this evaluation process and reviews relevant evaluation literature related to entrepreneurship development. This review of the literature served as the basis for developing the metrics framework that would guide in-depth evaluation of sample projects. Chapter 4 describes this metrics framework and the overall research approach used in this study.

Chapter 5 describes key aspects of the Appalachian region's business and economic environment that created the context for the EI. It is this context that created the need for and gave rise to the projects that became part of the EI portfolio. Changes over the ten year time horizon of the EI are also presented. Chapters 6 and 7 provide the key findings from this evaluation. Chapter 6 describes the types of projects in which ARC invested and presents data on key metrics collected by ARC for all projects. Chapter 7 provides a detailed discussion of the impacts, quantitative and qualitative, associated with the sample of projects considered for this evaluation. Chapter 8 presents the lessons learned from the EI experience for both practitioners of entrepreneurship development and policy makers who may be considering similar types of investment programs in the future. Finally, Chapter 9 provides recommendations, based on evaluation findings, for the field and for ARC going forward.

CHAPTER 2
REVIEW OF THE ENTREPRENEURSHIP DEVELOPMENT FIELD

While entrepreneurship has always been a feature of the American (and Appalachian) landscape, the history of explicit public support for regional entrepreneurial development is quite brief. Indeed, ARC's Entrepreneurship Initiative serves as one of the first such large-scale efforts, and the absolute first such effort investing Federal dollars in regional entrepreneurship strategies.

At the time of the Entrepreneurship Initiative's unveiling in 1997, ARC's leadership had grown increasingly concerned about Appalachia's future vitality. The region was especially hard hit by cutbacks in declining sectors such as timber, textiles, tobacco, and was seeking new approaches to jump start development. Entrepreneurship-focused economic development strategies were viewed by ARC as ". . . a critical element in the establishment of self-sustaining communities that create jobs, build local wealth, and contribute broadly to economic and community development."[4]

By investing in the Entrepreneurship Initiative in 1997, the ARC was something of an "early adopter." Up to that stage, economic developers had focused almost exclusively on industrial recruitment as a core strategy. The industrial restructuring of the 1970s and the 1980s had stimulated some interest in business retention and technology development strategies, but entrepreneurial development strategies represented something of a "new thing" in 1997.[5]

Nevertheless, ARC was not promoting entrepreneurship without some evidence that it would make a significant contribution to economic opportunity in Appalachia. In the late 1980s, Eisinger discussed the limited returns to traditional economic development activities and suggested a more important role for entrepreneurial, growth from within, economic development strategies.[6] There was some research that questioned the efficacy of traditional "smokestack chasing" and some that provided insights into the impact of specific programs such as business incubation, youth entrepreneurship, and targeted technical assistance. What was missing at that time was the evidence to link entrepreneurship to regional and community development, and to identify which policy interventions, and in what combination, would lead to increased entrepreneurial activity. Over the past decade, there has been rapidly growing interest among researchers and policy analysts in entrepreneurship as a core

---

[4] Appalachian Regional Commission, Entrepreneurship Initiative: Program Summary and Approved Projects, September 2003, 9 August 2007 <http://www.arc.gov/index.do?nodeId=1970>.

[5] For background, see Erik R. Pages, Doris Freedman, and Patrick Von Bargen , "Entrepreneurship as a State and Local Economic Development Strategy," The Emergence of Entrepreneurship Policy: Governance, Start-Ups and Growth in the U.S. Knowledge Economy, Ed. David Hart, Cambridge, MA: Cambridge University Press, 2003.

[6] Peter K. Eisinger, The Rise of the Entrepreneurial State: State and Local Economic Development Policy in the United States, Madison, WI: University of Wisconsin Press, 1988.

economic development strategy, and more evidence has been found to support this approach. It was important to the evaluation to understand the implications of this expanded understanding in order to appropriately assess the value and impact of the EI investment.

This chapter provides a brief overview of research, policy and practice that addresses two primary questions:

- What makes a region (or community) entrepreneurial?
- What policy or community interventions, if any, can help support entrepreneurial development?

WHAT MAKES A REGION ENTREPRENEURIAL?

Researchers have examined a host of both macroeconomic and microeconomic factors that help explain the innovation or entrepreneurial capacities of a region. At the broadest level, recent research has reviewed how leading demographic trends are correlated with new firm births. For example, in a 1994 review article, Reynolds, Storey and Westhead describe key factors that are associated with higher levels of new firm starts.[7] These include net population growth, increases in personal or household income or regional gross product, high population density, high educational levels among population, and a high percentage of population between the ages of 25 and 44. Acs and Armington similarly find that higher relative education levels strongly affect new firm formation rates, especially among service businesses.[8] These same factors have been highlighted in the cross-national research studies conducted under the auspices of the Global Entrepreneurship Monitor (GEM) research consortium.[9]

While this literature contains something of a consensus about several key factors (e.g., population growth, higher education levels) that are correlated with higher new firm formation rates, some researchers caution that the causal chain still remains unclear. For example, Feldman notes that many key factors associated with entrepreneurship, such as the presence of local venture capital firms, may actually lag instead of lead entrepreneurial growth.[10] In other words, these

[7] Paul Reynolds, D.J. Storey, and P. Westhead. "Crossnational Comparisons of the Variation in New Firm Formation Rates, Regional Studies 28.4 (1994):443-456.
[8] Zoltan Acs and Catherine Armington, "Using Census BITS to Explore, Entrepreneurship, Geography, and Economic Growth," Research Summary No. 248, Small Business Administration Office of Advocacy, February 2005. Similar findings that emphasize the importance of local educational levels as well as local employment growth and productivity rates can be found in Advanced Research Technologies, "The Innovation-Entrepreneurship NEXUS," Research Summary No. 256, Small Business Administration Office of Advocacy, April 2005.
[9] Begun in 1999, the Global Entrepreneurship Monitor project is a cross-national effort to assess national rates of entrepreneurship. Begun with ten countries, the research program now tracks entrepreneurial activity in forty-two countries. The project's research reports can be accessed at <www.gemconsortium.org>.
[10] Maryann Feldman, "The Entrepreneurial Event Revisited: Firm Formation in a Regional Context," Industrial and Corporate Change 10.4 (2001):861-891.

regional assets emerge as a result of strong local entrepreneurial activity. They are a by-product, as opposed to a trigger, for high firm formation rates. Feldman concludes by cautioning that each region's entrepreneurial development activities generally emerge from a unique and idiosyncratic mix of historical factors, local resources, and business conditions.

PUBLIC POLICY AND ENTREPRENEURSHIP

While many economists and researchers continue to assess how various demographic and macroeconomic factors help drive regional entrepreneurial activity, policy makers, including the ARC's leadership, are more concerned with questions of how (and whether) policy interventions can affect a region's entrepreneurial propensities and development patterns. A large and growing literature examines this issue,[11] and much of this work has helped guide the strategic direction of ARC's own Entrepreneurship Initiative.

While individual analysts may differ on the relative importance of certain regional factors, there is relatively strong consensus that five factors are especially important:

- Access to Capital
- Enabling Culture
- Local Networks
- Supportive Infrastructure
- Supportive Government Policies.

A more detailed description of each factor and the public policy approaches used to address them is provided below.

Access to Capital

Successful entrepreneurial regions tend to enjoy a wide range of options for financing businesses at different stages of the business life cycle. Successful regions host a variety of financial institutions that can provide businesses with a range of both equity and debt financing options. Rural communities may be especially challenged on this front. Recent US Department of Agriculture-sponsored research has found that rural areas tend to have fewer lenders and less diverse markets. While rural areas do have less bank competition, the study found few rural-urban differences between the cost and availability of debt

[11] For an excellent comprehensive literature review, see Jill S. Taylor, "What Makes a Region Entrepreneurial? A Review of the Literature," Monograph, Cleveland State University, Center for Economic Development, September 2006. Other good sources include Brian Dabson, et al., Mapping Rural Entrepreneurship, Washington, D.C.: CFED, August 2003; Deborah Markley, Don Macke and Vicki Luther, Energizing Entrepreneurs: Charting a Course for Rural Communities, Lincoln, NE: Heartland Center for Leadership Development, 2005, and OECD, Entrepreneurship and Local Economic Development, Paris: OECD, 2003.

financing.[12] In fact, a recent study of capital access in the Appalachian region found that banks in the region had higher small business loan to deposit ratios as compared to national figures.[13]

However, businesses in rural regions experience capital access problems when their needs fall outside the type of loans traditionally made by banks – e.g., microloans (to fund very small enterprises with limited collateral) and equity finance. Microenterprise development was just emerging in the early to mid-1990s. A recent study of the industry noted that only about one-quarter of microenterprise programs listed in a 2001 directory existed before 1991.[14] The importance of providing both training and microfinancing to entrepreneurs was just being viewed as a development strategy as ARC invested in the EI.

Appalachia also suffers in terms of access to equity finance. For example, a 2000 ARC study found that only 1/3 of 1% of all venture capital ($117 million) was invested in rural regions of Appalachia.[15] A more recent study of capital access in the Appalachian region shows improved access to equity capital.[16] Through 2004, the study shows that ARC had invested in 11 funds in seven states and these funds collectively had invested $13.6 million in regional businesses. If all of this investment is considered new to the region, it represents a 12% increase in equity capital as compared to that found in 2000. However, the later study also identified a need to continue to expand the capacity of community development financial institutions in the region by broadening sources of funds, increasing self-sufficiency, and expanding products available to businesses.

As a result of these market gaps, policy makers in Appalachia and elsewhere have supported a host of initiatives to develop new sources of microcredit and equity and equity-like capital.[17] Within the region, ARC funded microenterprise development initiatives and revolving loan funds, as well as others that created a venture capital industry. At the Federal level, these initiatives include the Small Business Administration's (SBA) Microenterprise Loan and PRIME (Program for

---

[12] Ray Collender, et al., "Financial Markets Serve Rural Areas Fairly Well," Rural Development Perspectives 14.1 (May 1999):28-35.
[13] National Community Reinvestment Coalition, Access to Capital and Credit for Small Businesses in Appalachia, Washington, D.C.: National Community Reinvestment Coalition, April 2007.
[14] Elaine L. Edgcomb and Joyce A. Klein, Opening Doors, Building Ownership: Fulfilling the Promise of Microenterprise in the United States, Washington, D.C.: FIELD, A Program of the Aspen Institute, 2005 <http://www.fieldus.org/Publications/FulfillingthePromise.pdf> 28 January 2008.
[15] Appalachian Regional Commission, Capitalizing on Rural Communities, Washington, DC: Appalachian Regional Commission, 2000, 8.
[16] National Community Reinvestment Coalition, April 2007.
[17] Deborah Markley, et al. Rural Equity Capital Initiative Study of Nontraditional Venture Capital Institutions, RUPRI PB2001-11A-D, 2001, <http://www.energizingentrepreneurs.org/content/cr.php?id=4&sel=2>. An excellent summary of these efforts can be found in a special issue of the Federal Reserve Bank of San Francisco's Community Development Review 3.2 (2006).

Investment in Micro-Entrepreneurs) programs, the Small Business Investment Company (SBIC) program, the New Markets Tax Credit initiative, the CDFI Fund, and other efforts. State and local initiatives have been more far-reaching and comprehensive, including Nebraska's Microenterprise Partnership Fund, the Oklahoma Center for the Advancement of Science and Technology (OCAST) and the Pappajohn Entrepreneurship Center at North Iowa Area Community College (NIACC). Nebraska provides state support for microenterprise development through a public-private partnership that channels investment to microenterprise development programs across the state through a competitive process. OCAST has developed a comprehensive set of financing tools for technology businesses in the state that includes pre-seed financing of up to $100,000 for tech start-up companies, a seed capital program with equity investments up to $750,000, and a number of technical assistance and sector-specific programs.[18] NIACC's capital programs are designed to work hand-in-hand with technical assistance and education programs available at the community college. Capital programs include a revolving loan fund providing debt capital, a nanoloan program providing debt capital for microenterprises, and access to both formal venture capital and angel investors.[19] Finally, private programs, such as the creation of local angel investor networks, are also being introduced across the US. Angel investor groups have grown from 50 formal groups in 1997 to an estimated 170 formal and informal groups in 2002;[20] there were an estimated 200,000 individual angel investors active in 2002 and 234,000 in 2006.[21]

Enabling Culture

The need for an "enabling culture" is widely recognized in the literature, but the details of what constitutes such a culture are expressed in different ways by researchers and practitioners. At the most basic level, an enabling culture is one that understands, recognizes, and honors the importance of local entrepreneurs. These three terms – understanding, recognizing, and honoring – also connote three different sets of potential policy interventions.

---

[18] More information is available about OCAST on their website, <http://www.ocast.state.ok.us/>.
[19] More information about NIACC can be found on their website, <http://www.niacc.edu/pappajohn/> and in Deborah Markley and Karen Dabson, Innovative Approaches to Entrepreneurial Development: Cases from the Northwest Region, RUPRI Center for Rural Entrepreneurship, 2006, 32-41.
[20] "Business Angel Investing Groups Growing in North America," Ewing Marion Kauffman Foundation, October 2002, 4 December 2007 <http://www.angelcapitaleducation.org/dir_downloads/resources/BestPractices_Summit1.pdf>;
[21] "Full Year 2002 Angel Market Analysis Report," Center for Venture Research, Whittemore School of Business and Economics, University of New Hampshire, 4 December 2007 <http://wsbe2.unh.edu/files/Center%20for%20Venture%20Research%20Press%20Release%20June%202003%20-%20The%20Angel%20Investor%20Market%20in%202002.pdf>; Full Year 2006 Angel Market Analysis Report," Center for Venture Research, Whittemore School of Business and Economics, University of New Hampshire, 4 December 2007 <http://wsbe2.unh.edu/files/Full%20Year%202006%20Analysis%20Report%20-%20March%202007.pdf>.

To promote understanding, analysts recommend the introduction of entrepreneurship education to all parts of the population. The introduction of entrepreneurship education at the college and university level has been a resounding success. In 1979, only 127 schools offered courses in small business and entrepreneurship. Today, more than 1600 schools offer this training.[22] Community colleges have also witnessed major growth in entrepreneurship training. The introduction of entrepreneurship education at the primary and secondary school levels has been less smooth, but innovative programs and curricula are widely available across the US.[23]

To promote recognition, analysts have advocated for several ideas, including more active entrepreneur involvement in the policy-making process. Given the time demands of running a business, few entrepreneurs have stepped up to this challenge. However, several states have created advisory bodies, such as New York's Small Business Advisory Board, to provide opportunities for this input. The creation of regional business plan competitions is another widely used tool that helps publicize local entrepreneurs. These competitions exist across the US, with a scale that can range from major national/international competitions to smaller local efforts focused on youth or specific market segments. Several of the ARC's Entrepreneurship Initiative grants funded efforts of this sort.

To honor entrepreneurs, many analysts recommend the creation of awards programs such as local Entrepreneur of the Year Awards.[24] ARC's own Springboard Awards, designed to honor innovations by entrepreneurship educators, was a particularly effective design for a regional awards program.

These education and recognition efforts are critical to improving the local climate for entrepreneurs, but existing cultural attitudes also come into play. Extensive research indicates that cultural factors play an important role in explaining differing entrepreneurship rates across countries and even within countries. For example, Giannetti and Simonov find that the presence of local entrepreneurial role models helps explain differences in regional entrepreneurship rates.[25] A recent US study also stresses the importance of role models.[26] Research sponsored by the Global Entrepreneurship Monitor project notes that differences

---

[22] Jerome Katz, And Another Thing. . .,"2006 Coleman Foundation White Paper on Entrepreneurship Education, 2006 Annual Meeting of US Association of Small Business and Entrepreneurship, January 13, 2006, 9 August 2007 <http://www.usasbe.org/knowledge/whitepapers/Katz%20White%20Paper-Final.pdf>.
[23] For background, see National Governors Association, A Governor's Guide to Strengthening State Entrepreneurship Policy, Washington, DC: National Governors Association, 2004.
[24] National Governors Association, 2004.
[25] Mariassunta Gianetti and Andrei Simonov, On the Determinants of Entrepreneurial Activity: Individual Characteristics, Economic Environment, and Social Norms, White Paper, Stockholm School of Economics, June 2004, 9 August 2007, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=554511#PaperDownload>.
[26] Edward J. Malecki, "Geographical Environments for Entrepreneurship," International Journal of Entrepreneurship and Small Business, Forthcoming 2008.

in cross-national entrepreneurship rates are influenced by local cultural attitudes toward risk-taking and fear of failure.[27] Like many rural regions, some Appalachian communities perform poorly on various measures of cultural attitudes toward entrepreneurship. Indeed, the ARC's own materials note that "the culture of entrepreneurship is neither wide nor deep throughout Appalachia."[28]

From the perspective of ARC's Entrepreneurship Initiative, recognition of the importance of an enabling culture is reflected in the number of program investments that can be described as "community capacity building" – facilitating visioning, leadership development, asset-mapping and community engagement activities intended to make the community more supportive of and attractive to entrepreneurs. In many cases, initial ARC investments were designed to build capacity for supporting entrepreneurs, with follow on investments supporting program implementation. These capacity building investments were designed, in essence, to enhance community social capital. An extensive literature measuring the importance of social capital for economic development, and the impact of enhanced social capital on community development outcomes, has been developed by researchers, particularly Cornelia Flora.[29]

Local Networks

Networks refer to local locations (both virtual and physical locations) where entrepreneurs can gain access to peers and others with expertise or knowledge about the processes of starting and growing a business. Entrepreneurs regularly report that such networks are a critical component in helping them learn the ins and outs of business and gain easier access to needed support services.[30] Such networks are commonplace in major urban areas, especially in technology hot spots such as Silicon Valley or Boston. They are less commonly found in rural areas as they typically depend on a critical mass of local business owners with an interest in networking. Because these dense concentrations of business owners and service providers do not exist in many rural regions, networking opportunities are often lacking.

---

[27] See, for example, Maria Minniti with William Bygrave and Erkko Autio, Global Entrepreneurship Monitor 2005 Executive Report, <http://www.gemconsortium.org/about.aspx?page=global_reports_2005>.

[28] Appalachian Regional Commission, Entrepreneurship Initiative: Program Summary and Approved Projects, September 2003, 9 August 2007 <http://www.arc.gov/index.do?nodeId=1970>.

[29] See for example, Mary Emery and Cornelia Flora, "Spiraling Up: Mapping Community Transformation with Community Capitals Framework," Journal of the Community Development Society 37.1 (Spring 2006):19-35.

[30] See, for example, Erik R. Pages and Shari Garmise, "The Power of Entrepreneurial Networks," The Economic Development Journal 2.3 (Summer 2003):20-30. For a local example of network building efforts, see North Carolina Rural Economic Development Center, Hello, My Business Name is …: A Guide to Building Entrepreneurial Networks in North Carolina, Raleigh, NC: North Carolina Rural Economic Development Center, 2007.

Many regional organizations – both public and private – have jumped in to help seed new networks. By providing staff support and limited funding, economic developers hope to jump start local networks that can then operate on their own. The networks can operate in a manner that is open to all entrepreneurs, such as a regional network, or they can focus on the issues and challenges facing a specific industry sector or cluster, such as ceramics and related industries.

Supportive Infrastructure

Entrepreneurs are no different from other kinds of business owners in their need for a supportive and reliable physical infrastructure including transportation, water and sewer. Building such infrastructure has been a traditional focus of ARC, through its highway program and other investments. More recently, ARC's broadband initiative has invested in providing critical IT-related infrastructure for the region's businesses.

ARC-sponsored research clearly indicates the powerful impacts of investments in traditional infrastructure such as highways, water and sewer facilities, and industrial parks.[31] Investments in broadband infrastructure can also have beneficial economic development impacts. Research from Minnesota indicates that the presence of high speed Internet access was a major factor in explaining the presence of local gazelle (fast-growing) businesses in regions across the state.[32] Other research indicates that communities with extensive broadband access outperform comparable regions without such amenities in terms of job growth and the number of businesses.[33]

Supportive Government Policies

While entrepreneurs may succeed anywhere, they are more likely to flourish in a region where government and community leaders are "entrepreneur-friendly." This can take two forms:

- The creation and nurturing of a supportive tax and regulatory climate
- The provision of a wide range of private and publicly-funded business services, including technical assistance, incubators, and other forms of specialized support.

[31] The Brandow Company and Economic Development Research Group, Evaluation of the Appalachian Regional Commission's Infrastructure and Public Works Program Projects, Washington, D.C.: Appalachian Regional Commission, 2000.
[32] Thu-Mai Ho-Kim and Ernesto Venegas, "Starting Up Economic Engines: Key Factors for Growing Successful Start-Ups," Minnesota Department of Employment and Economic Development Issue Brief, October 2003.
[33] Sharon E. Gillett, et al, Measuring the Economic Impact of Broadband Deployment, Washington, D.C.: Economic Development Administration, February 28, 2006.

An early study by the National Commission on Entrepreneurship documented federal policy in support of entrepreneurship from 1958-1998.[34] Since that time, much of the policy innovation surrounding entrepreneurship has occurred at the state level. For example, in 2004, the Kansas legislature passed a comprehensive package of legislative support for entrepreneurship development including the creation of an entrepreneurship center and implementation of a tax credit program to spur investment in new ventures.[35] As the focus has shifted from federal to state policy in recent years, the impact analysis of these policies remains to be done.

THE STATE OF THE FIELD AND THE EI

Much of the research and policy innovation described above has happened in the years since ARC's EI was launched. For example, the Global Entrepreneurship Monitor project was initiated first in 1999 with only 10 countries; GEM 2007 research is being conducted in 42 countries. Most state innovations have occurred since 2000. ARC was clearly leading the way in encouraging the practice of entrepreneurship as an economic development strategy. As such, ARC investments were designed to demonstrate the potential associated with a wide range of strategies, from youth education to venture capital development. Given that the entrepreneurship development field was in its early innovation stage, such an approach, referred to by one stakeholder as "let a thousand flowers bloom," was strategic in its design and appropriate for the time.

---

[34] National Commission on Entrepreneurship, American Formula For Growth, Washington, D.C.: National Commission on Entrepreneurship, October 2002.

[35] The Kansas Economic Growth Act of 2004 established the Kansas Center for Entrepreneurship and introduced several capital initiatives including StartUp Kansas – a seed capital fund, authorization for regional foundations, and angel networks. A review of other state efforts can be found in National Governors Association, 2004.