6 Economic Gardening: Next Generation Applications *for a* Balanced Portfolio Approach *to* Economic Growth

Synopsis

Economic gardening is an innovative entrepreneur-centered economic growth strategy that offers balance to the traditional economic development practice of business recruitment.[1] It was developed in 1989 by the city of Littleton, Colorado, in conjunction with the Center for the New West. While it was introduced as a demonstration program to deal with the sudden erosion of economic conditions following the relocation of the largest employer in the city at that time, it has emerged as a prototype for a rapidly expanding movement of like-minded economic developers looking for additional methods to generate truly sustainable economic growth for their community, region, or state. The purpose of this article is to examine the history, context, and application of economic gardening principles and practices, as well as the evolving application of specific programs in cities, regions, and states beyond Littleton, Colorado. A basic tenet of the article is that smart civic leaders and decision-makers of the future will adopt a portfolio approach to economic development that balances "outside-in" with "inside-out" strategies, tailored to local conditions, assets, and leadership.

Economic gardening is finding application in a number of community settings, especially in the Western states. Next frontiers lie at the state level, where several states have adopted statewide economic gardening principles and practices. More than simply a metaphor for explaining evolving priorities

1 This chapter was prepared under contract with the U.S. Small Business Administration, Office of Advocacy, by Steve Quello and Graham Toft. As managing partner and principal of CCS Logic,Quello specializes in the development of custom programs designed to accelerate organizational growth by identifying and engaging solutions that encourage the release of "network effect" principles. Toft is the principal of Growth Economics and a strategic planner specializing in how the "idea economy" brings change to communities, regions, states, countries, industries, and educational institutions.

and practices in the field of economic development, economic gardening is emerging as a cohesive framework of proven techniques that both challenge and complement conventional wisdom in the field.

Background and Context

"Entrepreneurial innovation is the essence of capitalism."

—Joseph Schumpeter, 1934

The contemporary expression of economic gardening principles and practices has, at its core, elements common to longstanding tenets of free market economic theory. However, economic development as an art of public policy has evolved with changing economic conditions. Beginning in the 1930s, economic development focused on business recruitment ("outside-in") strategies.[2] After the early 1980s, entrepreneurship and small business policies and practices gained momentum. Now the focus is shifting to designing public policies to support various stages of business growth and growth companies, and fostering technology-based economic development (TBED). This evolution in economic development policy has its roots in the simple reality that state policymakers have a better understanding of the opportunity costs involved in incentive-based programs, and they recognize that the commitment of large businesses to a particular state, region, or community is more fluid than ever before.

This chapter is about the evolution of an experiment outside the mainstream of economic development that now offers insight and lessons learned, as economic development policy and practice adapts to what most agree is some form of "post-industrial economy."[3] This rapidly transforming U.S. economy is not about the demise of manufacturing but the emergence of advanced manufacturing methods,[4] advanced business and financial services, exploding leisure and recreation industries, biomedical technologies and services, the information technology industry, etc. It is also about the dramatically changing

2 W. Schwecke, Carl Rist, and Brian Dabson, *Bidding for Business: Are Cities and States Selling Themselves Short?* (Corporation for Enterprise Development, Washington, D.C, 1994).

3 Sharon Barrios and David Barrios, "Reconsidering Economic Development: The Prospects for Economic Gardening" (*Public Administration Quarterly* 28:1/2, Spring 2004), 70–101.

4 Glen Johnson, chairman of the Illinois Manufacturers' Association, dubbed such methods "intellifacturing;" see ima-net.org/library/tim/timsummer05.pdf.

proportions of firms in different size categories. The National Commission on Entrepreneurship noted in 1999: "In the late 1960s, one in four persons worked in a Fortune 500 firm; now 1 in 14 do."[5] In this context, constant innovation with commercialization becomes the hallmark of success, enabled by an entrepreneurial culture.

The economic gardening model developed in Littleton, Colorado, is instructive and timely, deserving wider consideration. What has evolved in Littleton, somewhat underreported in national and state economic development policy and practice, now deserves centerpiece consideration as state, regional, and local leaders play an increasingly competitive game in global economic redistribution. It is a game where reliance upon conventional recruitment and retention strategies is not as productive as in the past, and future success will require increasing innovation and adaptation from businesses and community leaders.

State / Local Economic Development Policy in Historical Context

The history of modern economic development policy and practice in the United States has its roots in Mississippi in the 1930s. At that time, the prospects for relocating manufacturing from the North to the South were becoming apparent. To make known its low-cost operating environment, Mississippi introduced direct marketing and incentives through the BAWI program (Balance Agriculture with Industry).[6] Mississippi's approach soon took root in the rest of the South, with land giveaways, financial incentives, and tax breaks offered in various forms. The southern states continue with this traditional "outside-in" approach, but the practice (with incentives) has become quite similar across most states. Some now believe that an "inside-out" approach adds needed differentiation to an overall growth strategy.

With the back-to-back harsh recessions of 1980 and 1982, much of the Northeast and Midwest were particularly hard hit. At this same time the first "tech fever" emerged in economic development. Virtually all states wanted to model their future growth after the success of Silicon Valley in California and

5 National Commission on Entrepreneurship, "Forging New Ideas for a New Economy" (Washington D.C. NCOE, 1999), 3.

6 Connie Lester, "Economic Development in the 1930s: Balance Agriculture with Industry," *Mississippi History Now*, May 2004, http://mshistory.k12.ms.us/features/feature52/economic.htm.

Route 128 in Massachusetts. This period was energized by the work of David Birch on the centrality of small companies and "gazelles" in job creation.[7] Quite fresh and innovative, Birch's insights influenced the development of new initiatives at the state level, including state-supported product development corporations, science and technology corporations, incubators, and early venture fund creation. By the end of the 1980s, some state and local policymakers were becoming concerned with the generous handouts for both business recruitment and new business creation. In particular, some realized they did not have the resources or organization to compete successfully in business recruitment. The Littleton experiment grew out of such modifications to conventional economic development practices.

As a result of the dot-com and technology boom of the 1990s, a second "tech fever" took hold. Its focus was even more technology- and venture capital-intense. Seeding university spin-offs and venture capital and angel networks, the trend especially targeted sectors believed to offer "winning technologies," such as the biosciences. Cluster theory, as conceived and advocated by Michael E. Porter, has influenced this second tech fever, leading to de facto industrial policy in some states and regions.[8]

While this second technology fever will inevitably play out in larger metropolitan areas and some college towns, it has eluded many small to mid-sized communities and rural regions. Some more fundamental rethinking is now under way: what are the essential engines of economic growth in a rapidly changing global economy? A small but growing community of advocates, representing cities and regions in every state of the country, has focused interest on the economic gardening approach of Littleton, Colorado, because it (1) is soundly based on economic growth principles, (2) requires fewer public resources than traditional recruitment initiatives, (3) is more focused on where rapid growth occurs—in second- and third-stage companies—and (4) does not require "picking winner industries," but rather recognizes the critical role played by growth companies of all sizes across diverse sectors.

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7 David L. Birch, *Job Creation in America: How Our Smallest Companies Put the Most People to Work* (Free Press, 1987).

8 Michael E. Porter, "Clusters and the New Economics of Competition" (*Harvard Business Review* 76:6, Nov–Dec 1998), 78–79.

It is important to point out that business recruitment efforts remain very important to U.S. localities, regions, and states. In fact, with U.S. dollars accumulating in the hands of foreign investors because of large and continuing trade deficits, opportunities for foreign direct investment in the United States abound. In particular, it makes sense for states and large metro regions to be in the hunt for global capital on the move. Nevertheless, many localities and small regions, even small states, cannot afford to play this high-stakes game. What should they do? Reevaluate the dominance of their business recruitment efforts by adding a heavy dose of "growth from within."

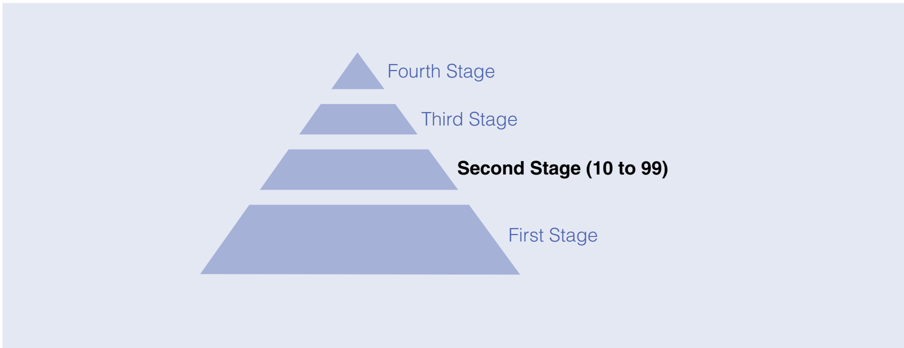
Today's Economic Growth Focus: Second and Third Stage Growth, Growth Companies and Related Definitions

Stages of Growth

What counts for the future will be the number of growth companies or facilities located in a state, region, or locality. They can be locally owned, part of national chains, or foreign-owned. For example, the Denver Regional Council of Governments (DRCOG) reports for 2002–2005 that 81 percent of net new jobs in the Denver region were attributable to 21 percent of all firms. These firms can be of any size, but "second-stage" companies are particularly strategic.[9] The Edward Lowe Foundation describes the second stage of business development as a point in the business life cycle when the casual ad hoc methods of entrepreneurial ventures begin to fail. It is a stage when the complexity of employing an increasing number of workers and the related regulatory compliance issues begin to exceed the span of control of one owner or CEO. At this stage of business development, more formal systems and processes may be required to effectively manage the business if it is to sustain or accelerate its current rate of growth to the next stage of business. These companies have moved from where the founder is owner, operator, manager, innovator—all in one—to an operation organized around specialization and

9 Edward Lowe Foundation, "Second Stage Defined" (Edward Lowe Foundation, 2005, unpublished) 1–3.

Chart 6.1 Economic Development Policy—Business Distribution/Stage of Development



Source: CCS Logic.

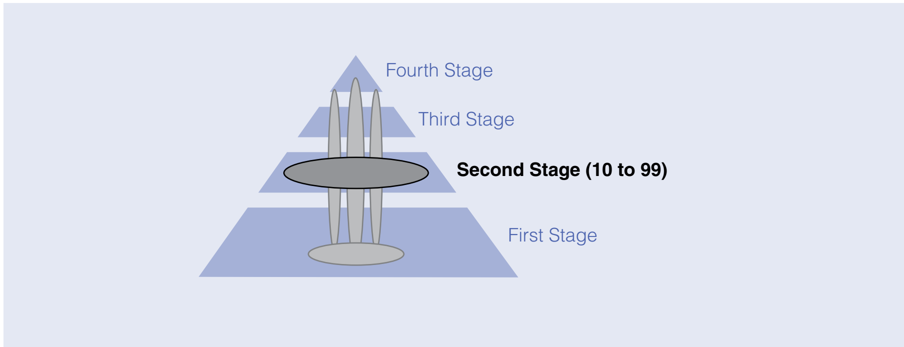
more formal organizational structure.[10] While descriptive terms used to characterize this inherently fluid stage of business development can be helpful in providing a deeper understanding of second-stage businesses, a more precise definition that permits quantification is ultimately required to both identify and track this business segment. This report adopts a method advocated by the Edward Lowe Foundation in which employee count (10 to 99 employees) serves as a proxy for quickly and easily identifying this business segment (Chart 6.1). In 2003, 19.7 percent of all U.S. companies were second-stage, growing numerically at 1.23 percent per year (1993–2003), compared with all companies growing at 1.05 percent per year.[11] The only federal data of use at the subnational level to break business growth out by size of firm is County Business Patterns of the Statistics of U.S. Businesses, U.S. Bureau of the Census. A next data challenge is to identify the number and characteristics of growth companies within classes of firms by size. This is now possible with the National Establishment Time Series (NETS) database or similar datasets derived from Dun and Bradstreet sources.

A simple depiction of firm size by stage of development appears in Chart 6.1. Contemporary economic development policy and programs generally begin with the vertical cluster approach, shown as three vertical ellipses in Chart

10 Eric G. Flamholtz and Yvonne Randle, *Growing Pains: Transitioning from an Entrepreneurship to a Professionally Managed Firm* (San Francisco: Jossey-Bass, Inc., 2000), 28–30.

11 U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

Chart 6.2 Economic Development Policy—"Horizontal" Entrepreneurship Cluster



Source: CCS Logic.

6.2, and a related business creation or incubation strategy depicted as the small horizontal ellipse at the bottom of the chart. A balanced portfolio approach to economic development emphasizing economic gardening adds another element to that mix by elevating the importance of serving second-stage growth firms, represented by the large ellipse in the center of the pyramid. This "horizontal" entrepreneurship cluster, based on stage of development rather than vertical industry sector, highlights the stage-based threshold all growth firms pass through as they progress from being small enterprises to becoming large businesses. It is this orientation to understanding and serving local entrepreneurs, based on stage of development issues, that economic gardening programs seek to support and promote.

Growth Companies

Growth companies can be found in all firm size categories. They are important because evidence is mounting that they are strong job generators, offer better paying jobs than the average firm, provide more opportunities for advancement, do more research and development (R&D), and export more. Most important, because they are more agile, they are ideally suited to the fast-paced business environment of the 21st century.[12] Furthermore, since the late 1990s,

12 Ongoing research findings grounded on the empirical work of such early researchers as David Birch, Paul Reynolds, and John Jackson highlight the disproportionate share of economic growth attributable to growth companies. For a discussion of agility, see Edward Malecki, "Entrepreneurship in Regional and Local Development" (*International Regional Science Review*, vol 16, nos. 1 and 2), 1994.

research has revealed that growth companies frequently partner with other firms in creative ways—generating new ventures and deeper local supply-buy linkages with other firms.[13] The more growth companies there are, the more the likelihood of local and regional interfirm collaboration. Most important, their CEOs and senior executives network extensively. Peer networks connecting business owners, vendors, civic leaders and entrepreneur support organizations have been identified as a key accelerator of economic growth.[14] The network effect generated by a densely connected business community represents an intangible asset common to dynamic regions from Fairfax, Virginia, to Seattle, Washington.

Growth Strategy Portfolio

The growth strategy portfolio is that mix of new business formation, retention, expansion, and recruitment strategies that best capitalizes on assets and opportunities for economic growth (defined as wealth and job creation). Like any smart investor in a fast-paced and largely unpredictable marketplace, civic, business, and government leaders must pay attention to achieving balance in their economic development investment portfolio, then fine-tuning it regularly through an ongoing strategic planning process.

The Littleton, Colorado, Story

Conventional wisdom suggests that "necessity is the mother of invention." A public sector corollary to this notion would likely read "community crisis is the mother of innovative political policy."

In 1987 the state of Colorado was in the midst of a broad-based economic recession (see box).[15] The city of Littleton, a suburb of Denver, faced additional economic complications as it tried to recover from the layoffs of several thousand employees by the community's major employer. The magnitude of these challenging business conditions strained the resources of local residents

13 Ibid.

14 National Commission on Entrepreneurship, *Building Entrepreneurial Networks* (Washington D.C.: NCOE, 2001), 3–6.

15 City of Littleton web site, http://www.littletongov.org/bia/economicgardening/default.asp.

ECONOMIC GARDENING:
An Entrepreneurial Approach to Economic Development

On the website for the city of Littleton, Colorado, Littleton's director of business/industry affairs, Christian Gibbons tells his own story about the genesis of economic gardening in Littleton. Following is a summary; to read more, see http://www.littletongov.org/bia/economicgardening/default.asp.

Working in the economic development field after massive layoffs in Leadville, Colorado, in the 1980s, Chris Gibbons met two miners who had created an invention—a resin bolt to keep steel mats up overhead in the mine. It occurred to Chris that what Leadville needed in response to job losses in this remote location was not to attract more businesses from outside, but to take advantage of the ingenuity of those already there, who had created something that could be used in mines everywhere—and who had chosen to live in Leadville. Five years later, in 1987, he found himself in Littleton, Colorado, as director of economic development in another place that had lost a major employer.

Chris and others had noticed that the traditional approach to economic development—recruiting outside companies to establish a plant locally—had several downsides. The companies recruited often represented a minor part of job creation; they seemed to come to areas that were attracting new businesses anyway (not outlying areas like rural locations and small towns); and outlying areas competed primarily on low price and low-cost factors of production—cheap land, free buildings, tax abatements, low-cost labor. Companies attracted by low costs stayed in the community as long as costs stayed low; as living standards began to rise, they would again look elsewhere—often overseas—for low costs.

The Littleton situation offered a natural opportunity to try out Chris's insight from Leadville days. "For nearly two years Jim Woods . . . and I researched the best thinking we could find on the subject, talked to experts, (including the Center for the New West, a think tank in Denver), and fleshed out the concept. We kicked off the project in 1989 with the idea that 'economic gardening' was a better approach for Littleton (and perhaps many other communities) than 'economic hunting.' By this, we meant that we intended to grow our own jobs through entrepreneurial activity instead of recruiting them."

Almost immediately, Chris notes, it became clear that a few companies—dubbed "gazelles"—were responsible for creating most of the new jobs. The key factors driving the fast growth were more elusive than business size or any other single factor. It seemed there was a noticeable correlation between innovation and growth. “Ideas drive economies”—a lesson learned.

“Based on this we proceeded to develop a full blown 13-part seminar series to bring state-of-the art business practices to Littleton companies with a focus on innovation.” They ran the seminars for four years, trying to increase revenues and employment in target companies, but found that despite all the effort to generate growing companies, “a few companies grew at sky rocket rates while most languished with low or no growth.” A related insight from this period was the degree to which certain profiles of CEOs also tended to be more prominent within high-growth firms. Recognizing that simply training CEOs was not increasing the growth rates of Littleton companies, they went back to the drawing board.

By the mid-1990s another factor affecting high-growth companies began to be apparent: businesses are as much biological as mechanical. For centuries, human beings have invented one mechanical device after another with predictable outputs. This idea transferred to other disciplines: business managers and economists often talked as if businesses and economies were predictable mechanical machines. “The Santa Fe Institute, however, saw something different. They saw a biological world in which each living thing was constantly adapting to all of the other living things, all tied together by innumerable feedback loops. They saw a complex world in constant turmoil which was both unpredictable and uncontrollable. . . . It took Nobel Laureate scientists to show us that unpredictability in companies and economies is a deep law of living things.” The science of “complexity” began to emerge.

Complexity science, although based on complex mathematical formulas using massive computer power, did produce some “handy rules of thumb,” such as the “edge of chaos.” The term refers to “the fine line between stability and chaos where innovation and survival are most likely to take place.” In nature, Chris notes, ice is frozen, steam is highly chaotic, and water is stable. Organizations can be like that: frozen—a state in which nothing moves or adapts and no information is transferred; chaotic— where so much change occurs that the organization doesn’t have an identity; or stable—where identity is retained, but adaptation is possible. The high growth companies in Littleton, Chris noticed, were those that could “ride the very edge of chaos like a seasoned surfer.” They adapted through experimentation and by learning from many small mistakes, which helped them avoid the big fatal ones.

A related principle was self organization. A flock of geese retains its shape, identity, and function with no one in charge. Similarly, high-growth “gazelles” seem to “just do it” and it all comes together. In contrast, larger organizations, working on a command-and-control model “just order it” and set in motion meetings, committees, reports. The larger an organization gets, the less command and control works. Self organization as a strategy may seem more chaotic and redundant, but it is more adaptable, more nimble, and more likely to survive.

Another principle was increasing returns. Chris notes Economist Brian Arthur’s contention that “winners continue to win because they have won in the past. His prime example is VHS vs. Beta tapes. Although Beta was generally acknowledged to be the better technology, a critical mass of people opted for VHS early on, which created a large installed base, and all of the supporting technology decided to move to where customers were concentrated.”

The Littleton economic gardeners continued to work at the principles behind creating an environment in which entrepreneurs could flourish, and other communities began to take notice and experiment with the concept. “As new people added their insights and experiences to the cause, it became clear that we had only the most rudimentary understanding of entrepreneurial activity and were working with the simplest of frameworks (support entrepreneurs and things will get better),” Chris writes.

“Even though we knew the tools and techniques that helped make entrepreneurs successful, there was another intangible (but very real) factor keeping local economies from improving. For the lack of a better word, I initially called it the ‘culture’ of a community. By this, I meant the way that entrepreneurial activity and risk and innovation and even diversity and newness are viewed by local people.”

He noticed that in resource production towns centered around farming, ranching, mining, timber, and fishing, the need to compete on price was paramount, and the smallest disturbance in price could mean that customers would look elsewhere for the commodity. These cultures tended to be very focused on stability, and risk-averse to the extent that they could become anti-entrepreneurial.

“This same anti-entrepreneur ‘culture’ also cropped up in areas where large corporations dominated the landscape. It seemed that in areas where big corporations employed a large percentage of the population, the typical employee saw wealth and job production as very distant from his or her realm of control. Any sense of self-reliance was bred out of the ‘culture.’”

All of these realizations contributed to an understanding of the entrepreneurial culture as an entity as organic as any living creature. More attention needed to be paid to the "complex, biological, and interrelated factors of building an environment conducive to entrepreneurial activity: intellectual stimulation, openness to new ideas, the support infrastructure of venture capital and universities, information and community support."

"We by no means have solved the economic development riddle," Chris says. "We cannot patent it, put it in a jar and take it to any community and guarantee results. But we do think we are closing in on the answer. We think it involves slow, painstaking community development with an eye on the innovators."

and businesses and threatened to undermine the community's overall tax base. Unfortunately, near-term prospects for recovery were not favorable.

During this state of relative economic crisis, community leaders in Littleton chose a strategic path that diverged from conventional economic development wisdom. Rather than seek a quick fix to replace lost jobs by offering relocation incentives and tax breaks to firms outside the region—an approach city leaders came to refer to as "economic hunting"—they embraced an alternate, long-term entrepreneurial strategy designed to generate new jobs from the existing base of businesses in the community. This approach, which they termed "economic gardening," sought to cultivate an "inside-out" expansion strategy in contrast to conventional business recruitment efforts. This decision and the resulting policy implications proved to be significant for the city of Littleton and eventually for communities throughout the nation that have elected to follow a similar path.

Philosophy and Principles

The philosophical framework supporting Littleton's economic gardening program offers a compelling argument for elevating the importance of entrepreneurship in contemporary economic development policy. The framework is both innovative and intuitively simple, suggesting that sustainable economic development policy must strike a better balance of applying "outside-in" and "inside-out" growth strategies, subject to the unique attributes and resources of a given community. The economic gardening policy the city of Littleton crafted in 1989 was based on a simple belief: small local entrepreneurial firms would be the engine for the creation of sustainable wealth and new jobs, and the role of the city was to provide a nurturing environment within which these small firms could flourish.[16]

This shift in economic development policy away from the pursuit of and reliance upon large firms was fueled in part by the painful lessons learned, as city leaders saw how quickly out-of-market businesses could undermine the fabric of their local economy. Equally influential over time was the evolving research of David Birch, which confirmed that small businesses do, in fact, generate a majority of the net new jobs throughout most communities, particularly a select few high-growth firms he referred to as "gazelles." Today, experts in the field of economic development take the general insights and supporting data generated by David Birch as axiomatic. However, during the formative years of the economic gardening experiment in Littleton, the practical application of those themes by economic developers outside of Littleton remained the exception rather than the rule.

As with any truly entrepreneurial venture, the process of development is adaptive by nature. Over time, the original model of economic gardening in Littleton was refined and evolved to meet the needs of the intended market—small business owners, particularly growth-oriented entrepreneurs located in the city of Littleton. What has emerged is a powerful and effective set of tools ideally suited for a new brand of home-grown economic development practices.

Practices

The economic gardening best practices that evolved in Littleton, Colorado, were ultimately associated with one of three critical themes:

1. Infrastructure: building and supporting the development of community assets essential to commerce and overall quality of life (e.g. roads, education, and cultural amenities);
2. Connectivity: improving the interaction and exchange among business owners and critical resource providers (e.g. industry trade groups, public sector supporters, and academic institutions); and

16 Chris Gibbons, director, Business/Industry Affairs, City of Littleton, Colorado, interview, May 24, 2006.

3. Market information: access to competitive intelligence on markets, customers, and competitors comparable to the resources historically available only to large firms.

Of these three critical themes forged over time through an adaptive process tied to customer input and feedback, improved access to market information proved to be of greatest value to the owners and operators of small businesses in Littleton, Colorado.[17]

Affordable access to sophisticated market research tools, tools typically available only to large businesses, proved to be the centerpiece of Littleton's economic gardening program. The original suite of market research tools offered by the city expanded over time and eventually included database and data mining resources, supplemented by the enhanced display capabilities of geographic information systems (GIS). These business development services, partially underwritten by the city to provide both free and discounted fee-for-service solutions, offered a degree of competitive intelligence that local business owners came to see as both relevant and beneficial.

Widespread support for Littleton's economic gardening program among targeted business owners is understandable, given the degree to which the market research services offered by the city addressed stage-related issues faced by growth companies. Practically speaking, expansion-related challenges common to second-stage companies by definition involve the sales function and its relative impact on a company's capacity to fuel job growth and wealth creation for the firm. The targeted delivery of applied research and sales-support materials to these targeted firms resulted in an unusually productive alignment of public sector capabilities with private sector needs. The subsequent success of Littleton's economic gardening programs over time reflects the degree to which the city was able to deliver services to the growth companies most able to convert those services to the greatest number of net new jobs and related wealth creation.

Results

Since inception of the economic gardening program in 1989, the number of jobs in Littleton, Colorado, doubled from approximately 15,000 to over 35,000

17 Chris Gibbons, director, Business/Industry Affairs, City of Littleton, Colorado, interview, May 24, 2006.

during a period in which the city's general population grew at a more modest rate of only 30 percent.[18] Sales tax revenue during this same period tripled from $6.8 million to $19.6 million, in spite of two major recessions and the adoption of a policy that eliminated the use of all incentives and tax breaks in the business recruitment process. While tracking the growth paths of firms in Littleton is beyond the scope of this paper, the creative use of the NETS database now makes such analysis possible.

Lessons Learned

Development of the economic gardening program in Littleton, Colorado, according to those involved, has been a journey in the strictest sense of the word.[19] No roadmap or signpost existed to guide them through the process of designing and implementing their gardening programs. The journey has been anything but a straight and smooth path. While the Littleton, Colorado, development team acknowledges that the program remains a work in progress, they are also quick to point out that the lessons they have learned along the way can help others reduce the frustration associated with the inevitable wrong turns, potholes and dead-end paths associated with any journey into new and uncharted territory. The following "lessons learned" are presented as guidelines critical to designing effective and sustainable economic gardening programs. They are offered with the caveat that, ultimately, economic development is a "bottom up" phenomenon requiring the application of local knowledge and appropriate adaptation over time.

1. ***Growth companies matter: clearly define and understand the needs of the target market.*** Economic gardening programs cannot succeed without a clear understanding and commitment to meeting the needs of entrepreneurs—specifically, identifying and meeting the needs of growth-oriented entrepreneurs that generate a majority of the net new jobs and associated wealth at the core of any effective growth strategy. Commitment to this principle can be a politically sensitive issue, but it gets to the heart of what economic gardening is all about. Generally speaking, only a fraction of all entrepreneurs in a given community have the intent and capacity to

18 Christine Hamilton-Pennell, "CI for Small Business: The City of Littleton's Economic Gardening Program" (*Competitive Intelligence* Magazine, vol. 7, no. 6, December 2004), 13–14.

19 Chris Gibbons, director, Business/Industry Affairs, City of Littleton, Colorado, interview, May 24, 2006.

build growth-oriented businesses. The goal is to identify them and serve them well.

2. ***Long-term commitment: seek to reconcile political and economic lead times.*** Economic gardening is a long-term strategy. It represents a lifelong economic development "lifestyle" change rather than the short-term economic development "crash diet" so often associated with recruitment and incentive programs. Unfortunately, the development cycle of gardening programs is longer than typical political election cycles. As a result, few supporters of a balanced "portfolio approach" to economic development will be in a position to reap the political benefits generated by economic gardening programs. All stakeholders in economic gardening programs must appreciate the cyclical disconnect associated with a long-term economic development strategy and be prepared for the inevitable pressures that will emerge. Consequently, economic gardening programs depend on advocacy beyond city hall and mainstream economic development organizations. Successful and sustainable programs require a long-term commitment by private sector leaders in the community, including a commitment to measurement of results, now possible with real-time retention and expansion web surveys and secondary data sources such as NETS.

3. ***Entrepreneurial climate: pay attention to the culture surrounding economic gardening programs.*** Economic gardening programs do not exist in a vacuum. As with other economic development programs, a threshold level of resources must exist. Unlike other economic development initiatives, however, economic gardening is most effective in regions having sufficient entrepreneurial spirit or "entrepreneurial DNA" already in place. The entrepreneurial capacity of a region includes both resident entrepreneurs and the degree to which the prevailing business culture is inclined to support those entrepreneurs. Unfortunately, while it is generally recognized that entrepreneurs are spread widely across all regions throughout the nation,[20] the entrepreneurial culture required to effectively support growth-oriented entrepreneurs has been bred out of many communities through years of risk-avoidance or a misplaced confidence in the commitment

20 National Commission on Entrepreneurship, *High-Growth Companies: Mapping America's Entrepreneurial Landscape* (Washington D.C. NCOE 2001), 1.

large businesses hold toward assuring the long-term economic well-being of a given local community.

4. ***Leadership: identify a "champion" for the long term.*** Littleton has enjoyed the long tenure of key staff. As with anything new or unproven, the involvement and commitment of a recognized and respected local "champion" is critical to initial success. Often overlooked and unspoken in the process is the corresponding value of having management stability over time. Continuity of leadership at both levels both provides institutional memory and engenders the confidence of all stakeholders required to navigate the inevitable challenges that occur over time.

Does Littleton Owe Its Economic Progress to the Gardening Approach?

No definitive analysis has linked the economic gardening strategy of Littleton with its overall economic progress. Multiple factors contribute to a community's economic change, so only the most rigorous econometric methodology could single out primary causes. But overall evidence indicates that economic gardening has most likely been a positive force in Littleton, serving as an affirmative catalyst for economic growth and encouraging a culture that supports entrepeneurship.

While Colorado and the Denver region have underperformed the United States since the 2001 national recession, Littleton has performed remarkably well (Table 6.1).[21] And since its introduction of economic gardening principles in 1989, the number of net new jobs in Littleton has grown from 14,907 to 35,163, or 136 percent. (These numbers include wage-and-salary jobs plus self-employment.)[22] This growth is approximately twice the rate of the Denver region, three times that of Colorado, and six times that of the United States.[23] The growth can be partly explained by such factors as the general growth of suburban communities, Littleton's strong concentration in certain growth industries such as business services, and a vibrant Colorado economy in the

21 U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, and Denver Regional Council of Governments.

22 Denver Regional Council of Governments.

23 National data from U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

Table 6.1 Change in Wage-and-Salary Employment, 1990–2005 (percent)

	Littleton	Denver Metro	Colorado	USA
1990–2005	135.3	64.2	47.2	21.4
2000–2005	35.0	-2.6	1.2	1.5

Source: U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages, and Denver Regional Council of Governments.

1990s. Nevertheless, communities with healthy growth conditions can still fail to flourish because of poor local economic development policies. Clearly this has not been the case in Littleton: economic gardening, consistently applied over more than a decade, appears to have had very favorable consequences.

Littleton's 35 percent job growth between 2000 and 2005 well exceeds that of comparable inner suburban Denver communities of similar size: Englewood (7.3 percent), Northglenn (6.2 percent), and Thornton (21.4 percent).

Insight

These figures confirm a strong employment track record in Littleton, now over one full business cycle from the 1991 to 2001 recessions and beyond into the current U.S. and global economic expansion. Littleton appears to perform well in both good and bad times, partly because of its diversified economy nurtured by the economic gardening approach. But probably the most compelling evidence that Littleton must have been doing something right is reflected in the ongoing support the Littleton business community has given to this initiative. Several times when the city has faced budget constraints, the economic gardening program has contronted possible cutback or elimination. In each instance, the testimony and support of the business community has sustained the program. Clearly, businesses see the benefit, even while the program is supported by an optional tax on business activity, the local sales tax.

Littleton's Broader Context—"Entrepreneurial Dynamism" in Colorado

The economic growth of localities and regions is notably enhanced or enabled by a conducive, multi-region, or statewide economic climate. Littleton's experiment has been aided by virtue of its location in a state that has been "on the move" over the past 15 years, notwithstanding a slowdown since 2001. Colorado, in economic development terms, can aptly be described as a "break-away state." Out of a troubling economic downturn in the mid-1980s, caused by a depressed energy and resources market, Colorado has found new vitality in technology-related and growth industries. The labor force has expanded with an influx of younger, well-educated workers, attracted, in part, by the state's natural amenities, beauty, and quality of life.

From 1990 to 2004, Colorado's per capita income increased 84.5 percent compared with 69.7 percent for the United States.[24] Per capita income is a preferred measure of overall wealth creation. Further, employment growth has been strong. Between 1990 and the third quarter of 2005, employment covered by unemployment insurance grew 47.2 percent, compared with 21.4 percent for the United States.[25] Since the 2001 national recession, Colorado's growth has been somewhat muted but is still quite healthy, with average annual growth rates in jobs and output a bit less then one-half percent below the U.S. average.

Most notably, Colorado presents conditions conducive for growth, especially entrepreneurial growth. One measure of the entrepreneurial environment of states is the Kauffman Index of Entrepreneurial Activity.[26] Using the Current Population Survey of the U.S. Bureau of the Census, the index measures the rate at which respondents in the sample shift from salaried or wage employment to starting a new business from one month to the next. The index is particularly good at sensing new business and sole proprietorship starts each month. Colorado presents very strong rates of such entrepreneurial activity, ranking second of all 50 states in 2005. It showed particularly strong improvement from a score of 0.35 percent (U.S. average 0.30 percent) in 2004 to 0.53 percent (U.S. average 0.29 percent) in 2005.

A second way of measuring a state's entrepreneurial environment is Entrepreneurial Dynamism as reported in the Entrepreneurship Score Card published by the Edward Lowe Foundation, with analysis and research from GrowthEconomics, Inc.[27] According to the Entrepreneurship Score Card,

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24 U.S. Department of Commerce, Bureau of Economic Analysis.

25 U.S. Department of Labor, Bureau of Labor Statistics.

26 Robert Fairlie, *Kauffman Index of Entrepreneurial Activity* (Ewing Marion Kauffman Foundation, 2006).

27 Edward Lowe Foundation, Small Business Foundation of Michigan, and GrowthEconomics, " 2006 Entrepreneurship Score Card" (Edward Lowe Foundation, 2006).

states are showing marked differences in small business and entrepreneurial performance. (See the appendix for a brief description of the Score Card.) The top 10 states in Entrepreneurial Dynamism for 2005 were Massachusetts, California, New Mexico, Virginia, Maryland, Washington, Colorado, Utah, New York, and Rhode Island. Colorado scores in the top 10 on two of the three drivers that make up Entrepreneurial Dynamism: Entrepreneurial Vitality and Entrepreneurial Climate. In a third driver, Entrepreneurial Change, which measures recent growth in small business activity, Colorado rates in mid-range with a ranking of 26 out of 50.

Multiple factors can contribute to the changing entrepreneurial dynamics of a state or region, including many outside the direct control of the public sector or public-private partnerships. Rapidly changing local industry competitiveness, especially with respect to a changing global marketplace, can energize or enervate entrepreneurial response. Culture too, plays a big part. States with changing demographics experience different cultural dynamics regarding innovation, commercialization, and business creation. Notwithstanding these factors, it appears that those states experiencing high scores in Entrepreneurial Dynamism are well suited to local innovations that support small business and entrepreneurial development. In effect, the ambient state "entrepreneurial climate" sets the stage for creative local entrepreneurial development.

Colorado also performs well in the "Nexus" report.[28] In early 2005, the U.S. Small Business Administration's Office of Advocacy and the Edward Lowe Foundation cosponsored a significant study of *The Innovation-Entrepreneurship Nexus: A National Assessment of Entrepreneurship and Regional Economic Growth and Development*. Authored by Advanced Research Technologies of Ohio, the research is based on an analysis of the U.S. Census database, the Longitudinal Establishment and Enterprise Microdata (LEEM) file, which makes possible tracking firm performance by size over time. In the study, 394 regions in the United States were compared using three indexes: the Entrepreneurial Index, Innovation Index, and Economic Growth Index.

28 Advanced Research Technologies, *The Innovation-Entrepreneurship NEXUS: A National Assessment of Entrepreneurship and Regional Economic Growth and Development*, prepared for the U.S. Small Business Administration, Office of Advocacy, and the Edward Lowe Foundation, April 2005.

Of the top 30 ranked regions, six were located in Colorado. This distinction positioned Colorado as the state having the largest number of top-ranked regions. Key findings from the study are that:

- Regions with innovation capabilities may not necessarily exhibit high growth;
- High growth is related to the connection between innovation and entrepreneurship; and
- Entrepreneurial vitality is a critical component of economic prosperity.

While considerable attention has been given to building development capacity through both research and development and entrepreneurship, the Nexus study findings draw attention to linking the two themes. Such a linkage would result in more "deals" for venture investors, rapid transfer from discovery to application leading to higher productivity, and higher levels of worker knowledge and skills, resulting in higher pay and higher profits. Winning states and regions appear to be those where innovation and entrepreneurial activity synchronize in self-reinforcing ways.

Of particular note is Colorado's strong long-term showing in the growth of second-stage companies. Colorado's second-stage companies outperformed the United States throughout the 1990s in growth in number of firms, employment, and payroll (Charts 6.3–6.5).[29]

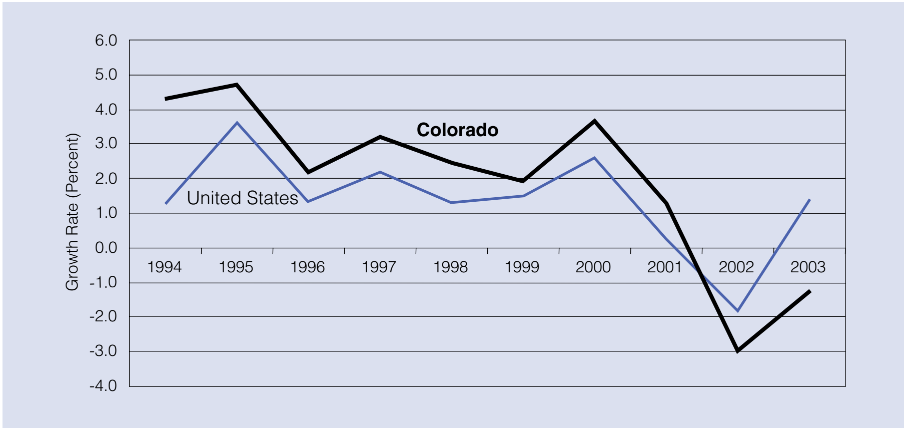
Since the recession of 2001, Colorado has underperformed the United States, likely because of the impact that recession had on Colorado's burgeoning technology companies.

The Evolving Application of Economic Gardening in Other Regions

The economic gardening practices forged in Littleton, Colorado, continue to evolve. Evidence of this evolution can be seen in how the sophisticated competitive intelligence services originally conceived in Littleton have been further refined by communities throughout the country as each community seeks to

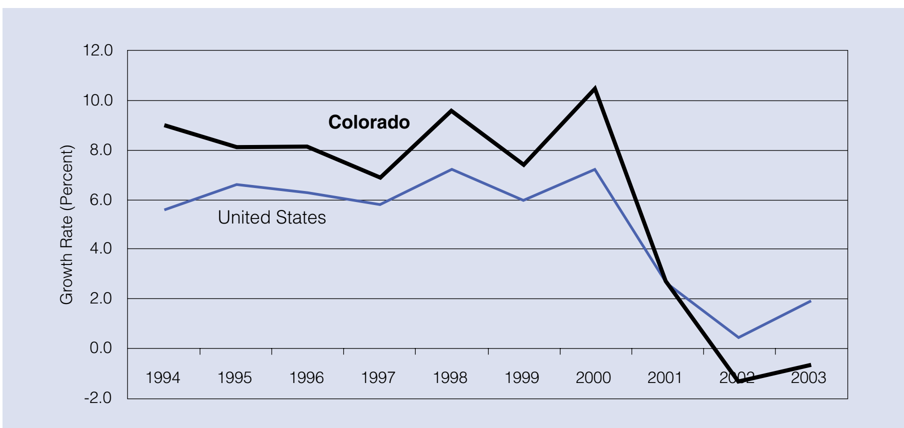
29 U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

Chart 6.3 Colorado Second-Stage Employment Growth, 10–99 Employees



Source: U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

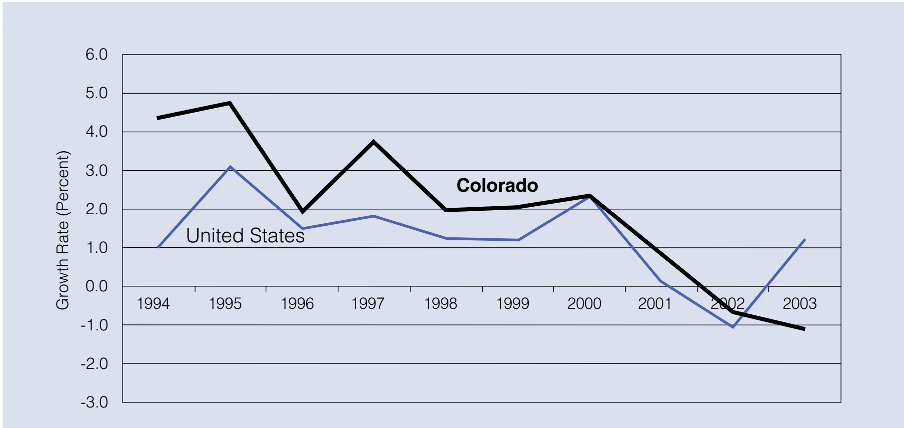
Chart 6.4 Colorado Second-Stage Payroll Growth, 10–99 Employees



Source: U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

customize its program to reflect local assets and needs. In each case, however, the guiding philosophy and principles of "inside-out" economic development remain central to all economic gardening initiatives. To demonstrate this evolution, the economic gardening programs of four communities other than Littleton have been selected as examples of emerging "best practices." The four programs and their host communities include search engine optimization (Oakland, California), cluster development (Santa Fe, New Mexico), connectivity (Madison, Wisconsin), and regional delivery (Cheyenne, Wyoming).

Chart 6.5 Colorado Second-Stage Firm Growth, 10–99 Employees



Source: U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

Search Engine Optimization: Oakland, California

In 2004 the Oakland, California, Economic Development office launched an economic gardening pilot program.[30] The intent of the program was to encourage the use of business development principles that embraced the entrepreneurial themes common to the venture capital firms that proliferated in the region, rather than relying solely on conventional incentive-based practices.[31] The Oakland pilot program emphasized the use of information-related marketing resources similar to those found in Littleton, Colorado. The pilot program differed from the Littleton model, however, in offering consulting services related to search engine optimization, an expertise associated with that city's specialized technology talent pool. This particular web marketing expertise, a natural complement to other sales and market information services valued by second-stage companies, represents an important adaptation to the economic gardening program originated in Littleton. The search engine optimization program adds value to participating businesses by increasing the effectiveness of their Internet marketing efforts through more efficient use of website structure, file naming conventions, page titles, keyword meta tags, description meta tags, image tags and text links.

30 Ryan Tate, "Running After the Gazelles" (*San Francisco Business Times*, August 13, 2004).

31 Oakland, California, Community and Economic Development Agency, economic gardening website, www.oaklandeg.com.

Cluster Development: Santa Fe, New Mexico

Santa Fe Economic Development, Inc. (SFEDI), a New Mexico nonprofit corporation, is charged with the responsibility of leading economic development efforts in the region without compromising the community's distinctive character. Striking a balance between cultural preservation and the relentless forces of progress presents a true economic development challenge. To bridge these related but often opposing views, SFEDI chose economic gardening as the long-term strategy for diversifying Santa Fe's economy. It did so by crafting a plan that fused conventional industry cluster development techniques involving highly specialized economic inputs with economic gardening principles and practices.[32] The resulting plan, involving a four-step cluster cultivation process, emphasized the importance of entrepreneurship and its "inside-out" approach to development. At the same time, the SFEDI plan required the rigorous application of cluster development techniques by recognizing the importance of supporting those clusters that had developed naturally in the region rather than seeking to create or compete for clusters based on their relative potential or current popularity among other economic developers. The four-step process, designed for long-term effectiveness, included cluster identification, cluster activation, cluster support, and cluster expansion. The ultimate objective of the program is to create a competitive advantage for the region based on the existing local business environment.

Connectivity: Madison, Wisconsin

Connectivity among business owners and the broader business culture supporting entrepreneurs is an important but intangible component of all economic gardening programs. In 2004, the state of Wisconsin, at the direction of a newly elected governor, addressed this issue by establishing the Wisconsin Entrepreneurs' Network (WEN) and a related program called the Wisconsin PeerSpectives Network.[33] Both programs were designed to increase the density of connections and interaction among entrepreneurs and the broader community of organizations supporting entrepreneurship. The Wisconsin Entrepreneurs Network was designed to cast a wide net and improve referral links to information and service providers. The PeerSpectives program, a CEO

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32 Santa Fe, New Mexico, economic development website, http://www.sfedi.org.

33 Wisconsin Small Business Development Center website, http://www.wisconsinsbdc.org/peerspectives.

peer-to-peer problem-solving resource, offered access to a narrow and highly targeted community of CEO peers. Taken together, the programs offered enhanced connectivity and exchange among a traditionally fragmented and isolated community of business owners and leaders.

Regional Delivery of Services: Cheyenne, Wyoming

The economic gardening program in Wyoming, a true statewide initiative, posed a set of challenges not faced in the entire history of the Littleton, Colorado, program.

The Littleton economic gardening program, for all its success in testing and delivering a suite of market information services, never dealt with the sheer scale of engaging and delivering that same service to such a large and geographically dispersed customer base. While the philosophy, principles, and proposed services of the Wyoming economic gardening initiative parallel that of Littleton, the greater challenge for the state had to do with logistics and customer service.

Responsibility for managing the 2003 implementation of the program was assigned to the Wyoming Market Research Center (WMRC).[34] WMRC, a co-venture involving the Wyoming Business Council and the University of Wyoming, modified program processes derived from Littleton by building a strategic distribution alliance with the Wyoming Small Business Development Center (SBDC) and its network of regional representatives. This distribution alliance effectively allowed WMRC to focus on its core competency of research and analysis and to outsource the sales and customer service aspects of the program.

The Georgia Story

The relatively rapid emergence, adaptation, and dissemination of economic gardening principles and related best practices throughout the country suggest a growing recognition among economic development leaders that entrepreneur-centered initiatives offer an important complement to conventional "outside-in" recruitment programs. Unfortunately, the adoption and implementation of

34 University of Wyoming website, http://uwadmnweb.uwyo.edu/wmrc/.

those programs has been so recent that very little data exist regarding overall program effectiveness.

Many communities, especially in rural regions and small urban markets, have become more receptive to economic gardening programs, given the degree of difficulty they have experienced in pursuing conventional business recruitment programs. In many cases, the price competition among communities involved in business recruitment has become so fierce that some practitioners argue that the eventual winners, in fact, become the real losers over the long term. In this context, recent changes in the economic policy for the state of Georgia offer a refreshing counterpoint to conventional wisdom.

The state of Georgia, like most states, has a long history of pursuing industrial recruitment as its primary strategy for economic development. In 2002, following the election of a new governor, a series of entrepreneur-centered programs was initiated to support the small businesses that constitute a majority of businesses in the state.[35] Those programs, administered by the Georgia Department of Economic Development's Entrepreneur and Small Business Office, eventually evolved to become a statewide demonstration of the economic gardening principles and practices created in Littleton, Colorado. In fact, the principles and practices conceived and tested in Littleton served as a model for the related programs proposed for Georgia. The key difference between the Littleton model and the programs designed for Georgia is the scale and operational complexity of administering a comparable program to a significantly larger set of stakeholders across a significantly larger geographical area.

In an effort to minimize the complications presented by these two substantial programmatic differences, the design and development of Georgia's economic gardening program draws upon the "lessons learned" in Littleton following more than a decade of experimentation and refinement, and specifically addresses the three critical themes that comprise Littleton's core principles.

Addressing the four lessons learned from the Littleton experience, the Georgia program:

35 Georgia Department of Economic Development website, gateway to assistance, http://www.georgia.org/Business/SmallBusiness/Governors+Welcome+Message.htm.

1. Specifically defines its primary target audience as business owners having no more than 19 employees and a demonstrated desire to grow their business;
2. Acknowledges the long-term strategic nature of the initiative;
3. Communicates an intended outcome of "changing the culture of entrepreneurship in the state;" and
4. Demonstrates political support at the highest level by virtue of the endorsement it has received from the governor.[36]

The Georgia program also has embraced each of the three core principles or themes identified by Littleton as essential for success by offering specific programs or resources; for example:

1. Infrastructure: Entrepreneur and Small Business Coordinating Network (ESBCN) and the "Entrepreneur Friendly" (EF) communities initiative;
2. Connectivity: Mentor-Protégé program; and
3. Access to market information: market research project.

Viewed together, the positioning and programmatic responses outlined in Georgia's economic gardening program clearly address the "lessons learned" and related critical themes advocated by Littleton. The comprehensive and integrated structure of these programs and related resources suggest that Georgia's economic gardening program is well positioned for success. Specific examples of each are outlined below.

Infrastructure

Infrastructure, from an economic gardening point of view, involves both conventional assets and services such as transportation and education, and related intangible assets and services such as financial resources and a business culture that supports entrepreneurship. While the state of Georgia is generally competitive in its delivery of conventional infrastructure, the intangible infrastructure it has developed to support entrepreneurship as a part of its economic gardening program shows great promise. Two specific examples include the

36 Greg Torre, Georgia Department of Economic Development, division director, Small Business and Innovation, interview, June 15, 2006.

Entrepreneur and Small Business Coordinating Network (ESBCN) and the Entrepreneur Friendly communities initiative.

The ESBCN is a multi-agency group involving state and federal agencies. The ESBCN is responsible, as its name suggests, for coordinating the state's entrepreneur and small business initiatives, including the Entrepreneur Friendly communities initiative. The ESBCN offers value to entrepreneurs by acting as an advocate for their interests and streamlining access to the vast and often complicated process of navigating bureaucratic channels.

The EF communities initiative is a community-based program designed to enhance the business environment for entrepreneurs and encourage the inclusion of entrepreneurial and small business strategies into a region's overall economic development strategy. [37] This program, early in its development, offers promise to the economic gardening effort for the state because it establishes a programmatic and staffing framework upon which to convey a variety of useful services and solutions geared to the target market.

The EF initiative includes a seven-step process which, when completed, allows a qualified community to access specific state resources and services useful to resident entrepreneurs (Chart 6.6).

Connectivity

While the ESBCN and the EF communities initiative both provide a degree of connectivity in the conventional sense, from an economic gardening point of view, connectivity relates to improving the density and frequency of direct links among target entrepreneurs, their peers, and related support organizations. The Georgia Mentor/Protégé program is an excellent example of this model. The program connects qualified entrepreneurs with their counterparts in larger firms with the intent of solving specific issues identified during an extensive interview process.[38] Participants commit to an 18-month engagement cycle designed to identify strategies for accelerating growth, securing necessary resources, and defining new target markets.

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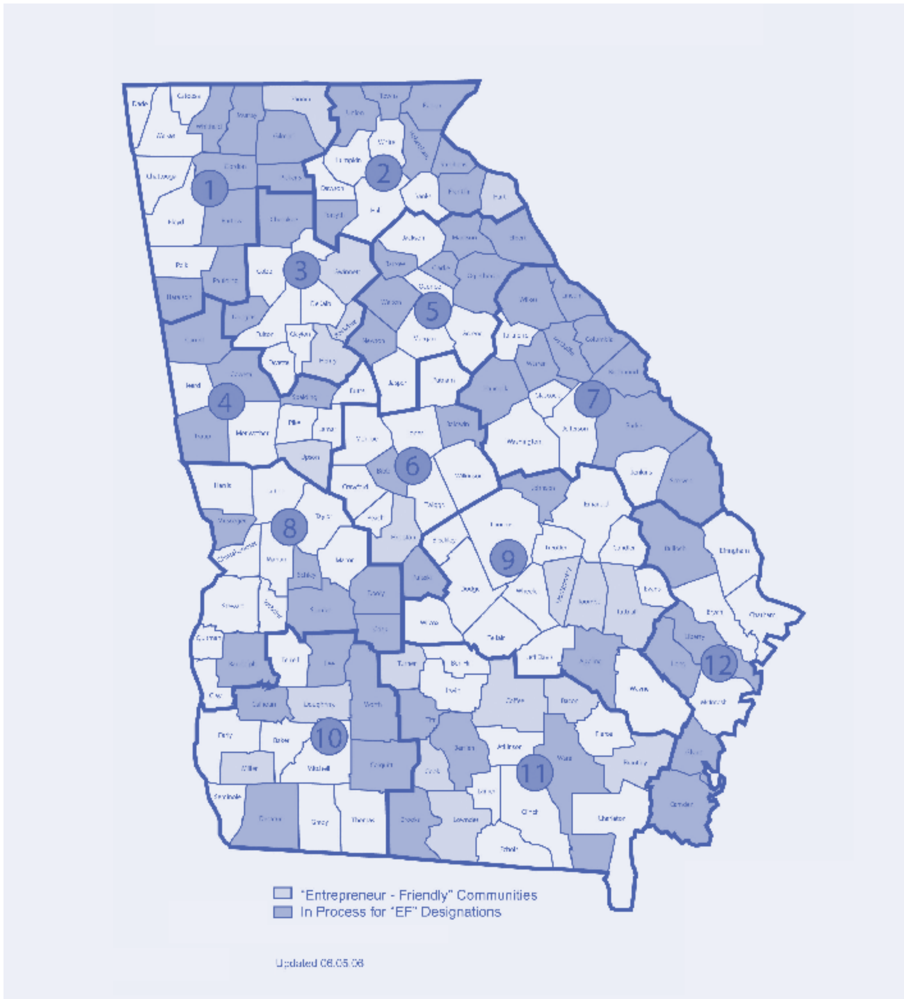
37 Mary Ellen McClanahan, Department of Economic Development, director, Entrepreneur and Small Business Office, interview, June 15, 2006.

38 Georgia Department of Economic Development website, Mentor-Protégé, http://www.georgia.org/Business/SmallBusiness/mentor_protege.htm.

Chart 6.6 “Entrepreneur Friendly” Communities



Source: Georgia Department of Economic Development.

Access to Market Information

The challenge of delivering relevant and timely market information, the cornerstone of the Littleton, Colorado, economic gardening model, becomes a daunting task when projected on a statewide basis. This is particularly true for a state as vast as Georgia. The lessons learned in Littleton, and subsequently refined when that methodology was applied to the state of Wyoming, demonstrated that the local model required adaptation for statewide delivery. In

Georgia, this adaptive process will be mitigated to a degree by a phased distribution of the service in select EF communities.[39] The EF community system and the 10 regional project managers assigned to serving local entrepreneurs will work to manage the overall volume of customers to match the capacity of the market research team.

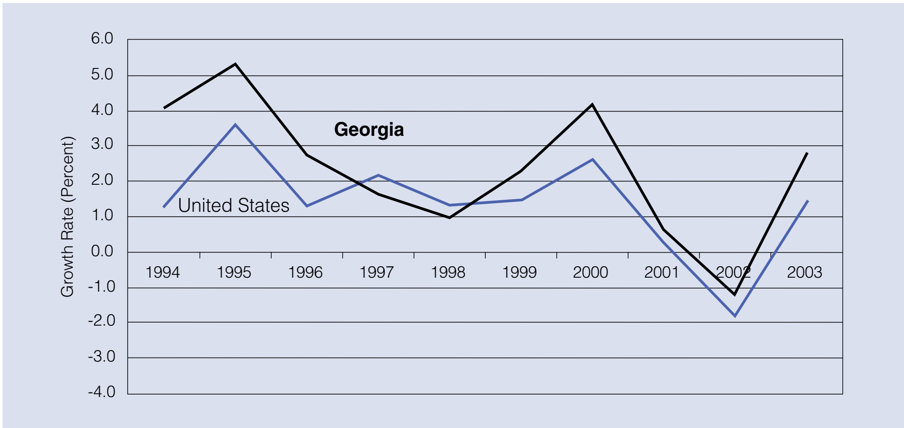
Georgia's Changing Growth Portfolio

Given the Littleton, Colorado, state experience, does Georgia possess the ambient statewide climate conducive for nurturing economic gardening at the regional and local levels? According to the Kauffman Index of Entrepreneurial Activity, Georgia does not score as well as Colorado, but is above the national average. In 2005, Georgia's index was 0.37 percent compared with the U.S. average at 0.30 percent, ranking it 19th of 50 states. In the latest Edward Lowe Foundation Entrepreneurship Score Card, Georgia is a runner-up to the top 10 states in entrepreneurial dynamism, scoring 3 of 5 stars and ranking 13th of 50. The Entrepreneurship Score Card indicates notable improvement in Georgia's small business growth over the 2001–2005 period. Georgia is quite diversified in the size distribution of its companies and has always had an aggressive approach to attracting investment from the outside in. Over the years, with considerable support from state government and utilities, Georgia has offered attractive incentives for direct investment. Nevertheless, Georgia presents healthy scores in entrepreneurial dynamism and appears to be moving towards a balanced growth portfolio where growth from within is gaining increasing support. Georgia's scores in the Entrepreneurship Score Card are summarized in the appendix.

Most important for this chapter is how Georgia's second-stage companies have been faring in recent years. The growth in the number of firms with 10–99 employees, as well as in the jobs they created, surpassed the U.S. average in the 1990s and since the 2001 recession (Charts 6.7–6.9). Payroll growth in recent years has tracked the U.S. average closely, although it performed well above the national average in the late 1990s. On average, Georgia has not attained

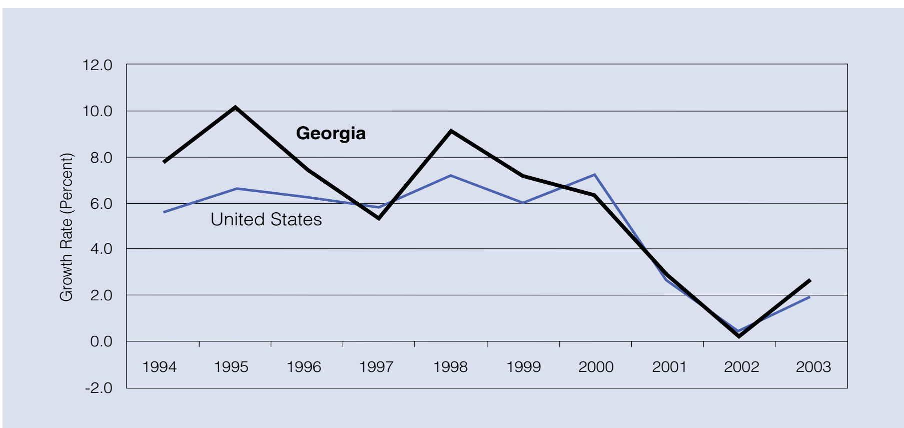
39 Dara Barwick, Georgia Department of Economic Development, director, Regional Entrepreneur and Small Business Program, interview, May 30, 2006.

Chart 6.7 Georgia Second-Stage Employment Growth, 10–99 Employees



Source: U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

Chart 6.8 Georgia Second-Stage Payroll Growth, 10–99 Employees



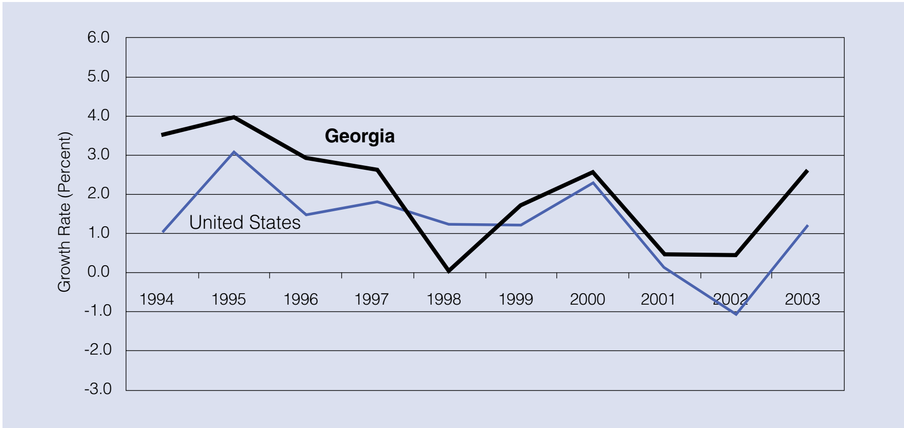
Source: U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

the growth levels of Colorado. However, Georgia's second-stage companies are presenting more robust growth in this decade compared with Colorado.[40]

Georgia also scores reasonably well in the Nexus report mentioned earlier. In linking innovation with entrepreneurship, of the top 30 regions of 394, three were from Georgia.

40 U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

Chart 6.9 Georgia Second-Stage Firm Growth, 10–99 Employees



Source: U.S. Department of Commerce, Bureau of the Census, Statistics of U.S. Businesses.

It appears Georgia has strong entrepreneurial momentum and would do well to consider strategies to accelerate entrepreneurial growth as a complement to its ongoing recruitment efforts. Economic gardening offers considerable promise in Georgia.

Conclusion and Observations

The key conclusion of this report is that economic gardening, as formulated and implemented in Littleton, Colorado, has clearly passed the "beta stage" with flying colors. It is not only ready for application elsewhere; its principles and practices are being adopted rapidly based on its inherent logic and on a mounting body of supporting evidence. Most likely, gardening programs are best suited to regions and states already exhibiting healthy signs of entrepreneurial dynamism, like Georgia. Unfortunately, long-term definitive data are still scarce, but initial prospects and anecdotal evidence associated with economic gardening have been very promising. Ultimately, the prospects and future success of economic gardening practices are best expressed by the degree to which they can influence and complement existing economic development activity. Economic gardening has enough potential for spurring regional growth that industry professionals should be familiar with its principles so they can recognize situations where its best practices could be applied. Specifically, economic gardening can influence the dialogue within communities regarding the appropriate mix and allocation of economic development resources—encouraging the adoption of a balanced portfolio approach that generates long-term wealth and well-being for all citizens.

Limitations and Future Research

This report examined the origin, context and application of economic gardening principles and practices in selected U.S. locations. By design, this report was exploratory in nature and sought to identify the key themes and relative progress of this emerging practice rather than offer definitive answers to critical questions or proof of basic assumptions associated with the topic. Clearly, the next generation of research on this topic needs to quantify the assumptions and opportunity costs associated with economic gardening practices. To the degree possible, practitioners in the field currently attempt to measure the impact of economic gardening practices whenever those practices involve public sector resources or public policy review. Unfortunately, fundamental assumptions associated with economic gardening remain untested in academic circles because of the relatively recent emergence of the practice and the general absence of mainstream financial support for the topic among organizations historically associated with the funding of economic development initiatives. A short list of possible actions warranting further review includes the need to:

1. Quantify key assumptions associated with economic gardening principles, including:
    - The role and relative economic contribution of high-growth, second-stage firms
    - Any variation by region or by industry sector
2. Improve skills in measuring and assessing the receptivity and sustainability of a locale, region, or state, for economic gardening, including assessing:
    - Extant growth by firm size using a microdata file such as the National Establishment Time Series.[41]
    - The long-term political and operational challenges confronted by "gardening" programs vs. conventional economic development initiatives.

41 David Neumark, Junfu Zhang, and Brandon Wall, "Business Establishment Dynamics and Employment Growth" (Ewing Marion Kauffman Foundation, November 2005), 21–24.

3. Measure the comparative impact of economic gardening programs, including:

- The long-term return on investment and "total cost of ownership" of gardening programs versus conventional recruitment, expansion, and business creation strategies.

APPENDIX 6A
A Brief Description of the Entrepreneurship Score Card

In early 2005, the Small Business Association of Michigan produced the first Michigan Entrepreneurship Score Card as a way to benchmark Michigan's small business and entrepreneurship performance relative to the 49 other states. Based on constructive input from a cross-section of interested business, government, and civic leaders, the Entrepreneurship Score Card has been significantly enhanced for 2006. The Edward Lowe Foundation has taken on producing the Score Card every year both for Michigan and other interested states. The Score Card comprises 126 metrics that measure various dimensions of both the entrepreneurial economy and the broader economy that supports and sustains entrepreneurial activity.

Three key drivers that measure entrepreneurial dynamism were selected based on a comprehensive review of economic growth literature in both the United States and Europe. They are:

- Entrepreneurial Change, which measures recent improvements in number, employment, and payroll of the small and growth companies;
- Entrepreneurial Vitality, which measures the general level of entrepreneurial activity, such as small business starts, SBIR awards, etc., and
- Entrepreneurial Climate, which measures the broad economic environment under which entrepreneurship flourishes.

The three entrepreneurial drivers are aggregated, forming the composite score called Entrepreneurial Dynamism. The top 10 states for Entrepreneurial Dynamism, Change, Vitality and Climate are shown in Table 6A.1.

California and Utah score well across all three drivers, while Massachusetts, Colorado, New Mexico and Virginia score in the top 10 in two. Among a second tier of strong performers is Georgia, singled out in this chapter because of notable improvement over the past five years of Score Card data. Georgia, well

Table 6A.1 2006 Entrepreneurship Score Card

	Entrepreneurial Dynamism	Entrepreneurial Change	Entrepreneurial Vitality	Entrepreneurial Climate
1	MA	WA	MA	MA
2	CA	UT	CA	NM
3	NM	IA	CO	CA
4	VA	ID	VA	MD
5	MD	DE	MD	RI
6	WA	NM	NY	UT
7	CO	NV	UT	VA
8	UT	RI	TX	CO
9	NY	VA	MT	NY
10	RI	CA	FL	NV

Source: Edward Lowe Foundation, Small Business Foundation of Michigan, and GrowthEconomics, Inc., 2006.

versed in "outside-in" growth from business recruitment, is becoming more equally balanced by "inside-out" growth.

The Entrepreneurship Score Card scores the states on a five-point scale where 5 stars is the top 20 percent of the score range, 4 stars the next lower 20 percent of scores, etc. Both five-point scores and rankings are useful for interpreting a state's competitive position.

Georgia's summary statistics are shown in Table 6A.2. Quite notably, Georgia's progress is evident in the statistics. Georgia has held steady in Entrepreneurial Vitality but scores below the mid-range. It shows improvement in Entrepreneurial Change and Entrepreneurial Climate, and scores mid-range or above. Overall, Entrepreneurial Dynamism has improved from 2001 to 2005. In short, evidence from recent years indicates that the entrepreneurial environment in Georgia is improving. With such momentum, the state is in a good position for efforts to accelerate entrepreneurial growth and to add economic gardening to its growth strategy portfolio.

Table 6A.2 Georgia's Entrepreneurship Scores, 2001–2005

	2005	2003	2001
Entrepreneurial Change	☆☆☆☆ (ranking 18)	☆☆☆☆	☆☆
Entrepreneurial Vitality	☆☆ (ranking 20)	☆☆	☆☆
Entrepreneurial Climate	☆☆☆ (ranking 15)	☆☆☆	☆☆
Entrepreneurial Dynamism	☆☆☆ (ranking 13)	☆☆☆	☆☆

Source: Edward Lowe Foundation, Small Business Foundation of Michigan, and GrowthEconomics, Inc., 2006.