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Special Issue

Community Economic Development

Popular Government

James Madison and other leaders in the American Revolution employed the term "popular government" to signify the ideal of a democratic, or "popular," government—a government, as Abraham Lincoln later put it, of the people, by the people, and for the people. In that spirit *Popular Government* offers research and analysis on state and local government in North Carolina and other issues of public concern. For, as Madison said, "A people who mean to be their own governors must arm themselves with the power which knowledge gives."

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Established in 1931, the Institute of Government provides training, advisory, and research services to public officials and others interested in the operation of state and local government in North Carolina. The Institute and the University's Master of Public Administration Program are the core activities of the School of Government at The University of North Carolina at Chapel Hill.

Each year approximately 14,000 public officials and others attend one or more of the more than 200 classes, seminars, and conferences offered by the Institute. Faculty members annually publish up to fifty books, bulletins, and other reference works related to state and local government. Each day that the General Assembly is in session, the Institute's *Daily Bulletin*, available in print and electronic format, reports on the day's activities for members of the legislature and others who need to follow the course of legislation. An extensive website (www.sog.unc.edu) provides access to publications and faculty research, course listings, program and service information, and links to other useful sites related to government.

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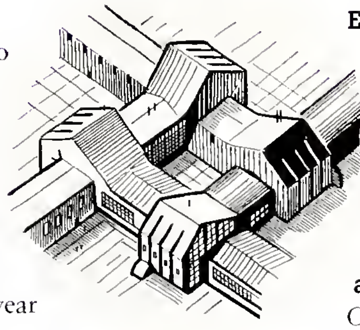

This issue of *Popular Government* is devoted to the topic of economic development. Its publication is part of an enhanced program in community economic development that is being launched by the School of Government (see the sidebar).

In keeping with the seventy-year tradition of the Institute of Government, the main elements of the community economic development program are training, research, and publishing. Examples include a series of bulletins on economic development; a guide to resources and best practices, on the School website; a certification course for professional economic developers and for community developers; training programs for local government officials and staff; and technical assistance to local governments in strategic planning for economic development.

Jesse L. White Jr., an adjunct professor in the School of Government and director of the new Office of Economic and Business Development at UNC at Chapel Hill, begins the issue with an overview of the North Carolina economy and both traditional and innovative approaches to economic development. The overview is followed by articles on innovative practices in community economic development, written by School faculty and other experts.

These approaches and more, both traditional and innovative, are conceptually framed by the Innovations Matrix at the conclusion of White's article.

—*Jesse L. White Jr., Guest Editor, and John Stephens, Editor*

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The Community Economic Development Program

Since 2003 the School of Government has strengthened its ability to assist North Carolina public officials in community economic development. The School's work in this area focuses on enhancing capacity at the local and regional levels. The goal is to equip public officials to understand better their local economies and community assets, the trends affecting them, the resources available to them, and innovative strategies for leveraging their community's strengths and opportunities in the new economy. For more information, see www.cednc.unc.edu.

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On the Cover
Postsecondary institutions are key players in community economic development.

Cover and Inside Illustrations
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Economic Development in North Carolina: Moving toward Innovation

Jesse L. White Jr.

North Carolina's economy appears to be undergoing a sea change. In fact, the ship of state seems to have lost its economic moorings. But is this actually the case? This article examines the state's changing economy and lays out a framework for thinking about economic development policy. It describes traditional economic development policies and their achievements. Then it surveys innovative policies and programs of the past decade. It concludes with a framework for integrating traditional and innovative policies into a matrix for planning and action.

The author is director of the newly established Office of Economic and Business Development at UNC at Chapel Hill and an adjunct professor in the School of Government. He is a former executive director of the Southern Growth Policies Board and a former chair of the Appalachian Regional Commission. Contact him at jwhite@unc.edu.

North Carolina's Changing Economy

To many, the pillars of the North Carolina economy seem to be crumbling. Almost daily, the newspapers report plant closings in the state's big three: textiles, furniture, and tobacco. Indeed, the job losses in these sectors have been substantial and painful to the people and communities affected. Alarms are being sounded about the need for a new model of economic development for the state, including major incentives for industrial recruitment. However, the tale of North Carolina's economy is more complex than today's headlines make it appear.

North Carolina participated in, and in some cases led, the boom of the Sunbelt. It also shared in the shadows.[1] In the two decades leading up to the new millennium, the state's population grew by about 30 percent, and the number of jobs increased by almost 60 percent, outpacing both the national and the southern rate of growth. By the late 1990s, North Carolina's per capita income was more than 91 percent of the national average and one of the highest in the South. Much of this growth was driven, not by the traditional pillars of the economy, but by the technology-intensive growth in the Research Triangle Park and by banking and other services sectors in Charlotte. The state also has been plagued, however, by persistent and growing differentials between urban and rural areas and among its various regions.[2]

North Carolina made the transition from an agrarian state to a manufacturing state long before most of the South. The transition was fueled in part by the migration of the textile industry from New England to the Carolinas and by the happy absence in North Carolina of a power structure of plantation owners, which stifled economic change in other southern states. Manufacturing of furniture and other nondurable goods, particularly tobacco products, joined the textile and apparel industries, but the manufacturing jobs paid low wages and were overwhelmingly nonunion. In fact, by the early 1960s, North Carolina was among the states with the highest percentages of their workforces in manufacturing, and among the states with the lowest average manufacturing wages. Even today the state ranks in the top three in the percentage of its nonfarm workforce in manufacturing.[3]

In the 1960s and the 1970s, however, a long decline in manufacturing employment began in North Carolina. It occurred as a result of technology and the globalization of production, the latter an emerging phenomenon that severely weakened the cost-sensitive manufacturing base of the South. The media and the public tend to focus on the *current* loss of jobs in the textile and apparel industries. However, as far back as the 1970s and 1980s, North Carolina was losing about 1,000 jobs per month in these sectors. Between 1978 and 1997, the state lost about 32 percent of its textile manufacturing jobs and 40 percent of its apparel jobs. From 1997 through 2001, the losses were a further 30 percent and 39 percent respectively. From 2000 to 2003, employment in textiles and apparel fell by another one-third. The state lost more than 80,000 textile jobs alone in the past decade. In the last few years, the same industrial restructuring began to affect the furniture industry, in which manufacturing employment fell by one-quarter.[4]

Alarms are being sounded about the need for a new model of economic development for the state, including major incentives for industrial recruitment.

Likewise, employment and wages from farming have plummeted in North Carolina. In 1950 there were about 300,000 farms in the state, and agriculture employed more than 25 percent of the workforce. Today the number of farms has fallen to about 50,000, employing about 2 percent of the workforce. Tobacco farming, once a

Urban-rural contrast: Charlotte's skyline by night and a familiar daytime scene in rural North Carolina.

Photos by North Carolina Division of Tourism, Film and Sports Development

Table 1. **Agriculture in North Carolina, 2001**

Total agricultural receipts	$8,061,862,000
Total crop receipts	$3,086,554,000
Total livestock receipts	$4,644,078,000
Hog receipts	$1,709,794,000
Broiler chicken receipts	$1,681,040,000
Tobacco receipts	$685,799,000
Greenhouse receipts	$986,637,000
Total farms 1987	59,284
Total farms 1997	49,406

Source: Data from North Carolina Rural Economic Dev. Ctr., Agriculture in North Carolina [data sheet], available at www.ncruralcenter.org /databank/datasheet.asp?topic=Agriculture (last updated Sept. 15, 2003).

Table 2. **Employment Sectors with the Greatest Job Gains and Losses, 1978–1997**

	N.C. Employment Change, 1978–97	Percent Change, N.C.	N.C. Employment, 1997	Percent of All N.C. Jobs, 1997
Sectors with Greatest Job Growth				
Business services	223,457	400.3	279,281	6.1
State and local government	186,132	55.7	520,481	11.3
Health services	171,877	196.0	259,565	5.6
Eating and drinking establishments	146,962	156.4	240,953	5.2
Food stores	56,383	90.9	118,407	2.6
Social services	47,899	212.6	70,430	1.5
Amusement services	36,188	213.7	53,120	1.2
Personal services	32,809	67.4	81,523	1.8
Industrial machinery manufacturing	30,895	77.6	70,718	1.5
Trucking and warehousing	27,394	53.2	78,885	1.7
Sectors with Job Loss				
Textile manufacturing	– 80,711	– 31.5	175,839	3.8
Apparel manufacturing	– 34,874	– 39.9	52,538	1.1
Tobacco products manufacturing	– 9,504	– 35.9	16,972	0.4
Furniture and fixtures manufacturing	– 6,111	– 7.3	77,346	1.7

Source: Adapted from State of the South 2000, at 95 (Chapel Hill, N.C.: MDC, Inc., Sept. 2000).

staple of income and employment in rural and small-town North Carolina, also has been in steep decline. In the United States, the number of tobacco farms was cut in half from 1978 to 1997. For the most recent year in North Carolina, receipts from tobacco trailed receipts from hogs, chickens, and even greenhouses (see Table 1).[5]

Like the rest of the United States, North Carolina began making the transition to a service-based economy in the last quarter of the century. (For data on the employment sectors with the greatest job gains and losses during this period, see Table 2.) Again, the state was ahead of much of the South, particularly in developing its powerful banking sector. Almost 70 percent of North Carolina's workforce is currently employed in the services sector broadly defined, and that sector has created 70,000 new jobs in the state since 2000. However, much of that sector pays low wages. In travel and tourism, the 80,000 people working in hotels and lodging and in amusement and recreation had average weekly wages of $308 and $447 respectively in 2001. In the same year, the almost 700,000 people working in retail made average weekly wages of $346. At the other end of the services spectrum, some 263,000 health care workers earned average weekly wages of almost $700. For those in high-tech services, the wages were much higher.[6]

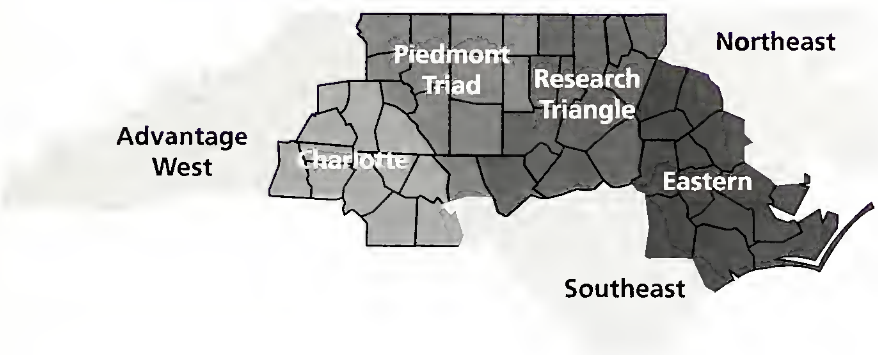
The same wage differential holds for high-tech manufacturing employment, which has grown impressively over the past two decades (although the absolute number of jobs still is smaller than that in traditional industries). The 19,000 workers in the pharmaceutical industry made average weekly wages of more than $1,300 in 2001, and the 58,000 workers in electronics and electrical equipment manufacturing made average weekly wages of more than $900. By contrast, the 123,000 workers in textiles made average weekly wages

Table 3. **Per Capita Income in North Carolina, by Region, 2000**

Region	Per Capita Income	Percent of Statewide Per Capita Income
Research Triangle	$30,400	113
Charlotte	29,900	111
Piedmont Triad	27,600	102
Statewide	**26,900**	**100**
Advantage West	23,900	89
Eastern	23,600	88
Southeast	22,600	84
Northeast	21,700	81

Source: Data from Frank Maley, *Looking for Work*, BUSINESS NORTH CAROLINA, Feb. 2003, at 1, available at www.businessnc.com/archives/2003/02.

Figure 1. **North Carolina Department of Commerce Regional Partnerships**



Source: From North Carolina Dep't of Commerce, Business Recruitment, available at www.investnc.com/helping/partner.asp (last visited Mar. 29, 2004).

of $541, and the 30,000 workers in the apparel industry made $442.[7]

The recent recession hit hard. North Carolina's per capita income figure slipped from a high of almost 92 percent of the national average to about 90 percent in 2003. The unemployment rate doubled, from 3.1 percent in December 1998 to 6.7 percent at the end of 2002 and 6.1 percent at the end of 2003. The change in the relative position of the state was breathtaking. In 1999, North Carolina ranked thirty-eighth in unemployment (first being the least desirable ranking), but last year it was in the top ten (it has since improved to twenty-first). Retail sales have experienced their largest decline in a decade, and even high-tech manufacturing employment declined between 1999 and 2001.[8]

North Carolina has made several major transitions in its economic base—from farming to manufacturing to services. One constant, however, has been the persistence of wage and income differentials and regional disparities. Along with most of the South, the state has experienced the "metropolitanization" of its economy. From 1978 to 1997, the state's metropolitan areas added 1.3 million jobs, while the nonmetropolitan areas added just 330,000. So, although about 67 percent of the people lived in metropolitan areas, those areas produced 80 percent of the job growth. Likewise, during the last decade, urban areas increased almost 26 percent in population, compared with 18 percent for rural areas.[9]

As well as a general urban-rural disparity, there are large regional differences. For example, per capita income ranges from $30,400 in the Research Triangle Park (RTP) to $21,700 in the northeast. (For a breakdown of per capita income by regional partnership areas, see Table 3. For a map identifying the various areas, see Figure 1.)

Clearly the tale of North Carolina's economy is not a simple one. Tens of thousands of jobs have been lost in many traditional sectors of the economy, while tens of thousands have been created in emerging sectors. If one word could describe the state's economy during the past two decades, it would be "churning." Although job loss often is the media story, the quieter story of job creation frequently remains untold. But therein lies the future of the North Carolina economy.

Economic Development Policies

"Economic development" is the intersection of public policy and private commerce for the purpose of creating jobs, businesses, prosperity, and wealth. The study of that intersection is "political economy," a term once widely used in political science and now making a comeback.

Both the nation and the states have implemented numerous economic development policies. Important federal ones have been the land-grant college system, subsidies to build the transcontinental railroads, the interstate highway system, rural electrification, military and space research and development, small business programs, regional commissions like the Tennessee Valley Authority and the Appalachian Regional Commission (ARC), and investments in all levels of public education. Although these programs often are not explicitly characterized as economic development policies, they have profoundly affected the evolution of the American economy. State policies have included the establishment of state departments of agriculture, state road systems, public education, community college systems, and programs for recruitment of branch plants of manufacturing firms.

North Carolina has embraced many of these policies throughout its history. Although much is heard today about technology transfer—as though it were some new phenomenon—one of the most successful models in history is more than a century old: the land-grant colleges and the cooperative extension service. Under the land-grant college system, North Carolina State University was established in 1887, and North Carolina A&T in 1891. This system benefited North Carolina mightily and helped it become a state of small, successful farmers. The state created its own Department of Agriculture in 1944.

To support both the manufacturing and the farming economy, for many years the state also has built roads and highways to get goods from farm and factory to market. In fact, as early as the 1920s, at the time of the creation of the North Carolina Highway Commission, North Carolina was known as the "Good Roads State." Today the state ranks second in the nation in terms of total highway miles under state control and maintenance.[10]

North Carolina also has invested handsomely in postsecondary education for decades. Today it ranks sixth in the nation in expenditures on universities, colleges, and community colleges. The sixteen campuses of The University of North Carolina and the fifty-eight public community colleges represent tremendous economic development assets.[11]

The state has supported the traditional pillars of its economy through other policies. It has kept cigarette taxes among the lowest in the country to support tobacco farmers and cigarette manufacturers. It also has enacted right-to-work legislation and other policies that support low-wage, nonunion manufacturing in textiles, apparel, and furniture.

North Carolina was slow to embrace the southern mania for incentive-based industrial recruitment. Beginning in Mississippi in 1937, the policy was simple and successful: to recruit the branch plants of labor-intensive, cost-sensitive manufacturing firms into communities on the basis of low-wage and nonunion labor, low taxes, and subsidies and incentives. These policies spread across the region and did, in fact, industrialize the rural and small-town South. However, in branch plants controlled from outside, the fate of workers and communities was left in the hands of corporations often domiciled far away. These branch-plant economies—while providing jobs—actually created little wealth in the communities in which they operated.

North Carolina did not adopt this strategy until the passage of the William S. Lee Quality Jobs and Business Expansion Act in 1996, although local incentives had been granted for some time and were held to be constitutional in the *Maready* decision that same year.[12] In December 2003 a special session of the General Assembly enacted the Job Growth and Infrastructure Act, authorizing about $230 million in incentives to Merck & Co. and R. J. Reynolds to create an estimated 1,200 new jobs in the already successful areas of the RTP and the Piedmont Triad. This was an unprecedented and controversial action.

One economic development policy in which North Carolina was ahead of much of the rest of the South was the creation of innovative institutions to promote technology.

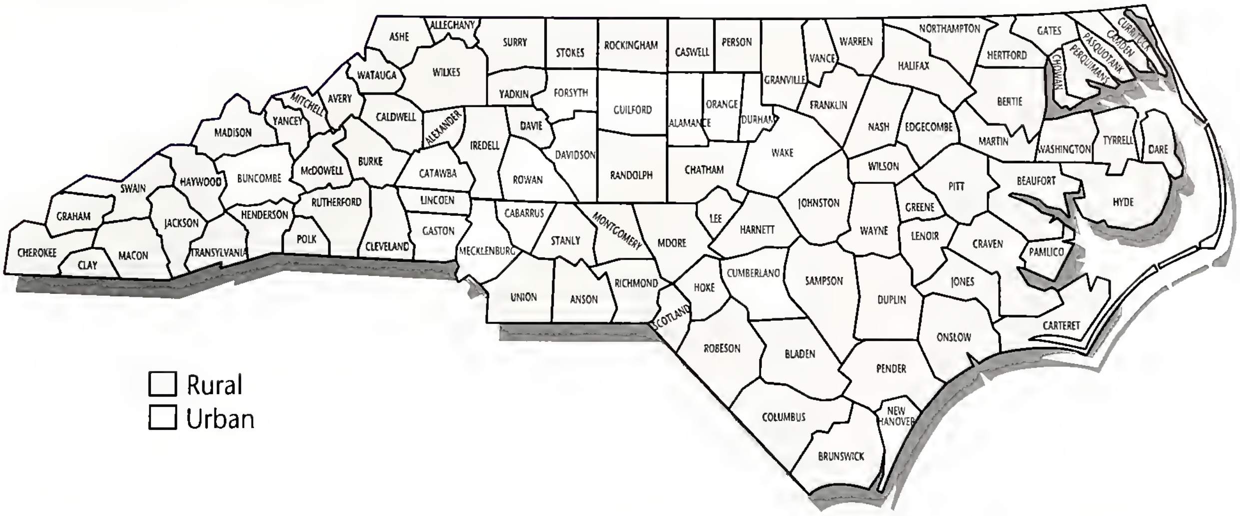
Although North Carolina has a large number of workers in branch plants, it also has many workers in plants of home-grown companies in tobacco, furniture, and textiles. In this sense North Carolina is different from many other southern states. These home-grown plants, however, are subject to the same pressures of technology and globalization as branch plants are.

One economic development policy in which North Carolina was ahead of much of the rest of the South was the creation of innovative institutions to promote technology. The most notable example was the creation of RTP in 1958. This was followed by the creation of the North Carolina Board of Science and Technology in 1963, the Microelectronics Center of North Carolina in 1980, and the North Carolina Biotechnology Center in 1981. In RTP alone, more than 130 companies and organizations employ 45,000 workers, whose average salary is $56,000. The total payroll in RTP is $2.7 billion.[13]

Other important state policies have been in financial services and rural development. For decades North Carolina was unique in the South in allowing statewide banking, which helped North Carolina banks grow and strengthen while restrictive banking laws in other southern states kept their banks small and isolated. Working through the Southern Growth Policies Board, this state was a leader in the 1980s in the interstate banking movement, first creating a protected regional market for a limited period and then embracing national interstate banking. As a result, North Carolina is one of the major banking centers of the United States. Two of the state's banks—Bank of America (newly merged with Fleet First Boston) and Wachovia—are among the five largest in the United States, employing approximately 100,000 and 87,000 workers and holding assets worth $736 billion and $401 billion, respectively.[14]

In 1987, recognizing the growing differentials between the burgeoning metropolitan economy of North Carolina and the languishing or declining rural and small-town economies, the state created the North Carolina Rural Economic Development Center (hereafter the Rural Center), probably the premier such institution in the nation. Its mission is to be an advocate for and funder of the rural counties of the state, drawing its impressive budget from state appropriations, foundations, and the private sector. The Rural Center has a large array of programs, including research and development, water and sewer services targeted at rural areas, microenterprise, access to capital, a leadership institute, an agricultural advancement consortium, a Rural Internet Access Authority, and rural entrepreneurship. A staff of nearly 40 professionals manages an operating budget of almost $7 million dollars, which includes about $3 million in grants. The Rural Center has additional grants and

Figure 2. **North Carolina Rural and Urban Counties, 2002**



Source: From North Carolina Rural Economic Dev. Ctr., Rural County Map, available at www.ncruralcenter.org/databank/rural_county_map.asp (last updated Jan. 2, 2002). Reprinted by permission.

Note: A rural county is one with a density of fewer than 200 people per square mile based on the 1990 U.S. Census [N.C. General Statute 143B-437.41].

awards amounting to almost $80 million, pursuant to the state's Clean Water Bond Fund. (These funds include those of the Rural Internet Access Authority.)[15] (For a map of the state's rural counties, see Figure 2.)

Obviously the intersection between public policy and private commerce—economic development—has had enormous impacts on North Carolina's economy. Although at times overwhelmed by national and global trends, economic development policies still are crucial to the future of the state and its communities. The question today is the same as it always has been: what is the best model of economic development for North Carolina?

Traditional Approaches to Economic Development

From an economic development perspective, there are three traditional ways to create jobs, companies, and wealth: (1) recruiting plants or other facilities of companies domiciled outside the state; (2) strengthening and expanding existing businesses and industries; and (3) promoting entrepreneurship, or creation of new, home-grown businesses. These are sometimes referred to as the three legs of the economic development stool.

Most southern states have invested an overwhelming proportion of their economic development resources in industrial recruitment. In fact, industrial recruitment is the central mission of almost all state departments of commerce or economic development. In North Carolina, state-funded incentives for economic development investments have amounted to more than $200 million

Harry Lynch / News & Observer

North Carolina's Research Triangle has experienced phenomenal growth in the last forty-six years, spurred by developments in biotechnology. Left, a production operator for a Raleigh-based company making medical adhesives pumps a product into a flask.

Project Development Financing

In November 2004, North Carolinians will vote on a constitutional amendment allowing cities and counties to use a new tool for financing debt, called "project development financing." This tool permits a county or a city, without voter approval, to borrow money to construct public improvements intended to attract private investment, and thereby to increase the tax value of property in the vicinity of the improvements. That increase provides the principal security for repayment of the borrowed money.

The county or the city begins the process by establishing a "project financing district," which includes the properties expected to increase in value because of the public investment. Cities may establish such a district in redevelopment areas as defined by the urban redevelopment statutes. Cities and counties may establish such a district in an area that is either (1) blighted, (2) appropriate for rehabilitation or conservation activities, or (3) appropriate for economic development. A county may establish such a district only in unincorporated areas.

A School of Government faculty member, David M. Lawrence, provides an extended explanation of project development financing online at www.sog.unc.edu/popgov/.

since 1996, when the William S. Lee Act was passed. In December 2003 the Job Growth and Infrastructure Act added $230 million to that figure, targeted at just two companies.

This emphasis on recruitment shows in employment statistics. About one-third of Americans employed in branch plants are in the South.[16] In North Carolina, by the mid 1990s, almost 20 percent of private-sector employment was in firms owned by outside interests. According to the Rural Center, in 2002 almost 110,000 firms with fewer than 100 employees together employed about 2 million workers, while nearly 5,700 firms with 100 or more employees employed about 1.7 million workers. In other words, the 110,000 small firms employed close to the same number of people as the 5,700 large firms did.[17] Branch plants tend to be larger than home-grown businesses, so the figure for firms employing 100 or more employees is a proxy for branch-plant employment.[18]

In the past two decades, almost all southern states have enacted programs aimed at strengthening existing industry. North Carolina extends its tax incentives to existing businesses that create new jobs in distressed parts of the state. Other states have embraced this move. Also, the Department of Commerce has established a Business and Industry ServiCenter to help businesses succeed and grow. This service is an innovative partnership among the Department of Commerce, the Small Business and Technology Development Centers, the North Carolina Community College System, and the North Carolina Industrial Extension Service.[19]

Despite these initiatives, however, only a small fraction of the state's resources is spent on existing industry programs. The Rural Center estimates that North Carolina spends only one dollar on strengthening existing businesses for every six dollars it spends on recruitment, despite the fact that existing businesses account for about 60 percent of all new job creation and investment.[20] The gigantic expenditure of funds on industrial recruitment often is a source of bitterness to existing business.

The South began to experience the turmoil of fundamental economic change in the 1980s, and from this distress came policy innovation. The revolutions in communications and transportation technology produced a profound globalization of the economy. That, in turn, doomed the South's economic base of labor-intensive, low-cost manufacturing.

In terms of creation of small businesses, many southern states support revolving loan funds, loan guarantees, technical assistance, and business incubators. North Carolina has provided funding to the Rural Center for its $1.7 million program of capital access. In addition, the Rural Center launched a $2.9 million Institute for Rural Entrepreneurship in fall 2003 with a ten-part program to be funded, in part, by state appropriations. (For more information about the institute, see the sidebar on page 32.) The state also has allocated more than $1 million of its ARC funds for entrepreneurship programs at the Advantage West regional partnership and the North Carolina Department of Commerce. Further, the state funds seventeen Small Business and Technology Development Centers across North Carolina to assist small business start-ups and expansions.[21]

Although the state has made efforts to support existing industry and creation of small businesses, like the rest of the South, it overwhelmingly allocates energy and resources to the recruitment leg of the economic development stool. However, the South and North Carolina also have moved beyond these traditional approaches and developed innovative policies, programs, and practices as the old economy has begun to fade and the new economy has come to be understood.

Innovations

The South began to experience the turmoil of fundamental economic change in the 1980s, and from this distress came policy innovation. The revolutions in communications and transportation technology produced a profound globalization of the economy. That, in turn, doomed the South's economic base of labor-intensive, low-cost manufacturing. The region now was competing with cost structures in the Third World. As noted earlier, the inexorable loss of manufacturing jobs began. A path-breaking report of the Southern Growth Policies Board in 1985, entitled *After the Factories*, documented for the first time this industrial restructuring of the rural and small-town South.[22]

In response to this challenge, out of the Southern Growth Policies Board—and the remarkable group of southern

Figure 3. **Technology-Intensive Employment as a Percent of Total Employment**

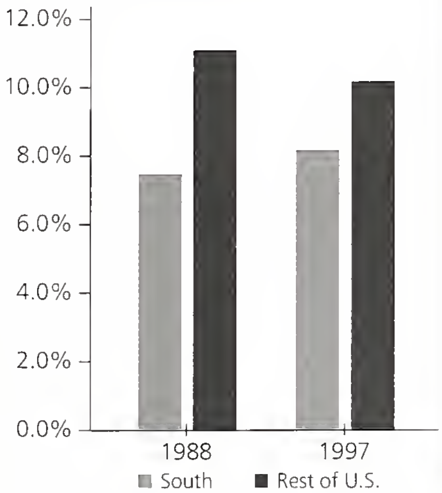
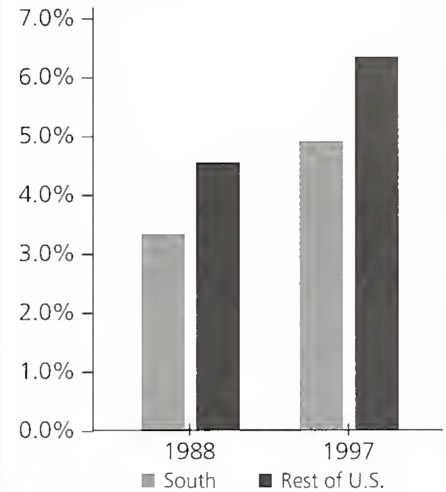


Figure 4. **Number of Technology-Intensive Firms as a Percent of All Firms**



Source: From *Invented Here: Transforming the Southern Economy* 15 (Research Triangle Park, N.C.: Southern Growth Policies Bd., June 2001). Reprinted by permission.

governors whom it served—came a ferment of policy innovation. It was captured first and perhaps most dramatically in the report of the 1986 Commission on the Future of the South, entitled *Halfway Home and a Long Way to Go*. Given the charge of producing an economic development plan for the South, the commission set forth ten path-breaking objectives. The report broke through the stovepipes of state and local government programs and policies, integrating education, training, technology, higher education, leadership development, civic capacity, global competitiveness, and entrepreneurship into a new matrix of economic development.[23]

Other think tanks were undertaking similar innovative work in the 1980s: MDC, Inc. (of Chapel Hill), the State Policy Program and the Rural Economic Policy Program (both of the Aspen Institute, headquartered in Washington, D.C.), the Corporation for Enterprise Development (located in Washington, D.C., and Durham, N.C.), the National Governors Association, the Council of State Policy Agencies, and the Southern Growth Policies Board's Southern Technology Council. In the 1990s a vigorous focus on rural development emerged through the Rural Local Initiatives Support Corporation, the Rural Policy Research Institute, the Center for the Study of Rural America at the Kansas City Federal Reserve Bank, the Northwest Area Foundation, and the ARC.[24]

These innovations were reflected in state policies and programs across the South and throughout the nation. The following sections describe seven key elements of this new approach to economic development.

1. Linking Human Resource Development to Economic Development

Perhaps the single most important development was that southern states began to link quality education to economic development. Although southern states had invested well in postsecondary education for decades, they were at the bottom of the heap in expenditures on elementary and secondary education. An economy based on row-crop agriculture, low-skill manufacturing, and extractive industries did not require a highly educated or skilled workforce. In the new knowledge-based, globally competitive economy of the 1980s, the weakness of the labor force became an albatross on the South's back.

As southern policy makers embraced this understanding, a remarkable wave of education reform and funding began. The education reform movement that began in Mississippi in 1982 swept across the South, often promoted by southern governors on the basis of economic development. North Carolina funded early childhood education and development through Smart Start. Also, in sal-

John L. White / News & Observer

Manufacturing associates work in a cell-culture room at Biogen Idec, a firm that produces therapies for cancer and vaccines for hepatitis B.

aries for elementary and secondary school teachers, it moved from forty-third in 1996 to twenty-third in 1999. Further, as noted earlier, the state now ranks sixth in the nation in expenditures on postsecondary education.[25]

2. Building Institutions to Promote Technology Development and Deployment

Beginning with the influential report of the Southern Technology Council in 1989, entitled *Turning to Technology*, southern states began to create institutions formally to promote the diffusion of technology and innovation for purposes of economic development.[26] Examples include the Alabama Technology Network, in which companies increased their sales by $28 million; the Georgia Research Alliance, which over a decade invested more than $275 million in an infrastructure for innovation; and the Kentucky Innovation Act, which allocated more than $50 million in technology initiatives and created a Kentucky Innovation Commission.[27]

The leadership role that North Carolina exerted is noted earlier in the creation of RTP, the Microelectronics Center of North Carolina, the Biotechnology Center, and the Board of Science and Technology.

Payoff from these investments can be seen in the growth of technology-intensive employment and firms (see Figures 3 and 4, page 9). From 1989 to 1997, technology-intensive employment as a percentage of total employment grew by 34.3 percent in the South, from 1.46 million jobs to 1.96 million. In the same period, the number of technology-intensive firms grew from 45,000 to almost 77,000. On both measures the South outpaced the nation. In North Carolina the growth of technology-intensive employment was 7.9 percent, roughly the southern average but lower than the national average of more than 10 percent. Technology-intensive firms increased by 4.5 percent, below the southern average of 5 percent and the national average of more than 6 percent.[28]

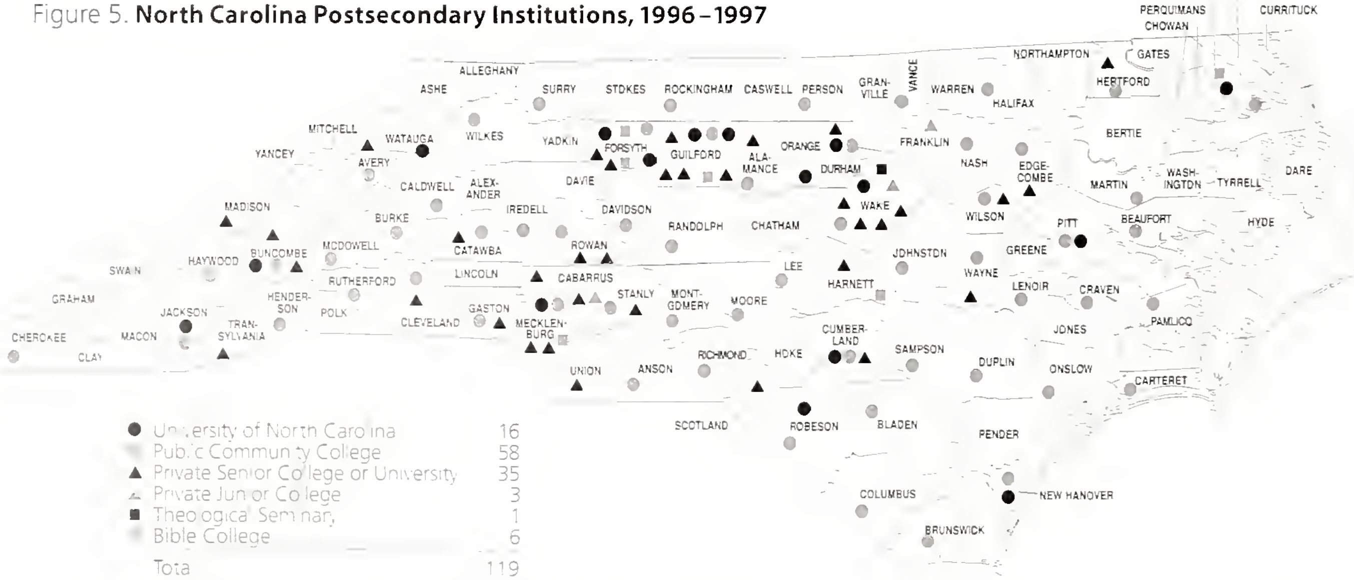
3. Creating Multijurisdictional Institutions to Work on Regional Economic Development

As awareness grew that economies do not function according to artificial political boundaries, states and localities began to create institutions for multijurisdictional planning and action. Some of these were federally created regional planning districts formed under the Economic Development Administration and the ARC in 1965. Others issued from state legislative actions. Still others resulted from cities and counties crafting their own instrumentalities. Examples include the Tennessee Resources Valley in the Knoxville–Oak Ridge area, a sixteen-county economic development agency; the Regional Leadership Council of Louisville, Kentucky, and southern Illinois, serving an interstate region of twenty-three counties; the Greater Richmond Partnership of Richmond, Virginia; and the Indianapolis Regional Economic Development Partnership.[29] North Carolina created seven regional partnerships for economic development under the umbrella of the Department of Commerce (see Figure 1), in addition to its seventeen existing regional councils of governments.[30]

4. Linking Community Development and Civic Capacity to Economic Development

As the South moved from a hierarchical industrial structure to a "flatter" services-sector economy, weaknesses in leadership and civic infrastructure became an impediment to growth and development. Again, the linkage was first established in *Halfway Home and A Long Way to Go*, which had as one of its ten objectives, "Develop Pragmatic Leaders with a Global Vision."[31] This focus on building leadership that is both broad and deep in communities has grown enormously in the past two decades. In fact, the Move the Mountain Leadership Center estimates that leadership development is already a $1 billion industry in the United States.[32] All this

Figure 5. **North Carolina Postsecondary Institutions, 1996–1997**



Source: Adapted from North Carolina Atlas: Portrait for a New Century 362 (Douglas M. Orr Jr. & Alfred W. Stuart eds., Chapel Hill: University of N.C. Press, 2000).

work and energy in building civic capacity led the Southern Growth Policies Board to create its Council on the Southern Community, dedicated to the promotion of model programs in capacity building in southern communities.[33]

There are literally hundreds of leadership development programs across the South and dozens in North Carolina, although many of them do not reach the neediest areas or serve the disadvantaged. Some, like Leadership North Carolina, are quite expensive, charging $2,500 for tuition. Since 1989 the Rural Center has run a leadership program expressly for economic development that costs only $495 and accepts thirty applicants per year. Regional universities, like Western Carolina University, also run programs.[34]

The linkage between leadership and civic capacity and community development is explored in another article in this issue, by Anita R. Brown-Graham and Susan Austin (see page 14).

5. Working with Communities and Companies on Global-Competitiveness Strategies

Perhaps the most important impact of technology on the southern economy has been the rapid globalization of it. The percentage of the U.S. gross domestic product accounted for by international trade soared from about 13 percent in 1970 to more than 30 percent today. The globalization of the production process and the adoption of free trade agreements have together destroyed tens of thousands of old jobs and generated tens of thousands of new ones, creating in the process massive dislocations of the underskilled workforce of the South in general and North Carolina in particular.[35] Further, the South still is an underachiever in export sales. As Carol Conway points out in her article in this issue (see page 35), if southern businesses exported at the national average, the South would have more than 380,000 additional jobs. North Carolina would have about 56,000 of those.

Southern states have adopted programs to help their communities and businesses become more globally competitive. Most have an international component to their economic development departments, but it frequently is focused on industrial recruitment. The

Appalachian Regional Commission

Southern states have supported the creation of small businesses, like the one above, and the strengthening of existing businesses but not to the extent that they have promoted industrial recruitment.

trade-promotion functions often are small and underfunded. World Trade Centers and programs at some universities work with businesses and communities, and North Carolina has just launched a new World Trade Center on the Centennial Campus of North Carolina State University. The effort is a partnership of the Community College System and the university's Office of Extension and Engagement.[36]

6. Developing Programs to Enhance Entrepreneurship

Regional organizations and states began to develop more explicit and sophisticated programs to promote entrepreneurship, realizing that new and small businesses create almost all the new jobs. In North Carolina, for example, according to Rural Center estimates, firms with more than 100 employees lost 42,000 jobs between 1998 and 2002, while firms with 50 or fewer employees created almost 27,000 new jobs. Further, the latter firms generated $14.5 billion in wages annually and provided 614,000 jobs.[37]

Entrepreneurship programs vary widely from state to state. North Carolina is cited as a "model for entrepreneurial infrastructure" in having the university-based Small Business and Technology Development Centers, the community college–based Small Business Development Centers, the programs of the Rural Center, a robust Rural Entrepreneurship through Action Learning program in public schools, and the Self Help Credit Union, which served as the model for the federal Community Development Financial Institutions program.[38]

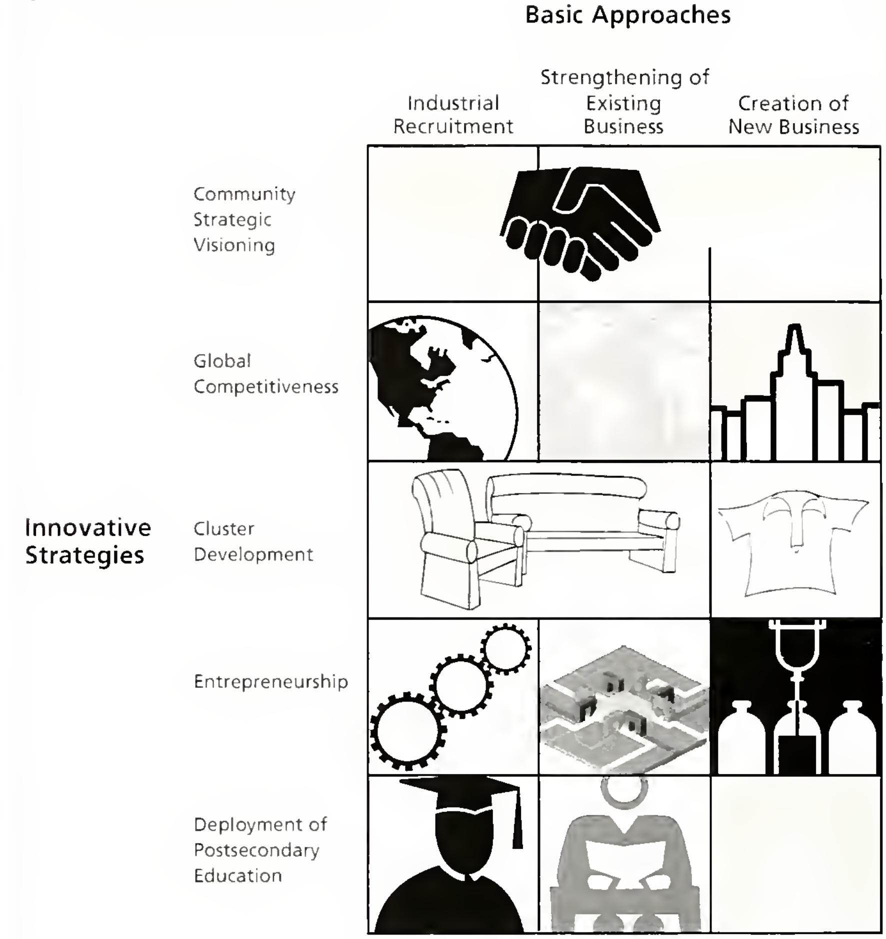
The most ambitious regional program is the ARC's Entrepreneurship Initiative, now in its sixth year. The program has invested about $31 million of federal resources and leveraged another $45 million to help create an infrastructure for entrepreneurship throughout Appalachia. The initiative already has helped create 1,200 new businesses and more than 5,000 jobs. Most of the results of the investments are yet to be realized. ARC funds helped establish the Blue Ridge Entrepreneurial Council in western North Carolina. During its first year, it created a Blue Ridge Angel Investor Network, which raised more than $500,000 for one growing company. It also hosted two conferences, one on building entrepreneurial communities and another on venture capital and entrepreneurship. Further, the council plans to raise $5 million for an angel investment fund.[39]

7. Deploying the Assets of Postsecondary Education

Another innovation was an explicit effort to link postsecondary education to economic development. Higher education already had proven the value of this connection through the land-grant college system and cooperative extension. Now it began to address the broader range of development challenges in the knowledge-based and technology-driven economy of the twenty-first century. North Carolina was a pioneer in deploying the strengths of its community colleges to train workers in manufacturing skills and technologies. (These efforts are described in the article in this issue by Cynthia Liston, Trent Williams, and Stuart Rosenfeld—see page 23.) Beyond training, Catawaba Community College has worked with an industry cluster, through the Hosiery Technology Center, to make regional businesses more competitive. The center often is cited as a model.[40] (For more about the cluster strategy and its use in Catawba County, see the article in this issue by Jonathan Q. Morgan, on page 43.)

Connecting research universities to the development needs of states and regions led the Southern Growth Policies Board to publish *Innovation U: New University Roles in a Knowledge Economy* in 2002. This book outlines the many potential roles for higher education in state and regional economic development. North Carolina State University is one of twelve universities cited as a model for its work in industry research partnerships, technology transfer, industrial extension and technical assistance, and other programs.[41]

Figure 6. **The Innovation Matrix**



The infrastructure of higher education is extensive in the South and especially so in North Carolina. There is an institution of higher education in all but twenty counties in North Carolina. In most cases they can serve as a locus of action in areas that often suffer from weak institutional capacity. (For a map showing the extent of postsecondary education institutions across North Carolina, see Figure 5, page 10).

It is a paradox that most explicit economic development funding goes to the traditional approaches, especially industrial recruitment, even though the innovative practices and policies hold great promise for the future.

The Innovation Matrix

It is a paradox that most explicit economic development funding goes to the traditional approaches, especially industrial recruitment, even though the innovative practices and policies hold great promise for the future. As North Carolina ponders a new set of economic development policies and programs, the question arises: how can traditional approaches and innovative practices be married for the broadest and most effective development of this complex state and its churning economy?

One way is by employing a matrix approach to economic development. Across the top of the matrix are the traditional approaches to economic development, and down the side are innovative strategies (see Figure 6).

The innovative strategies listed down the left side are community visioning, global competitiveness, cluster development, entrepreneurship, and deployment of postsecondary education—the subjects of the other articles in this issue. Other innovative practices could be included—tourism and retirement strategies, telecommunication-based strategies, and regional cooperation, for example. In fact, any community that is undertaking strategic planning and community visioning can tailor the matrix to its vision and strengths and weaknesses.

The strength of the matrix is that using innovative strategies can enrich any of the traditional approaches to economic development. For example, industrial recruitment often can be more effective if it results from community visioning or is tied to existing business clusters. Likewise, the existing industry base often can be strengthened by deploying the assets of postsecondary education institutions in a regional context, relying on existing or emerging clusters. Also, business development strategies can be more effective if tied to technology or to explicit entrepreneurship programs.

Conclusion

The churning economy of North Carolina is filled with good news and bad. The economy's pillars are under enormous international stress, with no signs of abatement. On the other hand, emerging sectors are strong and are creating thousands of jobs, in part as a result of the state's farsighted policies and investments in technology and postsecondary education. However, at the state level, the portfolio of programs needs rethinking and rebalancing among the three legs of the economic development stool.

In thinking about new directions and new policies for North Carolina, policy makers would be well advised to combine the traditional approaches to economic development with the innovations that this state helped launch and is continuing to develop. By using the innovations matrix, the state and its communities can move a long way toward true global competitiveness in the twenty-first century.

Notes

1. *See* Shadows in the Sunbelt: Developing the Rural South in an Era of Economic Change (Chapel Hill, N.C.: MDC, Inc., May 1986).

2. *See* State of the South 2000 (Chapel Hill, N.C.: MDC, Inc., Sept. 2000).

3. Alfred W. Stuart, *Manufacturing*, in North Carolina Atlas: Portrait for a New Century 177 (Douglas M. Orr Jr. & Alfred W. Stuart eds., Chapel Hill: University of N.C. Press, 2000).

4. North Carolina Rural Economic Development Center (hereafter Rural Center), Occasional Papers (Raleigh: Rural Center, 2003); 2 North Carolina Rural Economy (published by the Rural Center) no. 4, at 1 (2003).

5. *Introduction*, in Orr & Stuart, North Carolina Atlas, at 1, 3; Rural Center database, available at www.ncruralcenter.org; Tobacco at a Crossroads, Report of a Presidential Commission 14 (Washington, D.C.: U.S. Dep't of Agric., May 14, 2001).

6. *See* Business North Carolina, Feb. 2003, at 1, available at www.businessnc.com/archives/2003/02; State of the South 2000.

7. Business North Carolina, Feb. 2003, at 1; State of the South 2000.

8. *See* Business North Carolina, Feb. 2003, at 1; State of the South 2000; Bureau of Labor Statistics.

9. State of the South 2000.

10. *See* NC 20/20, at 162 (Raleigh: North Carolina Progress Bd., Dec. 2001).

11. *Id.* at 60.

12. *See* David M. Lawrence, Economic Development Law for North Carolina Local Government ch. 1 (Chapel Hill: Institute of Gov't, U. of N.C. at Chapel Hill, 2000).

13. *See* Research Triangle Park website, at www.rtp.org.

14. Bank of America and Wachovia Bank websites, at www.bankofamerica.com, www.wachovia.com.

15. Rural Center website, at www.ncruralcenter.org.

16. Amy Glasmeier et al., Branch Plants and Rural Development in the Age of Globalization 12–13 (Washington, D.C.: Aspen Inst., 1995).

17. Rural Center, North Carolina Business Data Sourcebook 210–11 (Raleigh, N.C.: Rural Center, Oct. 2003).

18. David Tomaskovic-Dewey & Jacqueline Johnson, Southern Rural Economic Development: The Branch Plant/Local Firm Development Options 2, 7 (Raleigh: North Carolina State Univ., June 1996).

19. North Carolina Dep't of Commerce website, at www.nccommerce.com.

20. Rural Center, Institute for Rural Entrepreneurship, Occasional Paper (Raleigh, N.C.: Rural Center, 2003).

21. *See* Rural Center and Small Business and Technology Development Centers websites, at www.ncruralcenter.org, www.sbtdc.org. A map locating the Small Business and Technology Development Centers is available on the latter website.

22. *See* Stuart Rosenfeld et al., After the Factories: Changing Employment Patterns in the Rural South (Research Triangle Park, N.C.: Southern Growth Policies Bd., 1985).

23. *See* Halfway Home and a Long Way to Go, Report of the 1986 Commission on the Future of the South (Research Triangle Park, N.C.: Southern Growth Policies Bd., 1986).

24. *See* the organizations' websites, at www.mdcinc.org, www.aspeninstitute.org, www.cfed.org, www.nga.org, www.southern.org, www.ruralisc.org, www.rupri.org, www.kc.frb.org/RuralCenter, www.nwaf.org, www.arc.gov. The Council of State Policy Agencies no longer exists.

25. *See Quality Education for All*, in NC 20/20, at 59.

26. Southern Growth Policies Board, Turning to Technology (Research Triangle Park, N.C.: the Board, 1989).

27. *See* Southern Growth Policies Board, Invented Here: Transforming the Southern Economy (Research Triangle Park, N.C.: the Board, June 2001).

28. *Id.* at 15, 60.

29. *See* the organizations' websites, at www.trv.org; www.greaterlouisville.com/city/gl_spanning.asp; www.grpva.com; www.iredp.com.

30. *See* North Carolina Dep't of Commerce website, at www.nccommerce.com.

31. Halfway Home and a Long Way to Go.

32. See Southern Growth Policies Board, Reinventing the Wheel (Research Triangle Park, N.C.: the Board, 2003).

33. *Id.*; Southern Growth Policies Bd. and Appalachian Regional Comm'n websites, at www.southern.org, www.arc.gov.

34. Southern Growth Policies Bd., Reinventing the Wheel; Southern Growth Policies Bd., Appalachian Regional Comm'n, and Rural Center websites, at www.southern.org, www.arc.gov, www.ncruralcenter.org.

35. *Evaluating International Trade in the South*, 4 Southern Growth (published by Southern Growth Policies Bd.) no. 1 (1997).

36. North Carolina World Trade Org. website, at www.ncwta.org.

37. Rural Center, Press Release (Raleigh, N.C.: the Center, Oct. 23, 2003).

38. Brian Dabson, *Supporting Rural Entrepreneurship*, in Exploring Policy Options for a New Rural America 35 (Kansas City, Mo.: Center for the Study of Rural America, Federal Reserve Bank of Kansas City, Sept. 2001).

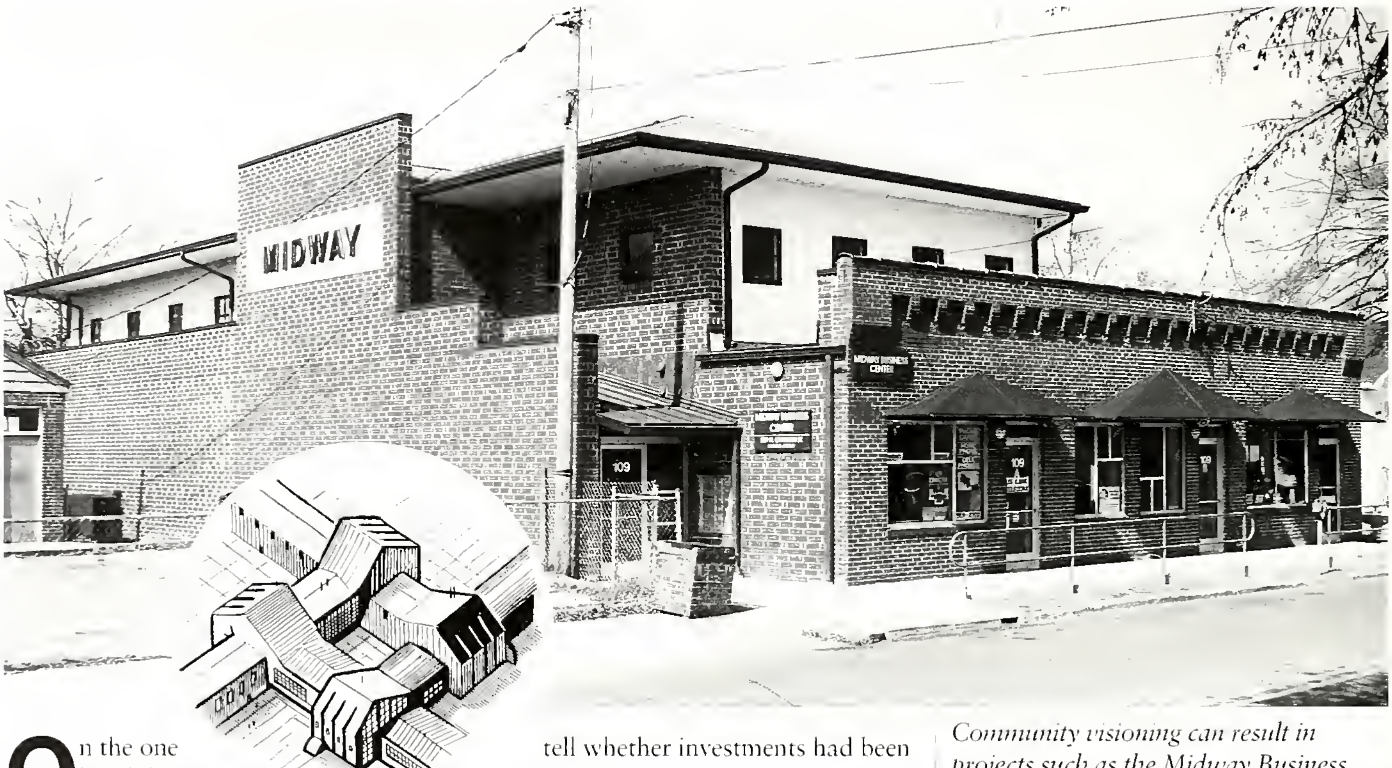
39. *See* Appalachian Regional Comm'n and Blue Ridge Entrepreneurial Council websites, at www.arc.gov, www.ncmtns.biz.

40. *See* International Economic Development Council, Economic Development Now (Washington, D.C.: the Council, July 2002).

41. Lou G.Tornatzky et al., Innovation U: New University Roles in a Knowledge Economy (Research Triangle Park, N.C.: Southern Growth Policies Bd., 2002).

Using Community Vision and Capacity to Direct Economic Change

Anita R. Brown-Graham and Susan Austin



JACK HAGGERTY

Community visioning can result in projects such as the Midway Business Center (pictured above). It is an initiative of EmPOWERment, Inc., which helps Alamance, Chatham, and Orange county neighborhoods build leadership and organize for community change.

On the one hand, local planning for economic development is nothing new. Numerous localities have gone through countless iterations of planning tools and decades of practice. Yet as late as the 1990s, the economic development efforts in many communities displayed the following weaknesses:

- A dizzying array of initiatives generating significant activity but producing few results
- Several seemingly uncoordinated development groups
- A lack of any clear public mandate on how to prioritize opportunities and allocate investment dollars
- No roadmap to provide benchmarks of progress and therefore no way to tell whether investments had been successful

Today communities recognize that they need new planning tools to respond adequately to the rapid rates of economic and social change confronting North Carolina in the early twenty-first century.[1] As development issues become more complex in substance, context, and political dynamics, public leaders are searching for ways to bring people together to frame a unifying vision for responding to the profound opportunities and threats that abound.[2] Realizing that their communities cannot afford to be constrained by present limitations, these leaders are seeking to redirect economic growth and change in ways that provide coherence while capturing the imagination and priorities of community residents. Increasingly they are turning for help to the planning process, "community strategic visioning."

Community strategic visioning asks residents to consider what the community should be at a future date, even

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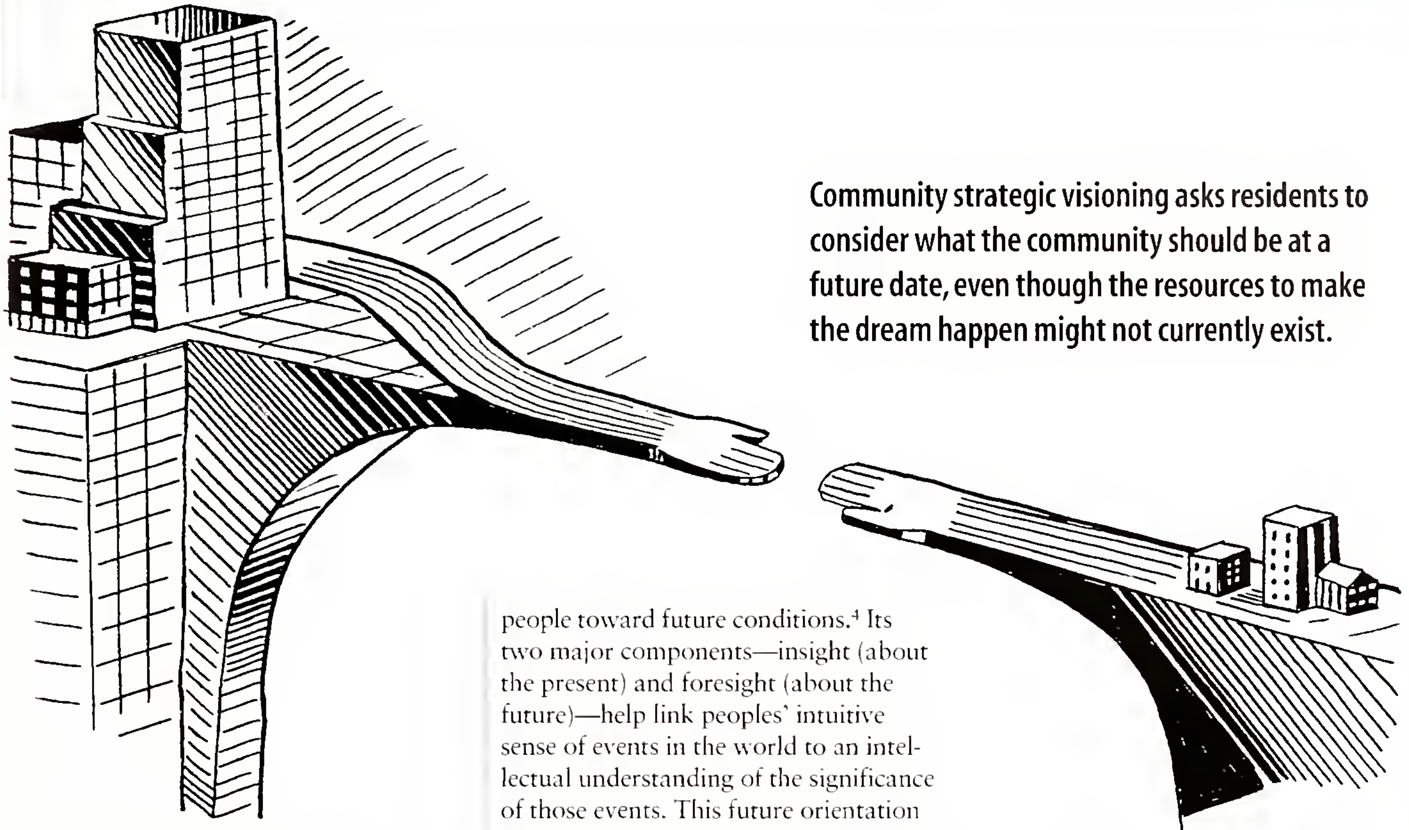


Community strategic visioning asks residents to consider what the community should be at a future date, even though the resources to make the dream happen might not currently exist.

though the resources to make the dream happen might not currently exist. Then residents create an action plan to attract needed resources and implement a set of strategies to accomplish their vision. This article explains that, in addition to helping communities attract external resources, strategic visioning helps build within the community resources that are critical to economic development success. These resources are collectively referred to as "community capacity."

Understanding the Value of Vision

Historian Frederick Polack asked, "Is a nation's positive image of its future the consequence of its success, or is a nation's success the consequence of its positive image of the future?"[3] The question can be asked about states and localities as well, and the answer may be found in Polack's research. After examining the fates of past and present nations, Polack suggested that (1) significant vision precedes significant success; (2) leaders share a compelling image of the future with their followers, and together they strive to make this vision a reality; and (3) a community with vision is enabled, whereas a community without vision is at risk.

What is "vision"? It is perhaps best understood as the instrument that moves people toward future conditions.[4] Its two major components—insight (about the present) and foresight (about the future)—help link peoples' intuitive sense of events in the world to an intellectual understanding of the significance of those events. This future orientation is used to create an image of what could and should be. By articulating a shared image of what their community seeks to be, residents can purposefully begin to create the desired future, rather than simply react to prevailing trends and external forces of change. Often adopted as a formal statement in strategic visioning, the vision serves both as a guide to future decisions and actions and as a framework for important public policy choices.[5] It helps keep a community on track by creating a roadmap and milestones to track progress. (For a detailed description of how a community engages in strategic visioning, see the sidebar on page 16.)

As a planning tool, strategic visioning relies on the general promise of visions to claim impressive outcomes. The oft-cited benefits mirror those that "visionary corporations" experience:[6]

- Broad stakeholder involvement
- Assessment of community assets and weaknesses
- Articulation of community values
- Evaluation of current trends and issues affecting the community
- Clarity of shared vision for the community's future, reached by stakeholder consensus
- A specific action plan with detailed long- and short-term steps necessary to achieve the vision
- A process for ongoing appraisal of the success of the initiative

Less frequently articulated, but important to economic development, is the idea that a community's experience with strategic visioning both reflects and builds community capacity. This capacity is itself a useful construct for guiding a community's economic and social change efforts.

In the rhetoric and the activities of strategic visioning, the notion of community capacity building is both explicit and pervasive. Much like strategic visioning, community capacity describes collaborations among individuals, organizations, and social networks within a given community that can be leveraged to solve collective problems and improve or maintain the well-being of that community.[7] However, achieving the vision requires the creation of substantial capacity to implement an action plan. (For a discussion of implementation as one step in a strategic visioning model, see the sidebar on page 16.) That capacity, in turn, leads to future visions. As strategic management guru Jack

A Comprehensive Community Visioning Process

Most strategic visioning models for communities are slight variations of what is called the Oregon Model, in acknowledgment of the innovative and widespread use of visioning as a planning tool in that state.[1] This model has been adopted, and adapted, by communities across the United States, Canada, Australia, and New Zealand. The Oregon Model involves a comprehensive five-step process (see the diagram on page 17). Each step focuses on a driving question, involves different activities, and results in specific products. Although all five steps are recommended, a community may choose to follow only some of them or to undertake specific activities at different points in the process. The five questions undergirding the steps are Where are we now? Where are we going? Where do we want to be? How do we get there? and Are we getting there?

Where are we now?

This question involves completing a critical evaluation of the community as it exists in the present. Participants develop a profile of the community's characteristics, such as populations, the local economy and labor force, political and community institutions, transportation, and education resources. As part of the profile, the community assesses its strengths and weaknesses, identifying the assets already in place that it can leverage.

Also during this first step, stakeholders identify the values shared by members of the community. These values may include a desire to maintain a small-town atmosphere over the anonymity that may be a byproduct of extensive growth, and a willingness to expend resources so that all members of the community have equal access to recreational activities or other amenities. Once articulated, the values become key drivers of strategic visioning.

Where are we going?

In this second step, participants identify significant trends and emerging issues to determine where the community may be headed. The trends and issues may include advances in communication technology, which allow many employees to telecommute, or aging of a large segment of the population, which will require accessible services appropriate to the needs. Once identified, participants develop a picture, or "probable scenario" (and perhaps alternative possible scenarios), describing what their community will look like if they continue to do things the same way in the future as they have in the past.

Where do we want to be?

This step is the heart of visioning. On the basis of identified trends and emerging issues, participants craft a vision of what they want their community to become. They incorporate their shared values into this vision. The vision should not be limited by current constraints. This "preferred scenario" is what their community will be if it responds to emerging trends and issues proactively.

How do we get there?

This is the step at which participants specify what the community must do to achieve its vision. Strategies are identified, responsibilities assigned, and timetables set. Participants are encouraged to develop a matrix to capture the complexity of elements essential to implement their action plan. Elements of the matrix may include committee assignments, resources required, and timelines for completion.

Are we getting there?

Some well-intentioned planning efforts never come to fruition. For a vision to become a reality, a method of monitoring progress must be adopted. Steven C. Ames, consulting planner and futurist, characterizes the key reasons for this step as follows: "(1) to make the desired change happen, (2) to monitor the community's effectiveness in achieving its vision over time, and (3) to provide a system that will inform the eventual update of its action plan over time and ultimately the renewal of its vision."[2]

Notes

1. Steven C. Ames, Community Visioning: Planning for the Future in Oregon's Local Communities (1997), available at http://asu.edu/caed/proceedings97/ames.html. The approach directly reflects the collective visioning experiences of local communities in Oregon. Beginning in the 1980s, they realized that they needed an effective way to manage rapid change, develop a shared sense of purpose, chart preferred directions, and foster the leadership needed to act. To help them design such a process, they turned to the Oregon Visions Project, a committee of the Oregon Chapter of the American Planning Association, which had formed to promote long-range planning in the state.
2. E-mail from Steven C. Ames to Susan Austin (May 5, 2004).

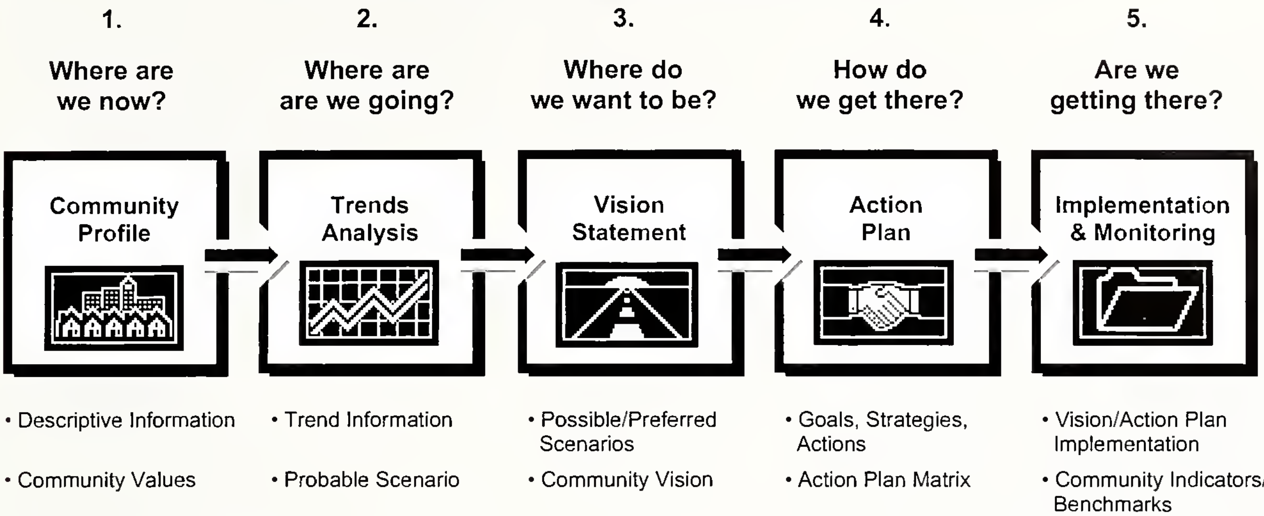
Koteen writes, "Whatever the vision promises, the capacity to deliver must exist . . ."[8] Without community capacity a strategic visioning process will fail to produce economic changes.

Developing Climates for Innovation and Renewal

Something causes well-functioning communities to function well. Its proponents contend that community capacity is that something. Specifically, proponents maintain that differences in community capacity often explain why communities that seem to be similarly situated have such different outcomes in economic development. Frequently credited with allowing community members and organizations to work together to optimize the development and the use of community resources, community capacity determines how effectively a community manages its economic change.[9]

"Community capacity" is "the interaction of human capital, organizational resources and social capital existing that can be leveraged within a given community to solve the collective problems and improve or maintain the well-being of that community."[10] On the basis of this definition, the benefits of abundant community capacity are intuitive. If economic development depends on a community's preparedness, willingness, and capacity to respond to opportunities

THE NEW OREGON MODEL
A COMPREHENSIVE COMMUNITY VISIONING PROCESS



Source: From A Guide to Community Visioning: Hands-on Information for Local Communities (Steven C. Ames ed., Portland, Ore.: Oregon Visions Project, Oregon Chapter American Planning Ass'n, 1993, rev. and updated 1998). Reprinted by permission.

and losses, then communities with greater capacity to mobilize individual, organizational, and social network resources will have better economic development outcomes. In communities that work well, community capacity will be reinforced by the continual interactions of its dimensions. In communities that work less well, leaders may need to facilitate interventions that both increase community capacity overall and achieve specific economic development outcomes. Strategic visioning has become an increasingly popular intervention strategy because it strengthens the capacity of communities to identify priorities and opportunities for positive economic change.

Unfortunately, translating the broad concept of community capacity into specific interventions, such as strategic visioning, is fraught with difficulty. When asked to be specific about the usefulness of community capacity, its proponents sometimes struggle to articulate a common language. What is "capacity"? How can it be strengthened? What are its components? How can they be recognized? Local leaders will need answers to these questions to assess the success of their interventions.

If economic development depends on a community's preparedness, willingness, and capacity to respond to opportunities and losses, then communities with greater capacity to mobilize individual, organizational, and social network resources will have better economic development outcomes.

Characterizing Community Capacity

Clearly a focus on community capacity in economic development leads away from simple evaluations of the production of outputs, such as the number of jobs created, to more complicated considerations of the functioning of the community. The attempts to be specific about the concept of community capacity vary in focus. Robert Chaskin, a notable scholar on the matter, says some attempts "focus largely on organizations, others on individuals, others on affective connections and shared values, and still others on processes of participation and engagement." However, Chaskin also notes that, taken together, the varied attempts suggest some agreement on the following factors: (1) resources (ranging from the skills of individuals to the strengths of organizations), (2) networks of relationships, (3) leadership, and (4) support for some kind of mechanisms for or process of participation by community members in collective action and problem-solving.[11] On the basis of those common factors, Chaskin has created a model for analyzing community capacity. A description of it follows, with modifications to address more directly the benefits of community capacity to economic development.

Community capacity is exemplified by a set of core characteristics:

- **Sense of community,** reflected by the degree of connectedness among members and the recognition of commonality of circumstances, including collectively held values and vision. This sense of community allows people to come together in ways that support a common good.

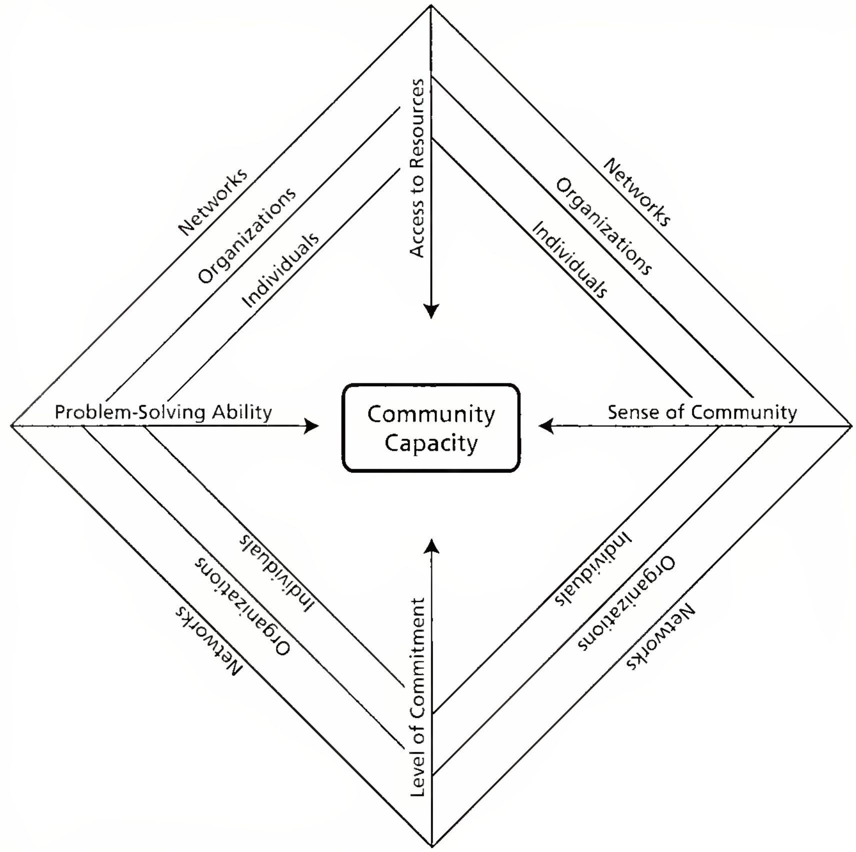
- **Level of commitment,** or the responsibility that individuals, groups, or organizations take for what happens in the community. Level of commitment is reflected both in the existence of community members who see themselves as stakeholders in the collective well-being of the community and in the willingness of these members to participate actively in the stakeholder role.
- **Ability of the community to solve problems** by translating its commitment into action. A community may identify and address problems or pursue collective goals through formal or informal means, spontaneously or through planned action.
- **Level of access to economic, human, physical, and political resources** within and beyond the community's boundaries. Communities with abundant capacity can garner resources and have some ability to influence policies that directly affect their development.

The core characteristics of community capacity may be engaged through some combination of three levels of social connectedness:

- **Individual level,** or the skills, knowledge, and resources of individual residents in the community and their participation in activity to improve the community. Such "human capital" contributes to community capacity as a collective resource and through specific individuals. Leadership applies particular aspects of human capital when individual community members act as change agents to mobilize others and catalyze action.
- **Organizational level,** or the ability of organizations (such as schools, local businesses, development organizations, and banks) to carry out their functions responsively, effectively, and efficiently as part of the larger system and economic development processes. The value of these organizations to community capacity goes beyond an accounting of production outputs, such as the number of loans a bank makes, to include issues of constituent representation, political influence, and ability to engage in useful interorganizational relationships.
- **Network level,** or patterns of relationships among individuals and organizations. This infrastructure of useful relationships provides a context of trust and support and represents access to a resource known as "social capital." Social capital is realized through relationships, as compared with physical capital, which takes observable material form, and human capital, which rests in skills and knowledge acquired by an individual.

(For a diagram of the interaction between the core characteristics and the levels of social connectedness, see Figure 1.)

Figure 1. **Interactions of Core Characteristics and Levels of Community Capacity**



Source: Developed by Anita R. Brown-Graham.

Designing Strategic Visioning to Build Community Capacity

Strategic visioning initiatives should be designed to do more than achieve tangible results. They should be designed to acknowledge a deeper connection among citizens, civic leaders, and the community for the purpose of using strategic visioning to increase community capacity. The following discussion of ways to generate community capacity through strategic visioning is based on (1) Chaskin's model of community capacity, (2) case study data derived from the authors' work on strategic visioning initiatives in North Carolina communities, (3) documentary data from additional initiatives and organizations engaged in efforts to build community capacity, and (4) a review of the existing literature.

Sense of Community

Defining community is difficult these days. People live and work in differing jurisdictions, and the economy pays little attention to local political boundaries. In such circumstances, economic development planners cannot afford to be overly focused on people and information internal to a locality. "Regional and local leadership—shared across the civic, business and government sectors by people willing to cross the old and familiar boundaries—is more critical than ever."[12] In considering how to approach external stakeholders for support in planning a strategic visioning process, local leaders should not be excessively wary. People do not want to say that they work or live in a community without a vision of what it wants to be. A commonality of circumstances, even across jurisdictional boundaries, allows people to come together in ways that support the common good. (For an example of multijurisdictional strategic visioning, see the sidebar on this page.)

Level of Commitment

Strategic visioning depends on people willing both to define and to support the public interest. Although strategic visioning always begins with a small, dedicated group of civic leaders who initiate and facilitate it, even that group should include representation from major sectors of the community, such as business, local government, human services, education, health care, community-based development organizations, and civic organizations. Perhaps the most important task for this planning group is to identify and invite others to participate in the effort. This may not always be a simple task. Civic responsibilities may fall low on the personal list of priorities for many people. Moreover, some stakeholders may not trust the motives of the people and organizations initiating the process. Building trust (a critical part of the process) will add time to the front end of the project. (For an example of a representative planning group that facilitated a strategic visioning effort, see the sidebar on page 20.)

Ability of the Community to Solve Problems

For strategic visioning to work well, it must not be captured by either special or shallow interests. In addition to showing broad citizen engagement, the process should reflect careful citizen deliberation and respect for expertise. Experts can be particularly useful in helping the participants avoid "analysis paralysis." Overwhelmed by the complexity of issues, civic leaders may fall prey to overload. Thus, experts on strategic visioning or the people who have organized the strategic visioning often must help participants determine what information they actually need for better deliberation and understanding.

Level of Access to Economic, Human, Physical, and Political Resources

Different communities have different strengths on which to draw when pursuing an economic development strategy. However, communities do not have to reinvent the wheel for solutions. They can learn much from observing what others have done and then analyzing, adopting, and adapting the most promising initiatives to fit their community's unique circumstances. By assessing the strategies of comparable communities, a community often can harness its own resources more strategically.

Individual Level

Strategic visioning is rarely easy. Indeed, bringing people together in an atmosphere of support to solve community problems systematically has been likened to "teaching dinosaurs to do ballet."[13] Differences are bound to arise, sometimes with great intensity. For the process to benefit from the skills, knowledge, and resources of individual residents, it must be open to airing those differences. Building community capacity does not require the elimination of di-

An Example of Strategic Visioning: The Outer Banks of North Carolina

The region of the state known as the Outer Banks is a beach resort community heavily reliant on seasonal tourism for its economic well-being. It has experienced steady growth over the past twenty years. This growth has affected every facet of community life.

Beginning in 2000, the Outer Banks Chamber of Commerce noted a rise in concern about quality of life in the responses to its annual Membership Opinion polls.[1] Respondents worried that growth-related problems, left unaddressed, would damage the very qualities that made the Outer Banks a desirable vacation destination. This concern that the community might "kill the goose that laid the golden egg" was the impetus for the initial phase of a community strategic visioning project.

In early 2001 the Chamber of Commerce contacted the Institute of Government for assistance in crafting a strategic visioning process. Together they applied for a grant from the Outer Banks Community Foundation to fund the first phase of the initiative. In addition to awarding a grant, the foundation joined the initiative as a partner.

Phase 1, begun in November 2001, involved the use of individual and small-group interviews to gather a range of information necessary to determine whether there was community-wide interest in pursuing the project. A preliminary report on the data was submitted to the Chamber of Commerce and the foundation in May 2002, and a comprehensive report was delivered in July 2003.[2] Both organizations now are reviewing the information to determine how they want to proceed.

The Outer Banks Quality of Life Initiative is an excellent example of strategic visioning across private and nonprofit sectors, as well as political jurisdictions. People interviewed for the initial phase included stakeholders from forty-nine business, civic, government, and nonprofit organizations; three counties; and six municipalities. With rare exceptions those interviewed were concerned about preserving their quality of life and interested in participating in the next phase of strategic visioning. —*Susan Austin*

Notes

1. Outer Banks Chamber of Commerce, 2000, 2001, and 2002 Membership Opinion polls. Handouts distributed at the chamber's annual "Viewpoint" Legislative Breakfast programs.
2. For more information about the report, contact Susan Austin, e-mail austin@iogmail.iog.unc.edu.

An Example of Strategic Visioning: Burke County, North Carolina

In April 1997 a *Reader's Digest* poll named Burke County, in western North Carolina, one of the top ten places in America to raise a family. Despite this distinction, an ample workforce, a desirable location, a highly rated public school system, and transportation strengths, Burke County faced a severe economic downturn in recent years for several reasons. First, the area depends heavily on manufacturing and production, two sectors that have recorded tremendous job losses as a result of productivity improvements and firms relocating to foreign markets. Second, the county also suffers from an inadequately educated workforce: in 2000, for example, 40 percent of residents over age 35 did not have a high school diploma, and 7 percent of youngsters in grades 7–12 dropped out each year.[1] This education deficiency and the county's proximity to counties that are more metropolitan make attracting new industry difficult.

In May 2001 a motivated group of approximately 30 Burke County residents sought to respond to these economic challenges. The group hoped to bring to economic development the same vision and commitment that a previous community collaboration, Continuing Burke's Vision, had brought to human services. The group named itself Partners for Economic Growth and began designing an inclusive, comprehensive economic development process with the assistance of the Institute of Government.[2]

The group held an Economic Development Summit in April 2002 to collect thoughtful options for development, gather information regarding the state of the workforce, compile a comprehensive list of resources, develop consensus to support the options, and promote understanding of the interdependence between a regional and a local economic community. The summit attracted 240 community residents. Ninety agreed to join the work of the group. The original 30 Partners for Economic Growth members now serve as the steering committee for the larger group of 120. This larger group is divided into subcommittees that focus on education, workforce development, entrepreneurship/small business, technology, community services, heritage preservation, existing industry, industrial site development, and communications.

In addition to having representation from county and municipal governments, public education, private industry, and small business, Partners for Economic Growth enjoys the participation of several leaders in human services. The group includes the director of the local Smart Start agency, the director of the public library system, the director of the local Employment Security Commission, and a local minister from the historically underrepresented portion of the county. The involvement of these people and the populations they represent is unusual for economic development task forces. Their participation in Burke County has enabled the group to design projects targeted at the county's low-income families.

One example is the Eastern Burke Alliance, which seeks to address the poverty in the eastern section of the county by providing specialized courses and support services so that low-income individuals can become better educated and earn higher wages. The program targets unemployed and underemployed people from both the native and Hmong communities in eastern Burke County.[3]

The alliance is using a Duke Endowment Rural Carolinas grant to provide a variety of courses and career counseling, as well as child care. The courses are being offered by a partnership consisting of Hildebran Elementary School, Hildebran United Methodist Church, Western Piedmont Community College, and the Town of Hildebran. The coursework focuses on computer and Internet skills, budgeting, entrepreneurship, and basic math, reading, and writing skills.

—*Anita Brown-Graham and Emily Williamson*

Williamson is a member of Partners for Economic Growth and a graduate of the School of Government's Master of Public Administration Program.

Notes

1. The data for 2000 (the year before Burke County took action) were obtained from a database maintained by the North Carolina Department of Commerce. They are no longer available online. For current data, see North Carolina Dep't of Commerce, Economic Dev. Info. Syst., County Profiles, Burke County, available at http://cmedis.commerce.state.nc.us/countyprofiles/profile.cfm.

2. Leslie Anderson et al., A Report of the Formation, Purpose, and Expansion of the Burke County Partners for Economic Growth (Chapel Hill: Institute of Gov't, Univ. of N.C. at Chapel Hill, July 11, 2002).

3. Hmong are from a variety of Asian countries. Most in the United States are from Laos.

versity. To the contrary, the process welcomes other points of view, embraces opposites, and seeks greater clarity in decision making through the understanding of all sides of every issue.[14]

Organizational Level

Businesses are not shy about articulating their desire to locate in communities that can provide an attractive quality of life to their employees. Quality-of-life issues, such as the eminence of educational institutions, the availability of good health care services, good air and water quality, the availability of parks and open spaces, and the preservation of natural amenities, are growing in their importance to economic development. Consequently no one organization or sector can shape the multitude of community characteristics that determine quality of life.

Rarely can today's problems be solved by, or a successful plan be implemented by, only members of the private sector, or only members of the governmental sector. To the contrary, community capacity at the organizational level requires the ability to engage in useful interorganizational relationships. "The successful communities of the 2000's will be those that find ways for business, government, and non-profits to work together with citizens to help a community reach its collective goals and meet its common challenges."[15]

Network Level

Ultimately, strategic visioning is about developing the social relationships needed to achieve desired goals. Communities in North Carolina are seeking to respond to economic changes through strategic visioning because they believe that "if you bring the appropriate people together in constructive ways with good information, they will create authentic visions and strategies for addressing the shared concerns of the . . . community."[16] Leaders in these communities recognize that when collaboration succeeds, new networks and norms for working together are established, and the primary focus of community work shifts from parochial interests to the broader concerns of the community. However, for collaborations to succeed, attention to internal group dynamics is critical, for the visioning group often involves members with a history of conflict, misunderstandings, benign neglect of one another, or little experience working together.

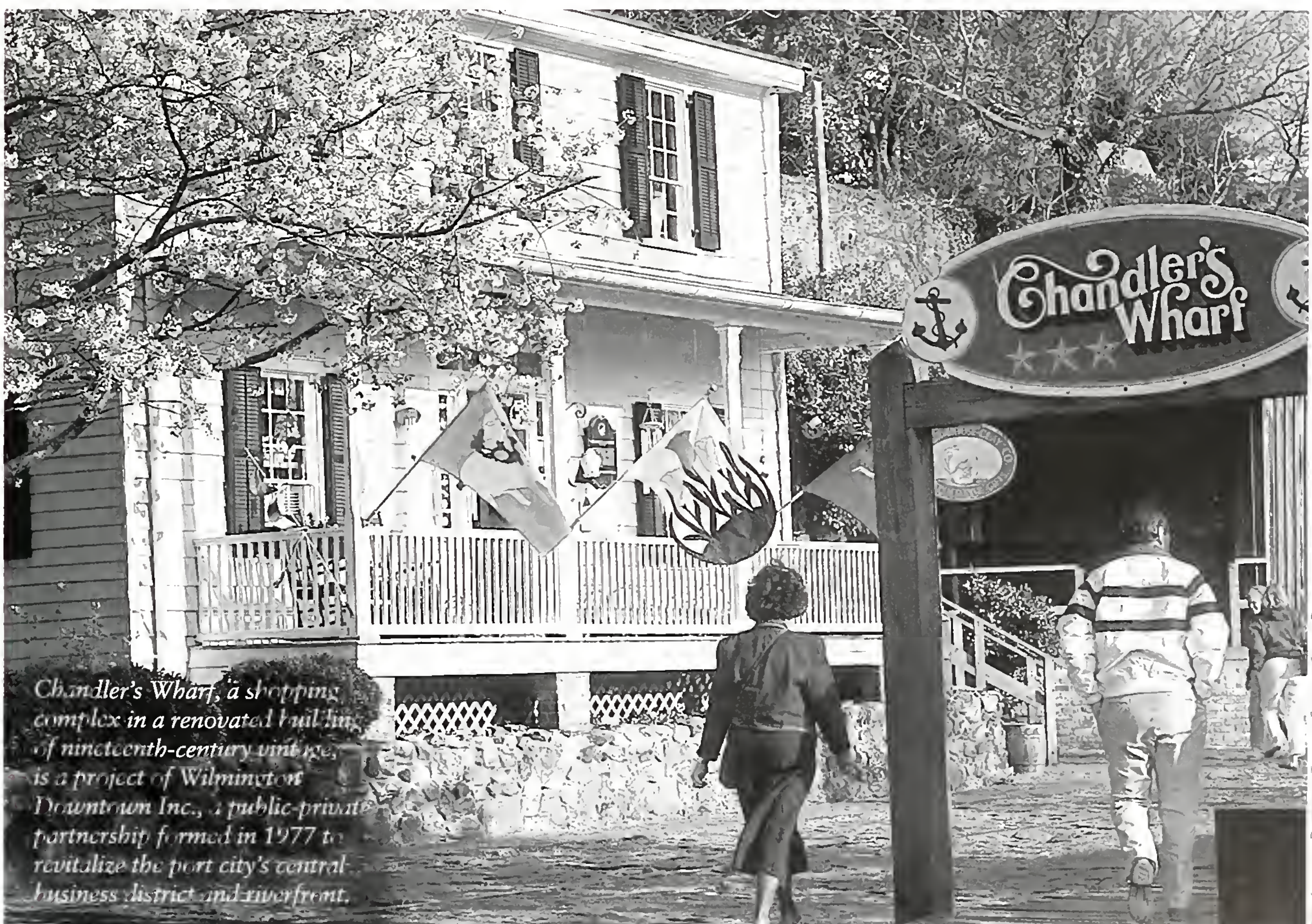
Quality-of-life issues, such as the eminence of educational institutions, the availability of good health care services, good air and water quality, the availability of parks and open spaces, and the preservation of natural amenities, are growing in their importance to economic development.

In the context of strategic visioning, every economic development success created by the collaborative effort will make it easier to mobilize people and other resources to deal with future opportunities and threats. As David Whyte points out in his commentary on corporate America,

> *Most paths . . . take the form of an iterative equation, an equation where the values and events it produces are continually fed back into the equation again and again, influencing any future values it may throw out. Every action, then, no matter how small, influences every future action, no matter how large.*[17]

Conclusion

Today, people frequently use the words "turbulent" and "chaotic" to describe the state's highly charged economic environment. Ambiguity and uncertainty have risen dramatically. Lingering behind the leading edge of economic changes has proved dire for many of North Carolina's communities. For



Chandler's Wharf, a shopping complex in a renovated building of nineteenth-century vintage, is a project of Wilmington Downtown Inc., a public-private partnership formed in 1977 to revitalize the port city's central business district and riverfront.

North Carolina Division of Tourism, Film and Sports Development these communities, an understanding of the connections between strategic visioning and community capacity for economic development must be premised on an appreciation for the struggle between the accelerating transitions taking place in the economy and the diminishing resources available to help communities adapt to the resulting disruptions.

Strategic visioning is not easy, and given the time and the energy required for a useful process, it may not be the right planning tool for all communities. Some will shy away from it, arguing that they are so overwhelmed by current plant closures or other immediate problems that they are unable to find the time or the energy for anything that sounds like "more planning." Others may lack an understanding of how effective visions drive a community, or they may have had experiences with unproductive planning processes. For those that accept that strategic visioning is a critical force in reshaping their future, however, the return on the investment of time and energy should include a greater ability to deploy resources to harness economic prosperity.

Ultimately, strategic visioning is about developing the social relationships needed to achieve desired goals.

Notes

1. Several significant trends are shaking up the status quo: the devolution of responsibilities from the federal government to state and local governments (John E. Peterson, *The Fiscal Face of Devolution*, GOVERNING MAGAZINE, Feb. 1999, at 100); sharp increases in the costs of Medicaid (Penelope Lemov, *Easing the Pain*, GOVERNING MAGAZINE, May 2003, at 58); homeland security (Anya Sostek, *Orange Crush*, GOVERNING MAGAZINE, Aug. 2003, at 18); and the desire of businesses to locate in communities that can provide an attractive quality of life to their employees. In many instances the devolution of responsibilities from the federal level to state and local levels has not been accompanied by adequate federal funding to carry out those responsibilities (Donald F. Kettl, *Mandates Forever*, GOVERNING MAGAZINE, Aug. 2003, at 12). These "unfunded mandates," coupled with the rising costs of Medicaid and homeland security, have strained state and local revenues, draining resources that may have previously been used to promote economic development or provide other programs.

2. *See* DAVID D. CHRISLIP & CARL E. LARSON, COLLABORATIVE LEADERSHIP 23 (San Francisco: Jossey-Bass, 1994) (pointing out the inaccuracy of saying that public issues of the past were not complex, but suggesting that the full complexity of the issues may not have been understood or recognized).

3. FREDERICK POLACK, THE IMAGE OF THE FUTURE 24 (Elise Boulding trans. & abridger, Amsterdam, Neth.: Elsevier Scientific Publ'g, 1973).

4. WARREN G. BENNIS & BERT NANUS, LEADERS: STRATEGIES FOR TAKING CHARGE (2d ed., New York: Harper Business, 1997).

5. STEVEN AMES, WHY VISIONING? CHARTING A COURSE FOR YOUR COMMUNITY IN THE 21ST CENTURY (Portland, Ore.: Steven Ames Planning, 2001), available at www.communityvisioning.com/whyvisioning/.

6. Like many other community planning tools, strategic visioning began in corporations. Management authors Stephen Covey and Keith Gulledge write of vision, "It is the written expression of the organizations' very identity. It becomes the organization's governing constitution, its supreme law, the standard by which all behavior is judged. It is the source of ultimate principles and values, direction and purpose, which guide the development and consistency of strategy, tactics, systems, policy, procedure, and decision making . . ." Stephen R. Covey & Keith Gulledge, *Principled Centered Leadership*, JOURNAL FOR QUALITY AND PARTICIPATION, July/Aug. 1992, at 70, 76.

7. ROBERT J. CHASKIN ET AL., BUILDING COMMUNITY CAPACITY 7 (New York: Aldine De Gruyter, 2001).

8. JACK KOTEEN, STRATEGIC MANAGEMENT IN PUBLIC AND NONPROFIT ORGANIZATIONS: MANAGING PUBLIC CONCERNS IN AN ERA OF LIMITS 60 (2d ed., Westport, Conn.: Praeger, 1997).

9. COMMUNITY CAPACITY BUILDING, (Raleigh: Family and Consumer Sciences, N.C. State Univ., 2003), available at www.ces.ncsu.edu/depts/fcs/agents/cap.pdf (last visited Apr. 9, 2004).

10. CHASKIN ET AL., BUILDING COMMUNITY CAPACITY, at 7.

11. Robert J. Chaskin, *Building Community Capacity: A Definitional Framework and Case Studies for a Comprehensive Community Initiative*, 36 URBAN AFFAIRS 291, 292–93 (2001).

12. NEAL PEIRCE & CURTIS JOHNSON, BOUNDARY CROSSERS: COMMUNITY LEADERSHIP FOR A GLOBAL AGE 8 (College Park, Md.: Academy of Leadership Press, 1997).

13. W. DeBevoise, *Collaboration: Some Principles of Bridgework*, 44 EDUCATIONAL LEADERSHIP no. 2, at 9, 12 (1986).

14. M. SCOTT PECK, THE DIFFERENT DRUM: COMMUNITY MAKING AND PEACE (New York: Simon & Schuster, 1987).

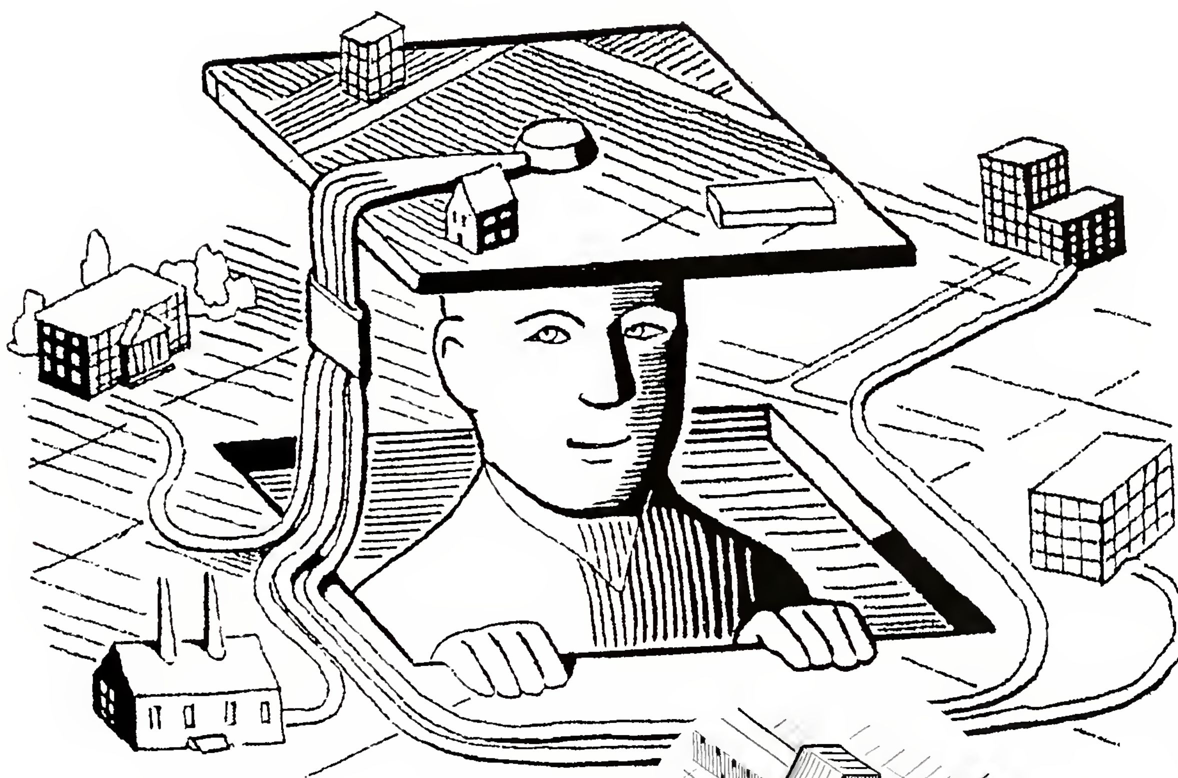
15. NATIONAL CIVIC LEAGUE, THE COMMUNITY VISIONING AND STRATEGIC PLANNING HANDBOOK 4 (Denver: National Civic League Press, 2000).

16. CHRISLIP & LARSON, COLLABORATIVE LEADERSHIP, at 14.

17. DAVID WHYTE, THE HEART AROUSED: POETRY AND PRESERVATION OF THE SOUL IN CORPORATE AMERICA 28 (New York: Doubleday, 2002).

Reporting to Work: Postsecondary Institutions as Regional Economic Development Actors

Cynthia Liston, Trent Williams, and Stuart Rosenfeld



DAVID SUTER

Advanced industrial countries such as the United States are moving away from producing things—or at least from producing easily made goods, with lower value added—toward producing value from knowledge. What does this mean for postsecondary educational institutions, which undoubtedly are key players for regions striving to succeed in a new economic landscape? How are they responding to a multitude of challenges and opportunities?

The American Economy, Then and Now

At one time the American economy was governed by mass production, business strategies that focused on high volume and low cost, and base technologies that chugged along at a manageable pace.

At the state level, industrial development policy revolved around tax exemptions and abatements and other public investments like buildings, land, and rail spurs. These policies made sense as an industrial recruitment strategy because reducing input prices improved the ability of the industries being recruited to compete on the basis of cost.

The world has moved on. In developed economies, manufacturing companies that compete strictly on cost are an endangered species. Instead, firms survive and prosper in volatile, niche-

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Table 1 **Key Economic Development Functions for Postsecondary Institutions**

Community Colleges	Universities
Preparing Technicians	***Educating***
Filling the pipeline	Producing knowledge and talent
Recruiting minorities, immigrants, and women	
Customizing Training and Other Services for Industry	***Transferring Technology***
Providing specialized training	Moving intellectual property to the private sector
Offering technology assistance	Generating local wealth and jobs
Connecting employers	
Supporting Entrepreneurs	***Allying with the Private Sector***
Providing classes and guidance on business plans and financial issues	Providing R&D, infrastructure, technical assistance, etc.
Incubating businesses, especially in rural areas	Offering access to facilities and equipment
Embedding entrepreneurship in curricula	
Going Global	***Providing Public Service***
Exposing students and faculty to international perspectives so that they are prepared for the global economy	Contributing technical assistance to governments and nonprofits
	Defining the Economic Development Milieu
	Supporting arts, culture, and community development

oriented, often lucrative global markets by adding value in design, function, precision, speed of delivery, appearance, and customization.

For any region to be successful in this vast, quick-changing, and free-flowing global economy, it must call on the community colleges and universities that serve it to generate new value and new wealth through the knowledge of their graduates and through engagements with private-sector partners.[1] Such engagements may take the form of training programs, business development, technical assistance, support for research and development, and technology transfer.

The corollary to this statement is that the old cost-sensitive policies of industrial recruitment are dangerously outdated. Continuing to pursue an economic development strategy that primarily depends on the approach many southern economic developers have used for the past thirty years—that is, attracting branch plants looking for low labor costs—is ill advised. Although this strategy may achieve limited success in the short term, it will fail in the long run. The consequence will be migration of workers, particularly new entrants, out of the state and destabilized communities with fewer and fewer opportunities for good jobs.

A number of support structures can help regions be economically competitive, but one group of institutions that is exceedingly important is two- and four-year colleges and universities. This article describes the evolution of higher education institutions as pivotal actors in economic development and explores some of the key roles that these institutions play to support the growth of their regional economies.

The Importance of Postsecondary Educational Institutions

The link between postsecondary education and economic development has not always been obvious. For most of the industrial era, the job of economic developers was to attract manufacturing plants. This type of economic development focused on generating jobs that required no more than a high school diploma (and in some cases not even that). Throughout that era, the role of the community college was to prepare students to succeed in a four-year institution or to teach them trade skills. The role of the four-year institution was to produce managers and professionals and conduct basic research.

Since the mid-1980s, however, the role of postsecondary institutions in economic development—indeed their value—has significantly and inexorably increased. Today in many communities, public officials and economic development professionals are focusing on strategies and actions to foster more knowledge- and talent-based regional economies, and community colleges and universities often are at the core of these strategies. (For a summary of the key functions that postsecondary institutions are playing, see Table 1.)

Community Colleges and Economic Development

Across the nation, and particularly in the South, community colleges have emerged as powerful catalysts for regional competitiveness. One of their greatest advantages has been their ability to change with the times. Most state community colleges began as junior colleges to prepare youth for four-year institutions and, after World War II, as vocational schools to prepare semi-skilled industrial workers. In the 1980s, concerns about growing competition from countries with lower labor costs prompted a few colleges to adopt a more proactive economic development stance. They established advanced technology centers (such as the Regional High Tech Center in western North Carolina) and supplemented their education program with industry services in order to function as technology intermediaries, spurring modernization of small and mid-sized enterprises.

By the 1990s, economic development had become a widely accepted part of the community college mission, with many institutions providing a broader range of services. This was especially the case in rural areas, where the community college often is the only higher education institution in the region and where few other resources exist to support economic development. The most proactive colleges began to offer more intensive services, such as seminars and training in quality control and "lean manufacturing" (a widely used program that helps manufacturers cut costs by operating more efficiently and reducing waste). As trusted neutral parties, they also began to connect local employers with one another through manufacturers councils and other associations, helping them learn how they could work together on technology, training, or other issues on which collaboration benefited everyone. For instance, Oklahoma State University—Okmulgee (a two-year branch of the university system) started the Northeast Oklahoma Manufacturers Association for local employers to cooperate on training, development of a supply chain, and e-commerce. Ties with companies strengthened during this era, and colleges partnered with local economic development agencies more often than they used to.

For the most part, increased core funding did not accompany these expanded economic development functions, the exception being customized training. Services oriented toward economic development fell outside traditional funding streams, which reimbursed colleges for each equivalent of a full-time student. Therefore, colleges turned to external funders such as development organizations, private foundations, and federal agencies to support the array of activities that developed within their growing business and industry centers (sometimes called the "shadow" college).

At present, most community colleges balance three institutional missions: preparing students to transfer to four-year colleges; improving access to postsecondary education by serving as open-admission second-chance institutions; and supporting economic development.[2] Following is a description of some key economic development functions that community colleges are likely to pursue today, and a discussion of some of the challenges and trends that affect how they will respond next to their regions' needs.

For any region to be successful in this vast, quick-changing, and free-flowing global economy, it must call on the community colleges and universities that serve it to generate new value and new wealth through the knowledge of their graduates and through engagements with private-sector partners.

Preparing Skilled Technicians

In policy circles these days, one often hears the term "K–12" being replaced by "K–14" or "K–16," for good reason: successful U.S. production firms require skilled technicians to program and operate computer-driven design and manufacturing processes, and a high school diploma is not enough to qualify for these jobs. Community colleges are the primary producers of skilled technicians for advanced manufacturing firms.

There are growing needs for technicians in other industries as well. Two examples are information technology and biotechnology. Community colleges offer an amazing array of curricular programs and information technology training specific to vendors, such as Oracle and Microsoft. The biotechnology sector needs workers who understand the stringent laboratory, regulatory, and quality-control processes required for the next generation of advanced medical products and drugs.

The technician workforce is important to a region because companies are unlikely to recruit technicians from outside the region. So the more effective a college is in producing these graduates, the more hospitable its region is to advanced and emerging technology companies.

A challenge that community colleges face is to train a workforce that is increasingly minority, immigrant, and female. One response comes from South Carolina's Advanced Technological Education Center of Excellence, located at Florence-Darlington and Piedmont technical colleges and supported by the National Science Foundation. The center partners with employers to recruit more women and minorities into its engineering technology program. It also offers an innovative curriculum that combines technical and general education courses in an accelerated program.

Community colleges understand that, above all, they are educators. They must diligently pursue their role in filling the technician pipeline.

Customizing Training and Other Services for Industry

Southern states pioneered programs to spur economic development by using community colleges as purveyors of company-specific training for industrial workers. In the 1950s, North Carolina became the first state to offer free or inexpensive customized training for industry to help attract companies. Its program, New and Expanding Industry Training, run by the state's community colleges, remains among the most emulated in the nation. Other southern states soon followed suit. The rationale was simple: along with tax abatements and assistance with infrastructure, states would offer new or expanding firms training assistance for production workers. Many companies known for choosing to invest in equipment rather than in training for workers leapt at these offers. By 1998 all the states combined were investing $575 million per year in employer-specific training. (Not all states use community colleges as the training providers, though most southern ones do.)[3]

Although noncredit customized training programs are generally seen as successful, some states are linking the training to certificates and degrees that hold value in the job market for workers beyond their employment at a specific company. Another innovation is to work more broadly with industry sectors, or even with geographically based clusters of similar firms, to create entry-level employer-endorsed training programs.

Georgia's QuickStart program, run by the state's technical colleges, is at the forefront of both these trends. It offers four "specialist certificates"—manufacturing, warehousing, construction, and customer service—both on campus and in the workplace, and at flexible times. Each certificate bears about one semester's credit and feeds into a two-year degree program. These certificates are a powerful incentive for a workforce to upgrade itself. Some workers go through the training at their employer's behest, receive the credit, and realize that college-level work is not out of their reach. The program thus increases the likelihood that people who obtain one of these certificates will pursue further education.

Smaller in scale but still significant are a broad range of services such as technology, quality assistance, and business support in areas like marketing and environmental consulting. Alabama's Technology Network, for example, is a system of ten centers dispersed across the state, most of them at two-year colleges (with participation from Alabama universities). The centers provide technical assistance and consulting services to improve companies' competitiveness. Catawba Valley Community College's Hosiery Technology Center in Hickory, North Carolina, creates specialized training and coordinates technology projects for the state's large hosiery cluster (for more information, see the article by Jonathan Q. Morgan on page 43).

Supporting Entrepreneurs

Frequently, many community colleges host small business centers and provide counseling services for potential entrepreneurs. These services typically focus on assistance with business plans, instruction on basic financial and tax issues, and guidance on gaining access to capital. Generally the types of companies that take advantage of these services are fledgling mom-and-pop retail or service companies—not those with the highest growth potential. However, some community colleges are more aggressively supporting entrepreneurs. Some are operating business incubators that help launch higher-growth companies with technical assistance and shared resources. The Technical Innovation Center at Hagerstown Community College in western Maryland is an excellent example.[4] Asheville-Buncombe Technical Community College in North Carolina is turning one of its facilities into an incubator for biotechnology companies.[5]

Other colleges are taking a cluster approach. An international alliance of fourteen rural community colleges in areas with strong traditions in arts and crafts is supporting local artisans (see the sidebar on page 27). Also, a network of twelve colleges, with support from the U.S. Department of Education, is collaborating to create tailored curricula and resources for industry clusters ranging from medical device manufacturing to tourism.[6]

Another innovative approach is to embed instruction in entrepreneurial skills and behaviors into existing technical programs through simulations, case studies, and other methods. Haywood Community College in Clyde, North Carolina, is adopting this approach for all its curricular programs. Among its graduates, then, are "latent" entrepreneurs who one day may recognize the potential for a product spin-off or a new type of machinery that will improve a manufacturing process. The more exposure students gain while in college to the decisions and the skills important to starting and running a company, the more likely they are actually to pursue an entrepreneurial route later in their careers.

To be well prepared, students, including those enrolled in community colleges, will have to understand cultures, economic systems, and business environments in other parts of the world.

Community college efforts to support entrepreneurship are on the rise. More colleges will likely expand their entrepreneurship services to include supporting companies that compete in high-end markets or use speed of delivery, precision, or other competitive advantages to command higher prices.

Going Global

A small but growing number of community colleges are looking far beyond their colleges' own borders for ideas to improve themselves. To be well prepared, students, including those enrolled in community colleges, will have to understand cultures, economic systems, and business environments in other parts of the world. Further, faculty and administrators need to search globally for solutions to problems and innovations. The Trans-Atlantic Technology and Training Alliance, directed by Regional Technology Strategies, Inc. (a nonprofit policy organization in Carrboro, North Carolina), includes about thirty U.S., European, and South African community colleges (or comparable institutions), among them North Carolina's Guilford Technical and Haywood community colleges. It allows members to exchange faculty and students and collaborate on projects across national boundaries. Another sign of the growing internationalization of community colleges is that last year, for the first time in its history, the U.S. Peace Corps began recruiting community college graduates.

Functions of Four-Year Institutions

The function of four-year colleges and universities in economic development has gone through three phases. From the passage of the Morrill Act in 1862 until the 1950s, colleges and universities undertook extensive applied research. During the decades of the 1960s, 1970s, and 1980s, the focus shifted to basic research aimed at fueling breakthroughs in medicine, defense, and aerospace. The passage of the Bayh-Dole Act in 1980, which allowed universities to retain the property rights to federally funded research inventions, saw the beginning of a third era, commercialization of technology.

In the decade after the passage of this legislation, the university community began to explore the implications and the benefits (including royalties) of technology commercialization. As they developed fledging operations to transfer technology and as they engaged with the private sector, they encountered and worked through a host of attendant conflict-of-interest, ownership, confidentiality, and mission-related issues. Many universities now regard technology transfer as a significant element in their overall mission. Some even include it in their mission statement, marketing this capacity as an economic development tool for their region and state.

Propelled by this experience, a number of universities throughout the coun-

CraftNet

Supported by the Ford Foundation, CraftNet is a network of fourteen community colleges from the United States, Europe, and South Africa, many of which are located in poor areas. The colleges are collaborating to help prepare youth and adults for employment and self-employment in craft-based enterprises, to develop the craft industry into a sustainable growth sector, and to create opportunities for marginalized populations.

Led by Regional Technology Strategies, Inc., and assisted by HandMade in America (a nonprofit group in Asheville, North Carolina, that supports the region's craft industry), participating colleges are developing art- and craft-based programs and services in such areas as the following:

- Design
- Production
- Technologies
- Marketing
- Business management skills

Some colleges plan to start craft-based incubators. Others are linking artisans in local networks to help them grow, thus increasing their regional economic development impact.

For more information about CraftNet, visit www.rtsinc.org/craftnet.

PHOTOS BY NORTH CAROLINA DIVISION OF TOURISM, FILM AND SPORTS DEVELOPMENT

try have become integral players in regional economies whose future prosperity is governed by what their companies and workforces know and how fast they can learn. In doing so, these universities have been compelled to expand and accelerate their engagement with the private sector and to think strategically as they assume new, numerous, and varied economic development roles. This is a major shift, and it has not come without its share of on-campus debate about the impact of these applied, often private-sector-driven activities on the fundamental academic values of scholarship and unfettered inquiry.

In the United States, four-year colleges and universities are currently featured performers in at least five important economic development functions: educating, transferring technology, allying with the private sector, providing public service and community leadership, and an intangible one, defining the economic development milieu.

Educating

From an economic development standpoint, the foremost function of universities is education. Some feel that the emergence of the university communities' more focused and direct economic development activities (discussed later) has pushed the education role into the background. Richard Florida argues that the United States is in danger of losing sight of universities' most important contribution to economic development. Universities have been naively viewed as engines, pumping out new ideas that can be translated into commercial innovations and regional growth. From Florida's perspective, this has led to overly mechanistic national and regional policies that seek to commercialize those ideas and transfer them to the private sector. He contends that, although there is nothing wrong with policies that encourage joint research, this view misses the larger economic picture: universities are far more important as the nation's primary source of knowledge creation and talent. Smart people are the most critical resource to any economy, and especially to the rapidly growing knowledge-based economy on which the future of the United States rests. Misdirected policies that restrict universities' ability to generate knowledge and attract and produce top talent suddenly loom as large threats to the nation's economy.[7]

The impact of the knowledge, skills, creativity, and character of the almost two million graduates of U.S. four-year colleges and universities every year swamps the impact of these institutions' more direct or directed economic development activities. This does not mean that the other economic development functions are not important.

Transferring Technology

"University technology transfer" is the process of moving intellectual property from the university environment, where it was created, to the private sector, where it can be further developed and then commercialized in the form of products and processes. It also includes university support of faculty entrepreneurship in this process.

Universities engage in technology transfer for a host of reasons. A large body of work already addresses its impact, promise, and practice. From the standpoint of those concerned with the national economy, the primary goals of university technology management clearly should be to make as many technologies as possible available for public use and to facilitate and encourage ties with industry. From the standpoint of those concerned with local or regional economies, the goal of university technology management should be to generate as much of the wealth and job-creating impact of this activity as possible at the local level.

Two challenges immediately present themselves in this regard. The first is to find ways to encourage colleges and universities to license intellectual property to business interests within their region. The second is to sponsor and promote strategies and actions that generate viable local candidates for licensing in the private sector. To put it simply, universities cannot be expected to license technology to local companies if there are none with an interest in the technology and access to the financial resources required for commercialization. Even under the best of circumstances, many university-based technologies and technological opportunities will not be suitable for licensing to a local company, so many technologies will continue to be licensed outside the region.

To date, there have been few efforts to create incentives that encourage universities to concentrate on licensing and commercializing their technology within their own region. In fact, the notion of developing local licensing incentives is, by and large, uncharted territory. There is room for policy innovation in this area.

For example, with two major medical schools and a host of public and private universities, including the University of New Orleans and Tulane, New Orleans possesses a substantial university research base. Two local economic development entities, Greater New Orleans, Inc., and the Louisiana Technology Council, have formed a fund to increase the frequency and the quality of local business development opportunities by licensing intellectual property that this base generates. The fund provides financing for emerging technologies that can reasonably be expected to translate into business development in the Greater New Orleans area. Eleven colleges and universities with research facilities located in the region have qualified to submit applications to the fund. The first two university recipients were announced in January 2004. Greater New Orleans, Inc., and the Louisiana Technology Council also have created an award for local Technology Transfer Company of the Year.

Allying with the Private Sector

This function encompasses a group of economic development–related endeavors that posit the university as a resource and an enabler for the private sector. It can be separated into at least four dimensions:

- **Research and development:** undertakings performed through sponsored research, cooperative agreements, and joint ventures, within separate university centers that serve specific industry sectors and clusters
- **Infrastructure:** participation in, ownership of, or sponsorship of research parks, incubator funds, and seed funds
- **Technical assistance:** consulting with the private sector on technology and product or process development and commercialization, and business development
- **Facilities, plants, and equipment:** provision of access (often for a fee but occasionally gratis) for entrepreneurs and companies to expensive facilities and equip-ment that they could otherwise not afford

Numerous examples of effective and innovative practice of each of these

The Millennial Campus Legislation

North Carolina's Millennial Campus legislation has major implications for the state's regional universities and especially for comprehensive rural development initiatives in concert with the private sector. Western Carolina University drafted the original legislation to cover itself only. Subsequently, legislators expanded the legislation to include all other UNC system campuses except North Carolina State University and UNC at Chapel Hill.

The legislation both acknowledges the campuses' economic development responsibilities and provides them with the tools to pursue their economic development goals. Specifically it allows them to do the following:

- Acquire property to promote the location of businesses
- Develop flexible land-lease arrangements to achieve specific economic development objectives
- Use their electronic infrastructure to support economic development efforts, including provision of direct service to companies
- Issue revenue bonds (with Board of Governors approval) to support business development
- Develop public-private partnerships and facilities to be used jointly by public and private partners
- Incubate firms that may have no relationship with existing academic programs

For media stories about the Millennial Campus legislation, see www.wcu.edu/pubinfo/news/campus.html and www.nccbi.org/NCMagazine/2001/mag-09-01execvoices.htm.

elements are sprinkled throughout the country. Following are descriptions of three that combine all four elements in single initiatives on different scales.

North Carolina State University's Centennial Campus. Springing from a modest beginning in 1991 through the university's College of Textiles, the Centennial Campus has blossomed into a 1,300-acre research park and campus where faculty and students work with industry and government to develop new technologies, products, and services and to solve problems. This is success on a large scale. The campus features more than 100 tenants representing about 1,500 jobs, a mix of large companies and small start-ups, a business incubator, cutting-edge facilities and equipment, an advanced telecommunications network, and an affiliated venture-capital fund. Its technical focus is advanced materials, information communication technologies, and biosciences and biotechnology. Its future plans are driven by an ambitious vision: condominiums, townhouses, an advanced transportation system, a hotel/conference center, a golf course, and a town center, in addition to more office and laboratory space.

Montana State University and TechRanch. On a smaller scale, Montana State University (MSU) and its neighbor, TechRanch, serve as an example, in a rural state, of a comprehensive initiative in which the participants share information, coordinate their activity, leverage against one another, advance one another's missions, engage in joint projects, and seek advice from one another day to day. TechRanch is a not-for-profit corporation located in the ninety-acre Advanced Technology Research Park adjacent to MSU in Bozeman. TechRanch functions as the technology-based start-up hub for the region. It features an incubator, start-up assistance, advanced telecommunication capacity, and a "pre-seed fund" (venture capital provided in the very early stages) for university-related start-up opportunities. It also houses TechLink, a technology transfer center; the Center of Entrepreneurship for the New West; and the Montana Business Foundry, a partnership among the National Science Foundation, TechRanch, MSU, and the Governor's Office of Economic Opportunity to develop technologies and build companies around them. Although it is only in its third year of operation, the TechRanch incubator already has nurtured and spun out three technology companies. In addition, TechLink has helped ten Montana companies acquire $11 million for technology development funding, provided seed grants to thirty-eight firms for technology development, and helped thirty-eight companies gain access to technology developed by the National Aeronautics and Space Administration and the U.S. Department of Defense.

Beyond their role as educators and producers of talent, universities frequently define the regional or local economic development milieu through their contributions to arts, culture, recreation, education, learning values, and community creativity.

Millennial campuses. Building on its successful Centennial Campus concept, in 2000 the North Carolina legislature unanimously passed innovative Millennial Campus legislation. It provides all UNC campuses (except North Carolina State University and UNC at Chapel Hill, which are supported through the Centennial Campus legislation) with the tools and the flexibility to become regional, technology-based economic development hubs (for more information on the legislation, see the sidebar on page 28).

Providing Public Service and Community Leadership

Universities also promote economic development through public service and community leadership. These efforts include assuming leadership positions on economic development–related task forces and committees and providing free technical support to government and nonprofits for projects or issues that affect statewide or regional economic development capacity, such as strategic planning and fiscal reform.

Institutions traditionally viewed as regional universities often lead the way in this regard because they tend to be more oriented toward regional and local economic development issues and opportunities. Most universities these days feature a public service element in their marketing efforts and public discourse, and occasionally in their mission statements.

At least one university has taken this a step farther. The University of Louisiana at Lafayette includes its role in support of regional economic development as a formal criterion in its accreditation relationship with the Southern Association of Colleges and Schools. "Expanding the role of the university in support of regional economic competitiveness and cultural development" is one of the four major goals of its five-year plan. Part of its accreditation process involves an assessment by the association of progress made on a series of objectives and strategies that advance this goal.

Defining the Economic Development Milieu

Beyond their role as educators and producers of talent, universities frequently define the regional or local economic development milieu through their contributions to arts, culture, recreation, education, learning values, and community creativity. They often function as major contributors to a community environment that attracts talent. The presence of The University of North Carolina at Chapel Hill, Duke University, North Carolina Central University, and North Carolina State University in the state's Piedmont is a well-traveled example of this role. This aspect of four-year colleges' and universities' place in regional economic development should be recognized and valued, though it is difficult to describe.

Some Findings and Considerations

On the basis of these discussions, at least ten findings or issues should be addressed.

Community Colleges

- Many economic developers view southern community colleges' history of active engagement with employers as one of the region's most significant competitive advantages. Policy makers in other parts of the country have generally been much slower to realize the impact that could come from these institutions and in many ways still are trying to catch up. The key is to keep innovating, but tight state budgets have made pursuing new ideas or initiatives difficult.

• The impact of community colleges on economic development stems largely from their flexibility and willingness to embrace new roles and services. Generally more responsive to changes in local conditions than universities, leading two-year colleges have carved out important roles for themselves not only as purveyors of technical skills important to economies but also as conveners for and catalysts of regional development. North Carolina should focus its efforts on ensuring that two-year colleges obtain resources and support for their proven economic development work. That will help their regions, some of which are highly distressed.

• Community colleges often must fund their economic development activities by stringing together external support from the private sector, foundations, federal agencies, and other sources. They tend to obtain seed money to start an economic development initiative, but once the grant expires, they have few options to sustain the program. Yet the service being provided often is a public good, so there is a strong argument for public support. Community colleges' impact would be greater if their economic development roles were more widely accepted and financially supported by state and local governments as core functions.

• Many of the conditions and trends likely to influence community colleges over the next decade already are in place, so a few predictions are possible. Cluster-based economic development, expansion of efforts to support information and biological technologies, globalization, and rising expectations and need for educational attainment will create a new set of challenges and opportunities for entrepreneurial colleges.

Universities

• Universities' economic development roles and terms of engagement with the private sector will continue to evolve on the basis of what works and what does not work. This will vary from institution to institution, depending on the regional economy, the political environment, the university mission, and university leadership and culture, including business culture.

• On the basis of what works, universities will continue to hone a comprehensive understanding of what their region needs to remain competitive, and what the requirements of private-sector businesses are. At the same time, they will improve their capacity to think as strategically as the companies they seek to support. This will happen through licensing of intellectual property, research and development, formation of industry and cluster centers, and especially education of students.

• There is an opportunity to generate a more productive relationship between colleges and universities, on the one hand, and the economic development community, on the other. This can be pursued in two ways.

First, universities can regularly invite local economic developers to their campuses for pragmatic planning sessions. Economic developers can function as a major resource for universities because they are more in touch with the current and anticipated needs of many businesses and can aggregate information to communicate to the university community. Universities can use these regularly scheduled sessions to help economic developers become more familiar with commercially promising research areas and to foster ongoing relationships with university researchers.

• Second, whenever appropriate and practical, universities can solicit industry counsel to help them coordinate their investments to complement regional economic development objectives. For instance, they can routinely seek advice from science- and technology-intensive industries about their long-range research plans and skill requirements for new employees to inform faculty hiring decisions and program development.

• The on-campus debate will continue between applied activities, often funded by the private sector, and scholarship and unfettered inquiry. However, it is no longer a question of one or the other. Rather, it is a matter of reaching a proper balance.

• Because they tend to be more oriented toward regional and local economic development issues and opportunities, the regional and city colleges and universities will continue to blaze new trails as an economic development resource and in community leadership in many places throughout the country.

• Legislatures, higher education governing boards, university leadership, and economic development professionals will pay more attention to developing strategies for local capture of talent and intellectual property generated by four-year colleges and universities.

Notes

1. As used in this article, the term "community colleges" encompasses technical colleges.

2. Thomas R. Bailey & Vanessa S. Morest, The Organizational Efficiency of Multiple Missions for Community Colleges, CCRC Brief (New York: Community College Research Ctr., Columbia Univ., 2003).

3. National Governors' Association, A Comprehensive Look at State-Funded, Employer-Focused Job Training Programs (Washington, D.C.: the Association, 1999).

4. For more information, *see* www.technicalinnovationcenter.com.

5. For more information, *see* www.abtech.edu/ce/biotechnology.htm.

6. *See* the Cluster Hubs' website, at www.clusterhubs.org.

7. Richard Florida, *The Role of the University: Leveraging Talent, Not Technology*, Issues in Science and Technology, Summer 1999, at 1.

Spurring Entrepreneurship: Roles for Local Elected Leaders

Nancy Stark

According to business economist David Birch, every community loses 7 to 8 percent of its jobs each year from a combination of bankruptcy, death, acquisition, and other causes. About 55 percent of all new jobs arise from expansions of existing businesses. Only 1 percent of net new jobs occur as a result of business relocations. As a result, approximately 44 percent of new jobs are created by start-up companies, usually one-person undertakings that begin with zero or a handful of employees and—if things go well—grow into larger, successful enterprises.

Recent research shows that entrepreneurial activity is strongly associated with overall economic growth in a community or a region. However, the benefits of entrepreneurship are not evenly spread throughout the United States. Compared with urban and suburban areas, rural communities and distressed inner-city neighborhoods are home to fewer and less-successful entrepreneurial ventures.

According to the Center for Rural Entrepreneurship, there are four primary obstacles to creation of new businesses in rural places:

- A rural culture that does not support entrepreneurship
- Distance to markets, service providers, and other entrepreneurs
- A limited number of entrepreneurs to act as role models, to mentor others, and to build networks among entrepreneurs
- Difficulty in acquiring business financing, especially venture or equity capital

Local government officials can help reduce or remove these obstacles to rural entrepreneurship. In collaboration with others—local schools and community colleges, regional development organizations, chambers of commerce, local banks, service clubs, government agencies, and neighboring communities—local leaders can build a supportive environment for entrepreneurs.

To help spawn and support new businesses, elected officials (and partners) might do the following:

- Assess the needs of current and potential entrepreneurs through site visits, surveys, and focus groups
- Scout for entrepreneurial opportunities arising from spin-offs from existing businesses or joint ventures among local firms
- Act as nurturers and conveners, helping new firms form networks and learn from one another
- Build training in entrepreneurial skills into the region's workforce development program
- Serve as brokers of resources for business assistance, so that entrepreneurs become knowledgeable about the programs and the services available to them
- Encourage local lenders to offer financing to small businesses, to aid the community and to strengthen their own Community Reinvestment Act rating

MAXINE MILLS

Small businesses like Cinelli's Pizzeria and Restaurant are important to a community's economy. Cinelli's just opened in a fifth location in the Research Triangle region.

The author is director of the Rural Governance Initiative, a joint undertaking of the Rural Policy Research Institute (RUPRI) and the Corporation for Enterprise Development (CFED). Contact her at nancy@cfed.org.

North Carolina's Institute for Rural Entrepreneurship

North Carolina is the envy of many other states for its rich infrastructure of support services for small businesses. Yet many current and aspiring entrepreneurs around North Carolina are unaware of the resources available, and those who are aware of them see needs for improvement, including more training, networking, and capital opportunities.

These findings, from twenty-two focus groups that the North Carolina Rural Economic Development Center sponsored last year, were one impetus for its decision to create the Institute for Rural Entrepreneurship in October 2003.

Another impetus was the realization that, since the 1980s, small businesses have been creating nearly all the *net* new jobs in America's national and state economies. For example, between 1998 and 2002, businesses with 250 or more employees eliminated 43,000 more jobs than they created in rural North Carolina, while businesses with fewer than 50 employees added nearly 27,000 more jobs than they eliminated.[1]

The mission of the Institute for Rural Entrepreneurship is to help North Carolina's eighty-five rural counties create and sustain small and entrepreneurial businesses. The institute is pursuing its mission through the following activities:

- Facilitating the Business Resource Alliance, a coalition of more than thirty public and nonprofit organizations in North Carolina that provide direct services and training to entrepreneurs in both rural and urban areas.
- Developing and maintaining a 100-county database, which includes data (number, payroll, sales, receipts, etc.) on such variables as firms with few employees, firms owned by minorities and females, and farm enterprises.
- Administering, guiding, and monitoring community entrepreneurship demonstration grants (funded largely by the North Carolina Department of Commerce) in several rural communities that are using entrepreneurship as an economic development strategy.
- Designing and overseeing a collaborative program to assist displaced workers who may be interested in starting a business. The Department of Commerce funds training scholarships through the federal Workforce Investment Act, and thirteen Small Business Centers (operated by the North Carolina Community College System) provide assessment and recommend appropriate training.
- Conducting a statewide inventory of entrepreneurship training and education programs, with an eye to increasing and improving those offerings over time in response to demand from entrepreneurs.
- Enabling e-commerce and promoting networking opportunities for entrepreneurs in rural areas, in partnership with the e–NC Authority's four current and four planned business and technology centers.[2] (For a list of the four current centers, see the sidebar on page 34.)
- Recognizing farmers as entrepreneurs and helping them innovate.
- Improving current and aspiring entrepreneurs' access to capital.
- Developing policy to support a strong state business climate for entrepreneurship.

Consistent with the historical strengths of the Rural Center, the institute's primary focus is on helping build the capacity of rural communities. In particular, it helps communities around the state understand and pursue entrepreneurship as an economic development strategy.

Volunteers affiliated with the Business Resource Alliance are currently working on two activities of high priority:

- Developing a seamless network of business service providers, with "no wrong door" for aspiring or existing entrepreneurs at any point in their development
- Developing policy statements for the North Carolina General Assembly about a more balanced portfolio of economic development investments for the state, including industry recruitment, services to existing industries, workforce development, and formation of new enterprises

For more information, visit www.ncruralcenter.org/entrepreneurship, or contact Leslie Scott, director, Institute for Rural Entrepreneurship, (919) 250-4314, lscott@ncruralcenter.org.

—*Leslie Scott*

Notes

1. Using data from the North Carolina Employment Security Commission, the research staff of the North Carolina Rural Economic Development Center compiled these figures for the eighty-five rural counties in the state and presented them at the Rural Partners Forum in October 2003.

2. The e–NC Authority is "a grassroots initiative to encourage all North Carolina citizens to use technology, especially the Internet, to improve their quality of life and their economic prospects." For more information, see http://e-nc.org.

- Partner with nearby development organizations to create a revolving loan fund that will provide small loans ($50,000 or less) at near-market rates to qualified businesses[1]
- Serve on the board of a local or regional nonprofit organization that provides expert one-on-one assistance (for example, facilitation of enterprise) to potential entrepreneurs
- Simplify the local government's business licensing procedures, streamline rules and regulations, and make applications and instructions available electronically
- Develop a plan to attract "lone eagles"—successful professionals who are leaving congested regions and setting up business operations in smaller, slower-paced communities
- Incorporate entrepreneurship training into the local high school or community college curriculum, or into youth service clubs (for example, 4-H), to inspire an entrepreneurial spirit in the community's young citizens
- Publicly recognize local entrepreneurs for their role in stimulating local economic growth

- Develop a directory of all products and services offered by local start-up businesses, to generate demand among local consumers

The following sections explore several of these local leadership strategies in more detail.

1. Scout for entrepreneurial opportunities.

A common picture of entrepreneurship is individual firms sprouting in garages and basements, as Apple Computers did from Steve Jobs's solo efforts at home. But not all firms actually begin this way. Most new enterprises originate as spin-offs from existing businesses or from joint ventures among several firms that ultimately split into two or more free-standing companies. Compared with stand-alone start-up companies, spin-offs and split enterprises grow more rapidly and are more likely to survive.

Local leaders can promote creation of small businesses by scouting for and supporting budding opportunities among existing firms for new businesses, wherever they may sprout. Through a local business-visitation program, community leaders might learn about new ventures being considered by company managers and owners. Perhaps a group of existing firms wants to form a new line and now needs a separate operating facility, preferably in town. Maybe a home-based entrepreneur is looking for a small loan to expand her business and hire her first full-time employee.

2. Act as nurturers and conveners.

Marketing, management, and financing are probably the three cornerstones of profitable enterprises. Local economic development leaders need not be experts in these areas. Instead, they can act as nurturers, conveners, and resource brokers for entrepreneurs.

Perhaps the least expensive and most affirmative way in which communities can nurture entrepreneurs is to provide opportunities for them to network among themselves. Starting a new company from scratch or from an existing enterprise can be extremely challenging and isolating. Especially for the home-based business owner, the days—and the nights—often are tiring and discouraging. Having an opportunity to meet with similarly situated people, even once a week, is tremendously encouraging and empowering.

For hundreds of communities, business incubators are providing this essential networking function, along with other useful services. "Incubators" usually are public or nonprofit facilities that offer shared services to start-up companies. Even without physical incubators, leaders can provide the networking function of an incubator by hosting weekly forums for the region's entrepreneurs and by providing a place for them to gather. In addition to the psychological support derived from sharing experiences with other business creators, entrepreneurs gain access to markets, contacts, resources, financing, marketing strategies, and new ideas on business management practices.

Marketing, management, and financing are probably the three cornerstones of profitable enterprises.

3. Broker resources that provide assistance to businesses.

The creators of new enterprises rarely begin with diverse expertise. Entrepreneurs often are skilled in manufacturing a product or providing a service but know little about managing employees, identifying and developing markets, and turning a profit, all at the same time. Most new and expanding companies require two kinds of assistance: general management support (accounting, finance, marketing, use of computers, human resources, and business law); and scientific or technical assistance (engineering, product design, and product testing). Nearly all entrepreneurs need reinforcement to craft a business plan worthy of external financing.

In partnership with economic development agencies and organizations, local development leaders can strengthen and promote assistance programs for small businesses in a variety of ways:

- Research the services and the programs available in the region to help entrepreneurs (for information about an important new resource, see the sidebar on page 32)
- Collect the brochures of organizations and agencies that provide assistance to businesses, and attractively display them in prominent locations—for example, the town hall, the public library, grocery stores, the motor vehicle administration office, and other frequented spots
- Make sure that the local economic developer incorporates entrepreneurial development into its mix of income and job-generating strategies
- Engage the local newspaper, television, or cable company in doing a series on how to start a business
- Organize an Entrepreneurship Information Expo featuring information booths on issues of interest and concern to prospective entrepreneurs: licensing, zoning, technical assistance resources (the Small Business Development Center, the community college, SCORE, cooperative extension services, etc.), and financing[2]
- Cosponsor a special seminar series on topics requested by growing businesses

4. Work with local lenders and others to offer debt and equity financing to small businesses.

The lack of financial capital is a crucial issue to entrepreneurs and existing small businesses, especially in rural and isolated areas. Consolidation within the banking industry has robbed many small towns of their local, independent financial institutions. Venture capital and risk capital also are woefully lacking in these areas.

By definition, start-ups are risky, so bank financing is a challenge. Also, early-stage risk capital is lacking, so equity is missing. Further, capital often is as important as technical assistance (advice on marketing, business finance, management, etc.). Therefore, combining access to capital with technical assistance is a good strategy.

Local officials can help address all these problems in various ways:

- Encourage local financial institutions to launch a small-business lending program, using the programs of the federal government's Small Business Administration and the state
- Encourage banks to participate in consortia of financial institutions to contribute capital and° share the burden and the risk of lending to small businesses
- Encourage banks and investors to invest in a community development financial institution, such as a community development credit union, a community development bank, or a micro-enterprise loan fund; and ensure that technical assistance is a key ingredient
- Encourage local financial institutions to establish a bank community development corporation that takes an equity position in community and economic development projects (for example, ShoreBank in Chicago)
- Encourage the state or local government, or the regional planning and development district, to begin a revolving loan fund, capitalized with public monies, that makes loans to small businesses
- Encourage the state or local government, or nonprofits, to create micro-enterprise lending programs, a form of revolving loan fund that makes small loans to very small businesses and often has peer review and technical assistance
- Advocate for local access to a Small Business Development Center at the local college, university, or community college

5. Incorporate youth entrepreneurship into school curriculum.

Across rural America, community leaders lament the mass exit of young people. Outmigration of youth affects a region's entrepreneurial development, especially if—as many claim—those leaving town often are the best and the brightest.

Although all young people have a desire and perhaps a right to expand their horizons, many rural regions are experimenting with strategies to retain and inspire students. Incorporating youth entrepreneurship into the local high school or community college curriculum instills an entrepreneurial spirit in the community's young citizens. Also, because entrepreneurs tend to start businesses between the ages of twenty-five and forty, youth entrepreneurship training can incubate new firms either soon after a student graduates or when he or she returns home, a little later in adulthood.

REAL, which stands for Rural Entrepreneurship through Action Learning, offers high school and community college courses in entrepreneurship that guide students through planning, creating, and operating small businesses of their own design.[3] Beginning in North Carolina and now operating in nearly a dozen states, REAL provides curriculum materials, professional development for educators, program evaluation, and technical business assistance. In 2004, REAL became a program of the Corporation for Enterprise Development.[4]

Youth entrepreneurship programs, operated by REAL and other entities, push students to solve real problems without a textbook or an answer sheet. The best programs encourage students to focus on products and services that solve annoying problems. Students think creatively and work in teams, practicing the same skills and cooperation required in the workplace. The accent on student-directed learning brings about some surprising results in interest and performance. Sometimes the poorest-performing students in a traditional curriculum shine in a youth entrepreneurship course.

Existing e–NC Business and Technology Centers

Blue Ridge Business Development Center (Alleghany County)
Grantee: New River Community Partners
Blue Ridge Business Development Center (main site)
21 North Main Street
Sparta, NC 28675
Phone (336) 372-1529

E–NC Telecenter (Duplin, Jones, and Onslow counties)
Grantee: Duplin County Economic Development Commission
e–NC Telecenter (main site)
WestPark Business Technology Center
946 Penny Branch Road
Warsaw, NC 28398
Phone (910) 293-2521

Northeast Business and Technology Center (Martin County)
Grantee: North Carolina's Northeast Partnership
Northeast Business and Technology Center
415 East Boulevard
U.S. Highway 13/17/64
P.O. Box 310
Williamston, NC 27892
Phone (252) 792-2044

Tri-County Community College Telecenter (Cherokee County)
Grantee: Tri-County Community College
Tri-County Community College Telecenter
4195 U.S. Highway 64 West
Village Center Shopping Center
Murphy, NC 28906
Phone (828) 837-6810

Notes

This article is adapted, with permission, from one that appeared in the Fall 2003 issue of *Small Community Quarterly*.

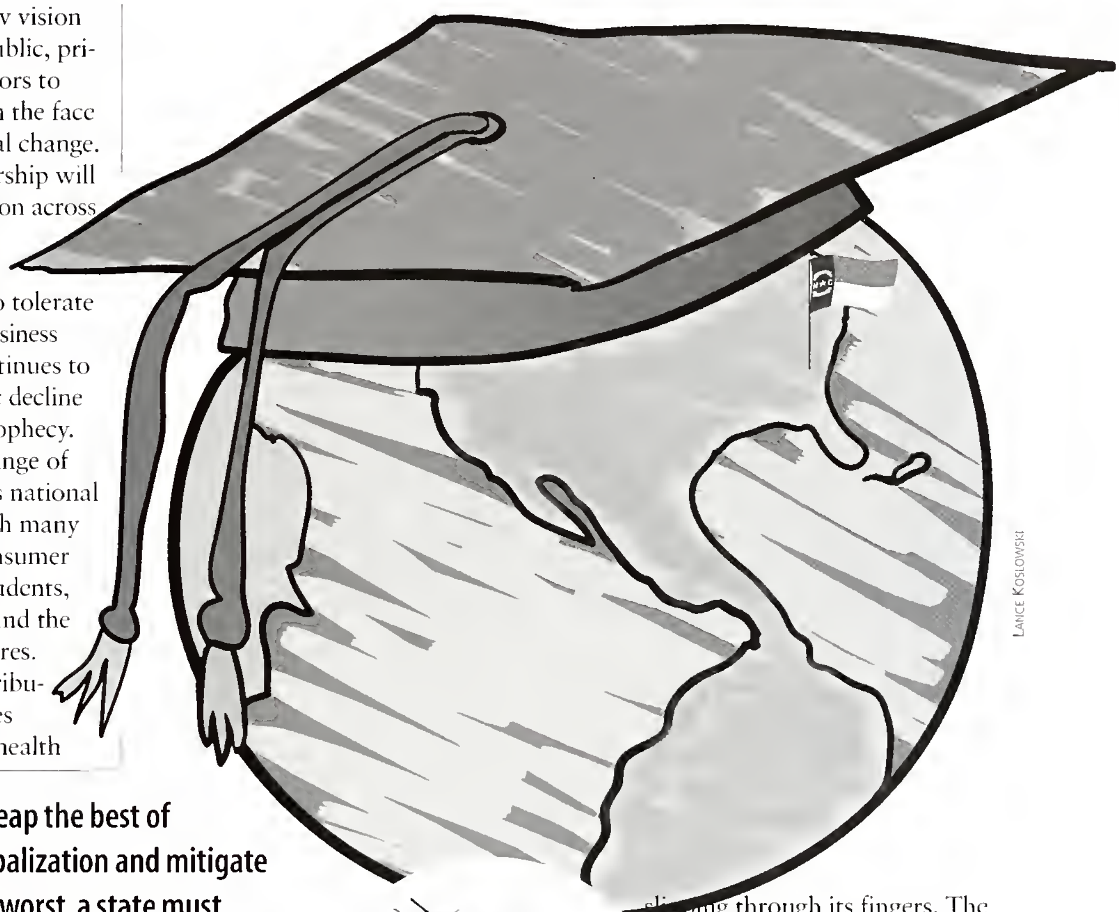
1. A fund "revolves" when an initial pool of capital is loaned and then is gradually replenished as borrowers repay principal and interest.
2. SCORE is a program of the federal government's Small Business Administration. Through the program, retired executives are available for business advice.
3. For more information, *see* www.realenterprises.org.
4. For more information, *see* www.cfed.org.

North Carolina's Global Position and Higher Education's Role

Carol Conway

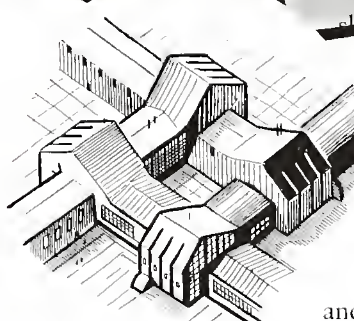
North Carolina needs new vision and leadership in the public, private, and academic sectors to build a competitive economy in the face of complex economic and social change. Achieving this vision and leadership will require unparalleled collaboration across sectors and a no-holds-barred attitude toward education and business.[1] If the state continues to tolerate the loss of human capital and business opportunities—that is, if it continues to see itself as a victim—economic decline may become a self-fulfilling prophecy.

"Globalization"—the exchange of people, goods, and ideas across national borders—has brought the South many good-paying jobs, low-cost consumer items, eager workers, bright students, new research and technology, and the rich experience of diverse cultures.



Globalization also has contributed to painful economic changes and increased risk to personal health and national security. Its negative repercussions are serious, but writing off globalization as a complete disaster, or advocating market-defying policies, such as promoting exports while reducing imports, would be a disservice to future generations of southerners. Global commerce currently accounts for about one-quarter of the North Carolina economy.[2] The southern economy already is tightly integrated with the global economy.

To reap the best of globalization and mitigate the worst, a state must develop a vision of itself as an "international state" and call on all its resources to mobilize action around strategic priorities.



Yet the state's piecemeal response to globalization—a Trade Adjustment Assistance program here, a trade mission there, and schizophrenic policies toward immigrants—means that both the best and the worst of globalization are slipping through its fingers. The scale of lost opportunity is astonishing. By one calculation, in exports alone, North Carolina gave up about $4 billion in sales in 2001, which would have supported almost 56,000 jobs (see Table 1).[3]

To reap the best of globalization and mitigate the worst, a state must develop a vision of itself as an "international state" and call on all its resources to mobilize action around strategic priorities. This article discusses various indicators of globalization and describes North Carolina's status on each one. It then discusses the role of one key player, higher education, in mobilizing action.[4]

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Indicators of Globalization

Knowing where North Carolina stands compared with the rest of the United States helps one appreciate better the state's untapped potential for growth through trade. Such information is only a starting point for discussion because accurate, timely, and comparable state data are scarce. Nevertheless, from the indicators available, North Carolina seems to have been a moderately involved but passive participant in globalization.

Exports

For the United States as a whole, merchandise exports rose from 5.4 percent of gross domestic product in 1977 to 7.9 percent in 2000. By contrast, North Carolina's merchandise exports actually decreased as a share of gross state product—from 7.2 percent in 1977 to 6.4 percent in 2000 (see Table 2).[5]

Nevertheless, between 1992 and 1998, North Carolina added new exporters at a faster clip than the South or the nation as a whole (see Table 3). This suggests that many small businesses sought opportunities overseas for the first time in these years, a period of explosive export growth.

If measuring trade at the state level is hard, measuring trade-related jobs is even harder. A rough rule of thumb is that every $1 billion in merchandise exports supports about 15,000 jobs (direct and indirect).[6] This is especially important for manufacturing. In 1997, one of every five jobs in this sector depended on exporting, compared with about one of every ten jobs in 1977.[7] In 1997, North Carolina had a larger share of export jobs as a proportion of the civilian labor force than any other southern state or the United States as a whole (see Table 4).

State export figures count only merchandise exports. Services accounted for 39 percent of total U.S. exports in 2001. Architecture and engineering, software, movies, consulting, law, travel, education, tourism, and insurance all became major sources of U.S. export income in the 1990s.

Foreign Direct Investment

Foreign-owned firms employed nearly a quarter of a million North Carolinians in 2001, or about 6 percent of the state's

Table 1. **Sales and Jobs Forgone Because of Passive Exporting, 2001**

	Export Sales	Export-Related Jobs (in billions)
North Carolina	$ 4.0	55,729
South	27.7	381,595

Source: Calculated by the Southern Growth Policies Board using its own formula and data from International Trade Admin., U.S. Dep't of Commerce, State Export Series, available at http://ese.export.gov (last visited May 17, 2004).

Table 2. **Merchandise Exports, Selected Years**

	1977		2000		2003*
	Sales (in billions)	As % of GSP	Sales (in billions)	As % of GSP	Sales (in billions)
North Carolina	$ 3.2	7.2	$ 17.9	6.4	$ 16.2
South	22.0	5.5	120.4	6.0	134.9
U.S.	107.1	5.4	782.4	7.9	723.7

Sources: Data from U.S. Census Bureau, Foreign Trade Statistics, available at www.census.gov/foreign-trade/statistics/state/country/index.html (last visited May 6, 2004); International Trade Admin., U.S. Dep't of Commerce, State Export Series (Washington, D.C.: Nov. 1978).

Note: GSP = gross state product.

*Data on 2003 exports as a percentage of GSP are not yet available.

Table 3. **Merchandise Exporters, Selected Years**

	1992	1998	% Change
North Carolina	3,833	6,869	100
South	27,326	46,461	70
U.S.	112,854	205,188	82

Source: Data from Economics and Statistics Admin., U.S. Dep't of Commerce, A Profile of U.S. Exporting Companies, 1997–98 and 1992 (Washington, D.C.: 1999, 1993).

Note: These figures are compiled from a now-defunct data series, State of the Exporter Location. Data from the Origin of Movement series would reflect more favorably on the South, but Origin of Movement data do less to indicate state of production than State of the Exporter Location.

Table 4. **Jobs Supported by Manufacturing Exports, 1997**

	Direct	Indirect	Total	As % of Civilian Labor Force*
North Carolina	132,900	152,700	285,600	7.5
South	711,500	913,200	1,624,800	5.6
U.S.	3,344,200	4,332,000	7,676,200	5.7

Sources: Data from Statistical Abstract of the United States: 1998 (Washington, D.C.: U.S. Census Bureau, 1999); Office of Trade and Econ. Analysis, U.S. Dep't of Commerce, U.S. Jobs from Exports: A 1997 Benchmark Study of Employment Generated by Exports of Manufactured Goods (Washington, D.C.: Feb. 2001), available at www.ita.doc.gov/td/industry/otea/job_report/jobs_report_web.pdf (last visited May 6, 2004).

Note: Data are for the latest year available.

*These figures were calculated as percentages of the total, adjusted civilian labor force as of January 1997. Inexplicably they are not the same numbers provided in the Department of Commerce report.

Every $1 billion in merchandise exports supports about 15,000 jobs. In 1997, in manufacturing, one of every five jobs depended on exporting.

civilian workforce (see Table 5).[8] Foreign direct investment does much more than create jobs. It brings innovative, world-class management and production practices into the business community at large.

Foreign-owned firms also account for nearly a quarter of U.S. exports, roughly half of which are destined to the foreign parent company. (At the same time, parent company exports to their affiliates in the United States account for about a quarter of U.S. imports.)[9]

Foreign investment in America is considerably larger than U.S. investment overseas. United States firms employed six million workers overseas in 1999, about the same number as foreign firms employed here. Although outsourcing to China and India has recently picked up, most U.S. investment is in high-wage industrialized countries.

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Why do the United States and other countries "swap" these jobs? In the case of the industrialized countries, the majority of cross-border investments are made to reach new customers in the host market with an efficiency that cannot be equaled by exporting from the home country. Investments in nonindustrialized countries more often are for cost-savings, though not always.

North Carolina has lost a disproportionate share of jobs to cost-saving overseas production. At the same time, North Carolina is a favorite locale for foreign direct investment. Although the total number of manufacturing jobs in North Carolina dropped by some 80,000 between 1998 and 2001, foreign investors added more than 10,000.[10] The state has lost much of its apparel industry to offshore production, but it has grown much of its high-tech industry by attracting foreign investment.

Other Measures of a State's Global Capacity

Exports and foreign investment are the obvious sources of job creation. A business will not get far, however, if it does not have access to the workers it needs and to appropriate overseas markets or research centers. Thus export development, investment recruitment, or simply enhancement of the competitiveness of existing industry depends on the quality of the state's workforce and overseas linkages. If North Carolina is to take full advantage of globalization (and not simply take the body blows), it also must raise educational levels, foster international skills, develop strategic ties overseas, and understand immigrant workers and their children.

Student exchange. The United States always has drawn bright young students from all over world. Often members of the elite classes of their homelands, these students have provided the United States with priceless political and social contacts.

Also, foreign students spend their own money on tuition and living expenses. In 2002 they spent an estimated $1.6 billion. For all foreign students—graduate and undergraduate—around 75 percent of their funding comes from overseas. United States support to foreign students is mainly in the form of graduate student stipends to provide teaching or research assistance.

The South's share of foreign students is less than what one might expect (see Table 6). Although the region had 21 percent of the nation's postsecondary students in 1999–2000, it had only 15 percent of the nation's foreign students.

Visits by foreign scholars. Visiting professors and university-based researchers also contribute to a state's global competitiveness. They not only enhance the technical expertise and the prestige of the host institution but also contribute to cultural diversity on the campus and opportunities to develop lasting relationships with foreign counterparts. This is especially important in some fields, such as medicine and physics, where publications and research are increasingly international collaborations.

Unfortunately, in 1999–2000 the South had only 16 percent of all foreign scholars in the United States, whereas it had 23 percent of the nation's faculty. (For specific numbers for the state, the South, and the nation from 1997 to 2000, see Table 7.)[11] Only Georgia and South Carolina met the national average of 10 percent of faculty being foreign scholars.

Study abroad. The number of students studying abroad is another critical measure of a state's global capacity (see Table 8). Students with a significant overseas experience are profoundly affected by the immersion. They not only learn a lot about the specific country but acquire a more accurate view of globalization in all its facets and a better ability to interact with foreign visitors and immigrants with both sensitivity and confidence. Given the increasingly international

Table 5. **Employment in Foreign-Owned Firms, 1997 and 2001**

	Employment (in thousands)		As % of Total Civilian Jobs	
	1997	2001	1997	2001
North Carolina	226.3	237.7	6.0	5.9
South*	1,267.5	1,470.1	4.3	4.8
U.S.	5,201.9	6,371.9	3.9	4.5

Source: Data from William J. Zeile, *U.S. Affiliates of Foreign Companies: Operations in 2001*, Survey of Current Business, Aug. 2003, at 38, available at www.bea.gov/bea/articles/2003/08august/0803usaffiliates.pdf.

Note: Only nonbank U.S. affiliates are included in these data. A "U.S. affiliate" is "a U.S. business enterprise in which there is foreign direct investment." *Id.* at 39.

*The percentage of the South's 2001 jobs was calculated separately, on the basis of January 2000 figures.

Table 6. **Foreign Students in the U.S., Selected Years**

	1970	1980	1990	2000	2002
North Carolina	1,594	3,709	5,764	7,848	8,960
South	14,529	46,801	56,243	78,733	68,605
U.S.	134,959	286,343	386,851	514,723	582,996

Source: Data from Institute of Int'l Educ., Open Doors: Report on International Educational Exchange (New York: the Institute, 1971, 1981, 1991, 2001, 2003).

Table 7. **Foreign Scholars in the U.S., 1997–2000**

	1997	1998	1999	2000
North Carolina	1,684	1,776	1,684	1,968
South	11,035	10,668	10,771	11,821
U.S.	70,501	65,494	70,056	74,670

Source: Data from Institute of Int'l Educ., Open Doors: Report on International Educational Exchange (New York: the Institute, 1998, 1999, 2000, 2001).

Table 8. **U.S. Students Studying Abroad, 1998–2001**

	1998	1999	2000	2001
North Carolina	4,564	5,439	5,693	5,864
South	21,252	24,944	28,539	28,480
U.S.	109,682	129,770	143,568	154,168

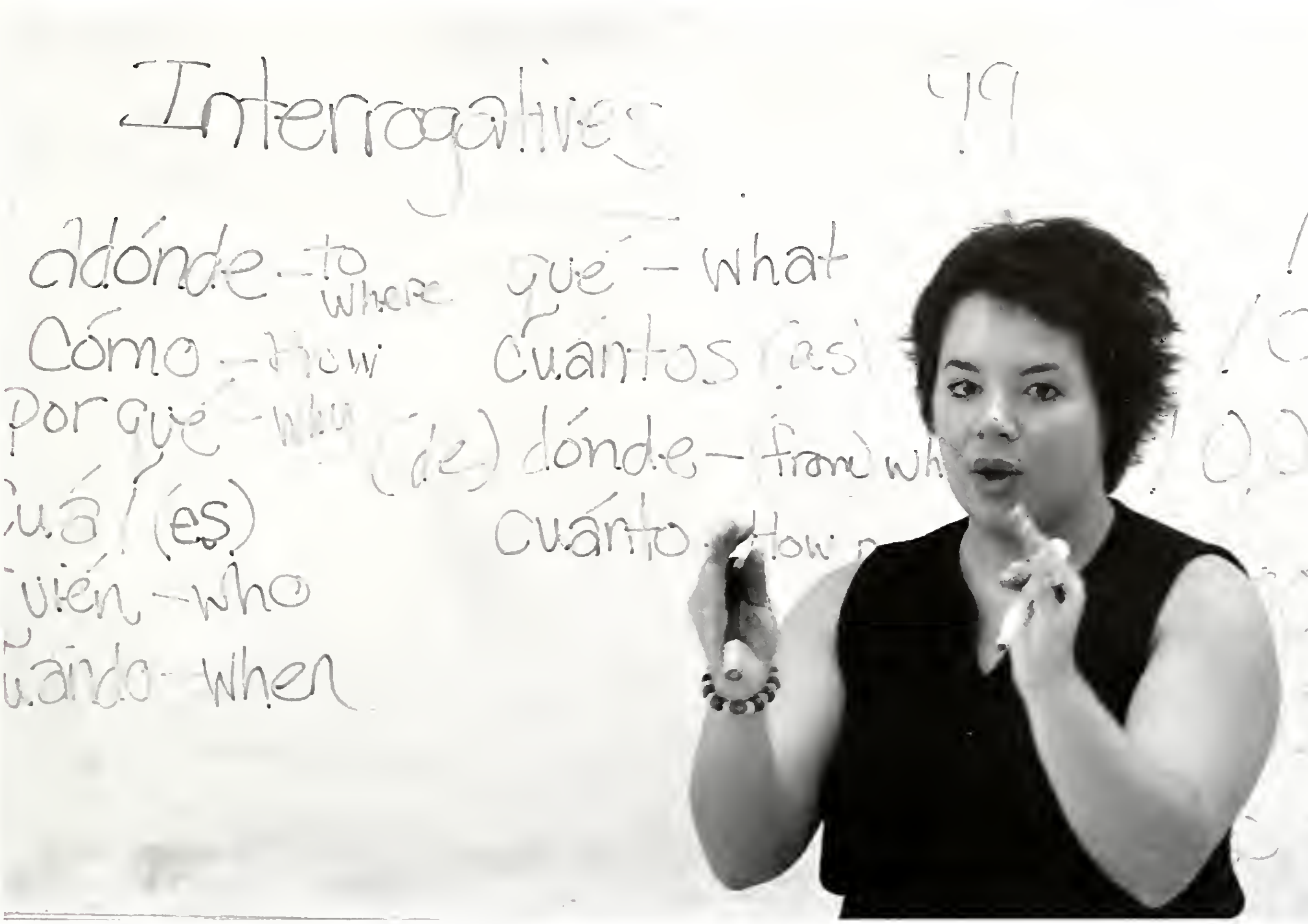
Source: Data from Institute of Int'l Educ., Open Doors: Report on International Educational Exchange (New York: the Institute, 1999, 2000, 2001, 2002).

Table 9. **Foreign Language Enrollments in Public Secondary Schools, Fall 2000**

	Foreign Language Enrollments (FLE)*	FLE as % of Total Enrollments	Spanish as % of FLE
North Carolina	187,114	28.3	64.2
South	1,362,934	28.3	67.7
U.S.	6,928,057	33.8	68.7

Source: Data from American Council on the Teaching of Foreign Languages, Foreign Language Enrollments in Public Secondary Schools, Fall 2000 (Alexandria, Va.: the Council, May 2002).

*Grades 7–12 include Latin as a foreign language.



Chuck Liddy / News & Observer

In the South the teaching of Spanish has increased dramatically in recent years in tandem with the rise of Hispanic populations.

dimension of work, employers will look more favorably on people who can communicate effectively with their international customers and workforce, or research their competitors.

In 2001–02, North Carolina had a slightly higher share of postsecondary students in study abroad than the nation as a whole (1.4 percent versus 1.1 percent). However, its growth in study abroad was somewhat slower than the nation's (36 percent versus 62 percent) from 1997 to 2001).[12]

Foreign language training. Like study abroad, foreign language competency is a good measure of a state's ability to navigate in an increasingly multilingual world. The teaching of Spanish has increased dramatically in recent years in tandem with the rise of Hispanic populations in the South. Yet there is more than a 5-point gap between the South and the nation on the percentage of high school students enrolled in a foreign language course (see Table 9). The gap is even more stark when the South is compared with the non-South: 28.3 percent versus 35.6 percentage, respectively, a difference of 7.3 points.[13]

This may change if more universities add a language requirement for entrance or graduation, a feature that many dropped in the 1970s. For instance, The University of North Carolina recently introduced two years of a second language as an entrance requirement.[14]

Given the increasingly international dimension of work, employers will look more favorably on people who can communicate effectively with their international customers and workforce, or research their competitors.

Immigration. Immigrants always have played a vital role in American growth and innovation. America's well-being will depend even more on them in the near future. Around the world, industrialized countries—and even some developing countries—are beginning to experience zero or negative population growth. The South faces especially slow growth in the size of its youthful population. According to Census projections, between 2000 and 2025, the South's youthful population will barely increase, whereas the rest of the United States will experience a growth spurt: 14.1 percent among young people under 18 years old and 7.1 percent among those 18–44 years old (see Table 10).[15]

Immigration is a recent phenomenon in the interior reaches of the South. As the region's population skyrocketed in the post-1950s industrial boom, most of the new arrivals came from other parts of the United States. Depleted of workers, those states turned to immigrants when their economies picked up in the 1990s. As a result, in 2000 the South had far fewer foreign-born residents—4.0 percent—than the nation as a whole—11.1 percent (see Table 11). Although 4.0 percent sounds like a small share of the South's population, it is slightly more than double what it was a decade earlier.

International relationships. Civic leaders can play a major role in helping local communities respond to globalization. Sister Cities and similar agreements offer a safe, positive, and fascinating vehicle for getting to know another country and its leaders' views of America. When the relationship is selected strategically, it can open the door to a mutually beneficial exchange of business, arts, and education. Sister Cities International is only one such vehicle, but it is both large and convenient for tracking civic connectedness. In 2003 the South had 92 cities involved in this program, and 14 more were seeking a foreign "sister" (see Table 12; for North Carolina localities, see the sidebar on page 41). Yet the 92 cities represent only about 16–17 percent of rhe total Sister Cities in the United States, significantly less than one might expect of the South, which is home to 24 percent of the nation's population. The resources required to host delegations and pay for visits overseas probably are a major barrier for many of the South's rural communities.

The Reason for North Carolina's Modest Profile

Why does Norrh Carolina appear to lag in so many areas? The thinness of the research record itself provides a clue: little attention has been given to the subject. Because the state was doing so well until the recession, there was not much recognition of what was wrong or missing in North Carolina's international profile. Thus there was no concerted, comprehensive effort to address the challenges.

The only serious attempt to look at the state's overall global preparedness ended in a debacle. In 1995, well ahead of its time, the North Carolina Board of Science and Technology studied the state's international position and the impact of that position on technology-led development. The board prepared its report, *North Carolina and the World Community*, without consulting turf-sensitive international trade programs, and the report was pilloried. The initiative shriveled into a series of Governor's Global Forums, annual gatherings of internationalists that led nowhere. The report's reception was so chilling that for years no one could suggest that state government play a leadership role of any kind.

The Role of Higher Education

Along with the public sector, the private sector, and nongovernmental organizations, higher education should be a partner in fashioning a state response to globalization. Each partner has strengths and weaknesses that complement those of the others. Higher education is the logical launching pad for a variety of initiatives, as follows. Activities can be structured and allocated to respect and strengthen the core missions of the different institutions of higher education.

- Educating the public about economics and global change

Table 10. **Percent Change in Youthful Population, 2000–2025 (Projected)**

	Under 18 Years Old	18–44 Years Old
North Carolina	1.4	– 1.3
South	3.5	– 0.6
U.S.	14.1	7.1

Source: Data from U.S. Census Bureau, Projections of the Population, by Age and Sex, of States: 1995 to 2025, available at www.census.gov/population/projections/state/stpjage.txt.

Table 11. **Birth Origin of State Residents, 2000**

	Total Population (in thousands)	Born in the State (in thousands)	Born in Another State (in thousands)	Foreign Born (in thousands)	% Foreign Born
North Carolina	8,049	5,073	2,546	430	5.3
South	66,154	44,091	19,401	2,662	4.0
U.S.	281,422	168,729	81,585	31,108	11.1

Source: Data from U.S. Census Bureau, Census Supplementary Survey, available at http://factfinder.census.gov/home/en/c2ss.html.

Table 12. **Number of Sister Cities, Agreements, and Seekers, 2002 and 2003**

	Cities		Pairs*		Cities Seeking Match	
	2002	2003	2002	2003	2002	2003
North Carolina	10	11	23	24	3	2
South	100	92	249	239	15	14

Source: Data from Sister Cities International, Member Directory, available at www.sister-cities.org/sci/directory/usa/index (as of Apr. 8, 2003).

Note: Data for years earlier than 2002 are not comparable. Only recently has Sister Cities International removed inactive listings.

*A city may have more than one sister. For example, Asheville, N.C., currently has three, and Charlotte, seven. Hence there are more pairs than cities.

- Training teachers and extension staff about cultures and global opportunity
- Educating businesses about overseas opportunities
- Assisting communities with strategic planning
- Internationalizing the curriculum, from kindergarten through the doctoral level
- Instilling a passion for reading among new arrivals with no such habit
- Connecting immigrant groups to the larger community
- Tracking the expertise of foreign faculty and foreign alumni
- Providing protocol support
- Supporting strategic overseas relationships

Even under the best of conditions, collaboration among business, government, prekindergarten–grade 12 schools, and higher education is not easy to initiate or easy to sustain. Incentive-based funding may be key.

North Carolina Localities Participating in Sister Cities

Asheville
Beaufort
Burlington/Alamance County
Charlotte
Concord
Durham
Gastonia
Greensboro
Kannapolis
Laurinburg
Montreat
Mooresville
Raleigh
Western Piedmont
Wilmington
Winston-Salem

Source: Sister Cities International, Member Directory, at http://www.sister-cities.org/sci/directory/USA/NC (last visited May 6, 2004).

The North Carolina Center for International Understanding

One example of a highly effective university-led global initiative is the North Carolina Center for International Understanding (NCCIU), a service of The University of North Carolina. The twenty-four-year-old NCCIU has developed an education program to help state and local policy and civic leaders understand Latino/Hispanic immigration in order to build capacity for making sound decisions.[16] In particular, its Latino Initiative for North Carolina Public Policy and Civic Leaders is a model of what can happen through public-private-academic partnerships.[17] It also provides a moving story of reconciliation and leadership in the first county to participate in the program.

In fall 1999, Rick Givens became an unlikely folk hero. As chair of Chatham County's Board of Commissioners, he had written a strong letter to the Immigration and Naturalization Service asking it to take away the county's undocumented workers, most of whom were from Mexico. Although many Mexicans (documented and undocumented) were working in low-wage, physically demanding, hard-to-fill jobs, such as poultry processing, they were perceived to be stealing jobs and burdening the schools.

The letter infuriated the Hispanic community. It was the final insult after a long string of slights. Public meetings were rancorous.

Along with the public sector, the private sector, and nongovernmental organizations, higher education should be a partner in fashioning a state response to globalization.

Luckily, NCCIU was there to help. It organizes and underwrites delegations of local leaders to go to Mexico to study the culture and meet face-to-face with the families that migrant workers leave behind. The goal of the program is to inform leaders about the culture of this fast-growing segment of the North Carolina population.

At the last minute, NCCIU added a delegation from Chatham County to an already-planned tour. Givens and five other community leaders—another county commissioner, the chief of police, the sheriff, the vice-chair of the county school system, and a Mexican-born community educator from a nonprofit organization serving the local Latino/Hispanic community—agreed to go.

While the delegation was in Mexico, its mission took on added urgency. White supremacist David Duke announced that he planned to use Chatham County as the venue for launching his campaign against immigrants in rural America. Violence was feared.

The delegation members returned as changed people. With ten days to go before the Duke rally, Givens and leaders in the Latino/Hispanic community led an all-out effort to stop people from participating in the rally or the counter-protest. It worked: the rally was a flop. Givens threw open the doors of government to consider issues of importance to the Latinos/Hispanics, such as a recreational area for soccer. The economic impact is impossible to calculate, but a violent clash would certainly have diverted city and county revenues to peacekeeping and made the area less attractive to future investors.

World Trade Center North Carolina

Another example, unique to this state, is the recent reconfiguration of the World Trade Center of North Carolina (WTCNC) into a partnership with North Carolina State University and the North Carolina Community College System. In a single stroke of the pen, WTCNC went, in effect, from a one-room operation to a statewide network. Its advice and services now are accessible through all the community colleges and university system campuses.

Typically, World Trade Centers in America and elsewhere offer seminars, trade leads, access to visiting delegations, and buyer-to-buyer matchmaking services that connect World Trade Centers around the world. In this case, WTCNC will work with its partners to deliver trade education services to underserved areas of the state, via the community colleges and relationships that North Carolina State University has with rural businesses and communities. From this base, WTCNC plans to expand its networks in the state both to help, and to be helped by, all the other "trade champions" in the state.[18] A downstream benefit may be greater involvement of students and faculty in international exchange and trade education.

Formal education, training, facilitation, brokering, and exchange programs—all described in this article—are some of the most efficient and powerful ways to expand the base of knowledge, skills, and confidence.

Conclusion

Knowledge of global markets and history, and the skills and the confidence to engage with foreign partners, are absolutely essential for the state's future economic success. Formal education, training, facilitation, brokering, and exchange programs—all described in this article—are some of the most efficient and powerful ways to expand the base of knowledge, skills, and confidence. North Carolina has had impressive successes in international education, trade, and economic development, but on many indicators it lags. The university community should take a leadership role in internationalizing the state's education system, from kindergarten through graduate school. Also, it should work with the business community to internationalize the state's approach to economic development. Leadership on global trade issues in these trying times is more important than ever, and postsecondary education has the capacity to lead. With vision, will, and wisdom, it can make the landscape of the North Carolina economy more competitive than ever.

Notes

1. Such an attitude means that every child must advance to postsecondary education, absent a compelling reason not to do so, and that every firm that is competing globally must have ready access to innovation and trade development services.

2. This is a back-of-the-envelope calculation intended to help readers appreciate the larger picture. It is cobbled together from various sources, the primary one being the STATISTICAL ABSTRACT OF THE UNITED STATES 2002 (Washington, D.C., U.S. Census Bureau, 2002). Goods exports account for about 7 percent of U.S. jobs. Tourism and other service exports equal at least a third of the value of goods exports. They account for roughly 3 percent of jobs. Imports depend on U.S. jobs in marketing, sales, distribution, transportation, and so forth. About 7 percent of jobs are related to imports—the rough equivalent of that generated by goods exports. More than 5 percent of U.S. jobs are in foreign-owned firms. Income from U.S. investments abroad may account for another 3 percent of jobs, if one assumes foreign investment's share of the gross domestic product is roughly parallel to the number of jobs it supports. Traditional export data do not include the total value of military products sold to other countries, which is substantial.

3. The United States as a whole exported 7.9 percent of its gross domestic product in 2000. North Carolina exported only 6.4 percent of its gross state product. Had North Carolina met the national figure, it would have generated millions more in sales. (A caveat: looking at merchandise exports as a percentage of gross state product is reasonable in times of recession but not when plants are operating at full capacity.)

4. For a discussion of the roles of other key players, visit the Southern Growth Policies Board's website, at www.southern.org, and click on Publications, then Globalization, then FAST FORWARD: MOBILIZING THE SOUTH FOR PROSPERITY IN A GLOBAL ECONOMY.

5. The U.S. Census Bureau's 2002 Economic Census of Manufacturers collected information on export activity, one of many indicators, but the findings will not be published until 2004–05. It is not known whether or to what extent the Census will report state-specific export performance.

6. The methodology for estimating jobs is detailed in the appendix of OFFICE OF TRADE AND ECON. ANALYSIS, U.S. DEP'T OF COMMERCE, U.S. JOBS FROM EXPORTS: A 1997 BENCHMARK STUDY OF EMPLOYMENT GENERATED BY EXPORTS OF MANUFACTURED GOODS (Washington, D.C.: Feb. 2001), available at www.ita.doc.gov/td/industry/otea/job_report/jobs_report_web.pdf.

7. The 1977 figures are from INTERNATIONAL TRADE ADMIN., U.S. DEP'T OF COMMERCE, STATE EXPORT SERIES (Washington, D.C.: Nov. 1978). The 1997 figures are from OFFICE OF TRADE AND ECON. ANALYSIS, U.S. JOBS FROM EXPORTS.

8. The U.S. Bureau of Economic Analysis defines as "foreign owned" any firm in which foreign investors hold 10 percent or more of the equity. Ten percent is low but deemed to be a level that can influence company decisions. However, most foreign-owned firms have more than 50 percent of their equity coming from foreign investors. The majority of jobs in foreign direct investment—87 percent—are in firms where foreigners hold more than 50 percent of the assets. William J. Zeile, *U.S. Affiliates of Foreign Companies: Operations in 2001*, SURVEY OF CURRENT BUSINESS, Aug. 2003, at 38, available at www.bea.gov/bea/articles/2003/08august/0803usaffiliates.pdf.

9. *Id.*

10. *Id.*

11. Faculty data are full-time equivalents in fall 1999. NATIONAL CTR. FOR EDUC. STATISTICS, DIGEST OF EDUCATION STATISTICS 2001 tab. 227 (Washington, D.C.: Feb. 2002), available at http://nces.ed.gov/pubs2002/2002130.pdf.

12. INSTITUTE OF INT'L EDUC., OPEN DOORS: REPORT ON INTERNATIONAL EDUCATIONAL EXCHANGE (New York: the Institute, 2003).

13. AMERICAN COUNCIL ON THE TEACHING OF FOREIGN LANGUAGES, FOREIGN LANGUAGE ENROLLMENTS IN PUBLIC SECONDARY SCHOOLS, FALL 2000 (Alexandria, Va.: the Council, May 2002).

14. *See* UNC's website, at www.northcarolina.edu/content.php/aa/departments/inter_programs/unc_inter.htm.

15. THE MERCEDES AND THE MAGNOLIA, 2002 Report on the Future of the South (Raleigh, N.C.: Southern Growth Policies Bd., June 2002).

16. "Latino" refers to anyone in Latin America and the Caribbean, including the Portugese- and French-speaking nations. "Hispanic" refers to a person from any Spanish-speaking country, including Spain and the Canary Islands.

17. For more information about the Latino Initiative and the NCCIU, contact Millie Ravenel, director of the NCCIU, at (919) 733-4902 or ravenel@ga.unc.edu. The website is www.ga.unc.edu/NCCIU/index.html.

18. For more information, see WTCNC's website, at www.wtcnc.org.

Clusters and Competitive Advantage: Finding a Niche in the New Economy

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Companies using the products of textile mills have clustered in Hickory, North Carolina, and the Piedmont area.

Corey Lowenstein / News & Observer

Industry clusters have become increasingly popular as a tool for localities, states, and regions to use in understanding their economies and taking actions to become more competitive. Indeed, industry clusters are becoming a dominant paradigm in economic development. Policy makers around the world are commissioning cluster initiatives and adopting a cluster-based approach to creating economic growth and prosperity.[1]

Internationally, the cluster approach is guiding economic and regional policy in places like Denmark and New Zealand. The World Bank advocates the approach in its work in developing countries. In the United States, the federal government's Economic Development Administration is focusing on clusters. State-level cluster strategies are under way in Arizona, Connecticut, Minnesota, Mississippi, New York, and Oregon. Metropolitan regions adopting the cluster approach include Austin, Texas; Chattanooga, Tennessee; Louisville, Kentucky; New Orleans, Louisiana; and San Diego, California.

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The most obvious cluster strategy in North Carolina centers on the renowned Research Triangle.[2] Lesser-known efforts are occurring in other parts of the state. For example, Guilford and Davidson counties recently hired consultants to help identify opportunities in target industry clusters.[3] Suffice it to say that clusters are all the rage.[4]

Despite the popularity of and recent interest in industry clusters, the process of cluster-based economic development is not well understood. At the least, policy makers and practitioners do not readily comprehend how they can use the cluster approach to boost private investment, create jobs, and expand the tax base. This article defines industry clusters, explains why they are becoming increasingly important in economic development, describes how they create competitive advantage, and illustrates what communities and regions can do to support and strengthen their business clusters.

The Need for a Better Way

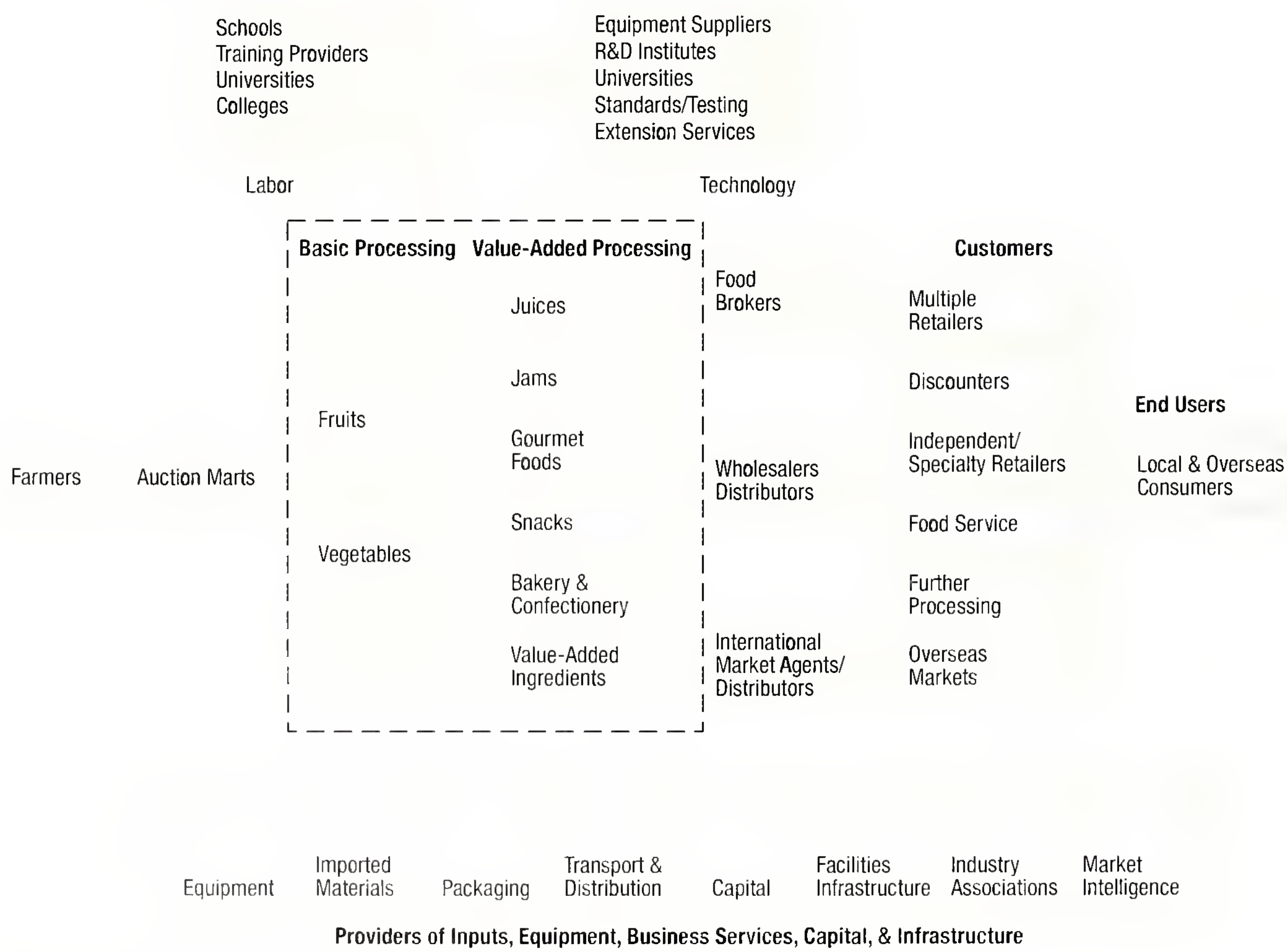
The rise of industry clusters taps into the desire among policy makers for a better way to conduct economic development—for an alternative to the proverbial "buffalo hunt" of recruiting large industrial facilities headquartered elsewhere. Growing weary of the costly, high-stakes game of incentives to lure industry, many jurisdictions are reexamining what they do to stimulate private investment and boost economic activity. Traditional approaches, which tend to emphasize external sources of growth, may be giving way to bottom-up strategies focused on generating growth from within.

Also fueling the desire for a more effective approach to economic development is the nature of the new economy, which places a premium on five elements:

- Innovation and productivity
- Knowledge and skills
- Flexibility and responsiveness
- Global markets
- Quality and value

Innovation and the use of technology to enhance productivity and increase returns on investments in capital and labor are driving the new economy. Now more than ever, to stay competitive, industries rely on the intellectual capital that resides in workers and knowledge-generating institutions. The new economy is characterized by rapid change, and it knows no boundaries. Companies adjust by organizing themselves to gain the utmost flexibility in responding to trends in the global marketplace.

Figure 1. **An Example of a Fruit- and Vegetable-Processing Cluster**



Source: From unpublished report by Regional Technology Strategies, Inc., Carrboro, N.C. Reprinted by permission.

Hickory, North Carolina, and the state's Piedmont area have high "location quotients" for furniture and fixtures. Location quotients are indicators of specialization.

The nature of the new economy is changing the context in which economic development occurs, making it more difficult for political jurisdictions to act alone in stimulating economic activity.[5] Government is organized around political boundaries, but because of globalization, economic activity is increasingly becoming boundary-free.

By definition, industry clusters are place based and contained within geographic boundaries. This suggests that, despite the emergence of a global economy that tends to ignore boundaries, place still matters. In one respect, relations between producers, buyers, and sellers depend less on proximity because of increased globalization and advances in communication and information technologies.[6] At the same time, the innovation and the knowledge that drive the new economy seem to be more rooted in the context of particular places.[7]

In this sense the role of geography has changed. Geography means something different to companies competing solely on the basis of low input costs than it does to those whose bottom line is driven by innovation, productivity, quality, and specialized niche markets. For the latter companies, "the enduring competitive advantages in a global economy lie increasingly in local things —knowledge, relationships, motivation— that distant rivals cannot match."[8]

Industry Clusters Defined

The recent buzz about industry clusters brings to mind the adage that there is nothing new under the sun. Hardly a novel concept, clustering has intellectual roots dating back to British economist Alfred Marshall and his writings on industrial districts in the early 1900s.[9] It is no great discovery that certain regions tend to specialize in particular industries. Whether it is automobile production in Detroit, semiconductor processing and software development in Silicon Valley, motion picture production and entertainment in Los Angeles, financial services in New York, or furniture manufacturing in High Point and Hickory, North Carolina, firms in related industries display a propensity to locate near one another in particular geographic areas.

This suggests that the current interest in clusters may be more of a revival than a substantial revision of earlier thinking. Writing specifically about industrial districts, the late economic development scholar Bennett Harrison raised precisely this point when he asked if clusters were in essence "old wine in new bottles."[10] At least one significant distinction can be made between industrial districts and their recent reincarnation as clusters. As discussed later, the new twist is an emphasis on collaborative interactions that occur outside the marketplace.

A number of "cluster" definitions exist, and that makes it difficult to pin down what the term "industry cluster" means. As analysts Ron Martin and Peter Sunley state, "[W]e know what they [clusters] are called, but defining exactly what they are, is much more difficult."[11] Getting bogged down in the nuances of various definitions is fairly easy. Simply stated, an industry cluster

is a geographically concentrated group of interdependent firms and supporting institutions.[12]

Interdependence is what differentiates a cluster from a mere group of businesses that happen to be located near one another. This distinction is not fully appreciated in practice. A functioning cluster is characterized by the presence of "active channels for business transactions, communications, and dialogue" among firms "that share specialized infrastructure, labor markets, and services and that are faced with common opportunities and threats."[13] A cluster is not just another name for an industry sector. Clusters extend across individual industry sectors to encompass the interrelations among them (for a typical fruit- and vegetable-processing cluster, see Figure 1).

Traditional economic development strategies, such as industrial recruitment, have focused on the needs of individual firms without considering the issues that cut across companies and industry sectors. The cluster approach focuses on enhancing the local capacity and resources needed to support groups of firms within an industry or set of related industries. It acknowledges that the competitiveness of cluster firms often is interconnected because of their reliance on shared resources.

Clusters and Competitive Advantage

The location of a critical mass of firms close together can generate certain advantages. By clustering, businesses can enjoy cost savings and efficiencies arising from economies of scale. For example, firms in a cluster can increase their profitability by doing business with nearby firms and customers, thereby reducing transaction costs. A cluster of firms in a certain industry tends to have a snowball effect by attracting similar firms, specialized resources, and support activities. In this way, clusters facilitate increased access not only to suppliers and customers but also to industry-specific inputs like a skilled workforce, technology, financing, support services, and infrastructure.

As clusters gain momentum in a region, they reinforce the region's competitive assets. When related economic activities and support services grow up around a cluster to meet its specific needs, the businesses constituting the cluster are able to specialize and focus on the activities that they do best. In much the same way that cluster businesses become more focused on doing what they do well, so do the regions in which they are located, as local institutions adapt and respond to ensure that clusters stay competitive.

Clusters provide greater opportunity for increased collaboration and networking both among firms and with supporting institutions such as government agencies, education and training providers, research institutions, and industry associations. The idea is to strengthen the linkages among these entities in order to take fuller advantage of existing and potential industry specializations within a region. A region's "social capital" is instrumental in cluster-based development because "social glue binds clusters together, contributing to the value creation process."[14]

A critical mass of firms indicates the potential for increased local and regional competitiveness. However, if firms and supporting institutions do not interact and collaborate, there is no guarantee

Table 1. **Types of Clusters and Their Characteristics**

	Critical Mass	Supply Chain	Social Network
Relations among Firms	Competitive	Competitive	Competitive and collaborative
Critical Linkages	None apparent	Market-based production; buyer-supplier relationships	Nonmarket interaction
Nature of Linkages	None apparent	Formal	Formal and informal
Resource Flows	None apparent	Goods, services, and factors of production	People, ideas, and knowledge
Level of Interdependence	Low	Moderate	High
Organizing Mechanism	Market forces	Production process	Industry association and cluster organization
Role of Supporting Institutions	Maintenance of overall business climate	Provision of specialized production inputs	Facilitation/convening of networking
Competitive Advantage	Economies of scale, specialization	Lower transaction costs; better access to suppliers	Knowledge spillovers, productivity, and skilled workers
Examples	Furniture and textiles in Hickory and Piedmont Triad (N.C.)	Detroit auto production	Catawba (N.C.) Hosiery Technology Center and Louisville (Ky.) Business Networks

Source: Author's interpretation and elaboration of the typology proposed by Ian R. Gordon & Philip McCann, *Industrial Clusters: Complexes, Agglomeration and/or Social Networks?* 37 URBAN STUDIES 513 (2000).

that a region's clusters will realize their full potential for adding economic value. This aspect of the cluster approach acknowledges that economic activities are part of larger social systems and that the whole is greater than the sum of its parts. When the firms and the supporting institutions that constitute a cluster systematically work together toward shared goals, they create a kind of synergy that is thought to make a difference for economic development.[15] Being located close together facilitates the face-to-face interactions necessary to build the trust required for collaborating to address common challenges. In the new economy, a key benefit of clusters is that they promote greater exchange of industry-specific knowledge and better diffusion of new ideas and technologies. They can enhance innovation by enabling firms to develop sustained interactions with other firms and institutions that result in gains in productivity and innovative capacity.

A cluster of firms in a certain industry tends to have a snowball effect by attracting similar firms, specialized resources, and support activities.

Geographic proximity may be advantageous in today's knowledge-based economy because it may facilitate collective learning and informal exchange of tacit knowledge. "Tacit knowledge" is the expertise and the know-how that are not explicitly written down but that people develop over time through experience. Such knowledge resides within people, not in textbooks or training manuals, and is thought to be crucial to innovation and shared learning.[16] When firms cluster, they can more quickly learn from one another about new market opportunities and technologies.

Ways to Think about Clusters

There are different ways to think about clusters, and they have implications for how a region might implement a cluster strategy. One can conceive of clusters along a continuum, from mere critical mass to supply chains to social networks (see Table 1).[17] The simplest type of cluster requires only the existence of a geographically concentrated critical mass of firms that have common needs and operate on a sufficient scale to generate economic benefits. In a supply-chain cluster, firms engage in production-related business transactions with one another. A social-network approach presumes some level of nonmarket collaboration among the firms in a cluster.

These cluster types are not necessarily mutually exclusive, although each emphasizes certain aspects of industrial clustering that may have different implications for economic development. They all provide a partial response to the question of what distinguishes a cluster from a group of private businesses. They vary with respect to the nature and the extent of cluster relations, the level of interdependence, and the role of supporting institutions.

Clusters as Critical Mass

In the most basic sense, an industry cluster is a critical mass of firms in the same industry or related industries. Key advantages accrue to firms simply because they are located together in a place.

Table 2. **Ten Highest Regional Employment Concentrations in Two Traditional Manufacturing Industries in the U.S.**

Textile Mill Products	LQ*	Furniture and Fixtures	LQ*
Danville, Va.	27.16	Hickory, N.C.	34.99
Hickory, N.C.	23.77	Greensboro/Winston-Salem/High Point, N.C.	11.17
Greenville/Spartanburg, S.C.	11.23	Grand Rapids, Mich.	9.30
Charlotte/Gastonia/Rock Hill, N.C–S.C.	10.35	Williamsport, Pa.	7.75
Chattanooga, Tenn.–Ga.	9.98	Elkhart-Goshen, Ind.	7.70
Anniston, Ala.	8.40	Fort Smith, Ark.–Okla.	7.15
Greensboro/Winston-Salem/High Point, N.C.	8.26	Joplin, Mo.	6.01
Florence, Ala.	8.22	Killeen-Temple, Tex.	5.59
Columbus, Ga.–Ala.	8.01	Sheboygan, Wisc.	5.09
Athens, Ga.	6.94	Dubuque, Iowa	4.87

Source: Author's calculations from a special run of data from the U.S. Census Bureau, County Business Patterns dataset. The general website for the dataset is www.census.gov/epcd/cbp/view/cbpview.html.

*LQ = location quotient.

These advantages arise mostly as a result of geographic proximity rather than from any conscious effort to create or capitalize on them. When firms physically locate near related firms, there is greater *potential* for interaction and collaboration. Evidence of such linkages may not be evident, however.

Critical mass is the starting point for a cluster. It can be measured quantitatively by the degree to which an industry is concentrated in a region. The most widely used measure is the "location quotient," the ratio of the share of industry employment in a region relative to a larger reference area, typically the nation.[18] The location quotient is an indicator of regional specialization and can provide the first clue regarding the presence and relative scale of a cluster.

When defining clusters in terms of critical mass or industrial specialization, one can analyze location quotients to detect the potential clusters in a region. Many regions of the United States have high concentrations of textile and furniture industries (see Table 2), the new South among them. Over the past few decades, traditional low- to mid-skilled production work found its way to the southeastern United States to take advantage of cheaper labor and nonunion environments. For example, textile employment now is highly concentrated in regions like Danville, Virginia; Hickory, North Carolina; and Greenville/Spartanburg, South Carolina. Similarly, regions like Hickory and Greensboro/Winston-Salem/High Point, North Carolina, are known for their high concentrations of furniture manufacturing industries. The pressures of globalization have caused significant downsizing in these industries over the past twenty years.

The numbers in Table 2 indicate which regions have higher shares of employment in textiles and furniture manufacturing than the national average. However, they tell nothing about the extent to which the firms in these regions actually interact and function as a cluster. Nor do they communicate why the firms are located in their region, rather than in another, and what specific advantages they enjoy from being where they are. In other words, the data show where critical mass within certain industries exists but do not indicate whether the firms recognize that they are a cluster and behave like one. The firms may or may not transact business with one another, hire from a shared workforce, use the same business services, or exchange industry-specific ideas and knowledge. If they do not, a critical mass of firms in an industry may constitute a "latent" cluster because it lacks the interaction and resource flows needed to maximize the benefits that clusters can generate.[19]

Clusters as Supply Chains

A more sophisticated way to think about clusters is to view them as production supply chains. What moves a cluster along the continuum from critical mass to a more advanced stage is the interrelations or "flows" between firms in an industry sector or group of related sectors. In a supply-chain cluster, these flows occur when firms transact business with one another in making a product. The predominant flows in this type of cluster are the goods and the services exchanged in buy-sell market transactions as part of the production process. The focus is the purchasing relations among firms, their suppliers, and their customers (see the center portion of Figure 1).

These market-based relations between firms are more difficult to measure. However, methods exist that attempt to capture the trading relationships in a chain of production and determine which types of companies are likely to transact business with one another.[20]

The idea of clusters as supply chains explicitly incorporates a focus on interdependence. Interrelations among firms in this type of cluster are largely market-based business transactions. These formal input-output, buyer-supplier relations involve backward and forward linkages that are geographically concentrated.[21] By trading with other firms in proximity to them, the firms in a given supply chain reduce their transaction costs because they minimize transport and shipping distances. Examples of this type of cluster are the petrochemical and oil refining industries in the New Orleans and Houston regions.

Clusters as Social Networks

Many contemporary cluster definitions emphasize the social-network aspects of clustering. From this perspective the driving force is the qualitative, often informal social relationships that occur not only among firms but also between firms and supporting local institutions. In this type of cluster, people, ideas, information, knowledge, and technology flow back and forth among firms and supporting institutions. The literature on clusters suggests that the strength and the dynamism of industry clusters are enhanced not only by the presence of supporting institutions and organizations but also by the nature and the extent of relations among firms, universities, and government agencies.[22] The collaborative nature of these relations is embodied in the concept of "social capital." (For more information about social capital, see the article by Anita R. Brown-Graham and Susan Austin on page 14.)

> **By identifying the drivers of a regional economy and the socioeconomic relationships that undergird it, cluster analysis provides a way for regions to find and support a niche in the new economy.**

Supply-chain clusters are based on market-based, buy-sell relations in a production chain, whereas cluster-based social networks emphasize linkages and i nteractions that occur outside the marketplace.[23] Some business networks are considered "hard," consisting of firms that work together on purchasing, production, or marketing.[24] The social-network type of cluster is "soft" and loosely organized, with firms collaborating to "solve common problems, share information, or acquire new skills."[25] In practice these soft networks often involve firms collaborating on issues like technological innovation and worker training.

Cluster-based social networks focus on "formal and informal flows of information or knowledge, the role of social ties or trust in governing transactions within clusters, and the importance of local pools of specialized labor."[26] From this perspective, proximity matters to the extent that it helps create the synergy required for a critical mass of firms and supporting organizations to function as a socioeconomic system and engage in collaborative activities. Cluster-based social networks are less about pure individual competition among firms and more about collaborative competition.[27] The role of local institutions in supporting cluster-based development is heightened in this type of cluster. Louisville's Business Networks program is a good example of a social-network cluster (see the sidebar on this page).

Ways to Use Clusters in Economic Development

Each of the three types of clusters has implications for what a region might do to gain a competitive advantage in the new economy. Having a critical mass is a prerequisite for reaping the full benefits of cluster-based development, so cluster strategies usually begin with an economic analysis to identify the groups of industries with above-average concentrations in a region. This quantitative analysis is typically supplemented with qualitative information to settle on the clusters to target. A thorough analysis lays the groundwork for the specific steps that a region will take to move beyond simply having a critical mass to ensuring that target clusters grow and remain competitive. To move along the cluster spectrum from critical mass to cluster-based networking often requires an institutionalized mechanism for collaboration.

Research and experience suggest that a region can use clusters for economic development in at least four ways:[28]

- As an analytical tool for understanding a regional economy and identifying where it might have a competitive advantage
- As a framework for regional collaboration both within and across jurisdictions
- As a basis for improving the delivery of economic development services
- As a way to prepare the workforce to meet the needs of a regional economy

By identifying the drivers of a regional economy and the socioeconomic relationships that undergird it, cluster analysis provides a way for regions to

Louisville Business Networks

Since 1993 the region encompassing Louisville, Kentucky, has been implementing a social-network type of cluster strategy, the Business Networks program, by facilitating a process for firms in targeted industries to collaborate on specific problems that have been difficult for them to tackle individually. The idea is to assemble competitors to think about ways they can work together on issues that they all face, while still competing with one another.

Originally administered by the Louisville/Jefferson County Office for Economic Development, the program initially created networks for food processing, metalworking, plastics, printing, and transportation/trucking. Over time, as a response to the new economy, the program has instituted networks for information technology, logistics, new manufacturing, and call centers.

In 1998 the Greater Louisville Chamber of Commerce, also known as Greater Louisville, Inc., assumed responsibility for the Business Networks program under contract with the Office for Economic Development. Greater Louisville, Inc., currently manages and facilitates nine business networks.

The stated mission of the program is to help retain and nurture companies by facilitating results-oriented interactions among businesses with common interests. The networks are intended to achieve what individual member firms cannot do alone by focusing on joint marketing and purchasing, strategic alliances, improved technologies, and public policy. The program is supported by local government funds and membership dues.

find and support a niche in the new economy. Cluster-based development is a framework for regional collaboration because it emphasizes the value of creating linkages among firms and the institutions that support them. By restructuring government assistance around target industries, the administration of economic development programs can become more focused, efficient, and potentially effective. Finally, by targeting job training programs to the specific needs of key industry clusters, regions can equip workers with readily marketable skills, and firms will benefit from a workforce with industry-specific knowledge.

Cluster-based economic development involves identifying the areas in which a region or a community is best suited to add value in the new economy.

The Research Triangle region's cluster strategy, which was just recently initiated, is an example of how a multi-jurisdictional region in North Carolina is refocusing its economic development efforts on meeting the needs of its key industry clusters to stay competitive.[29] The impetus for the Research Triangle initiative was a study conducted by cluster advocate Michael Porter. The 2001 study, titled *Clusters of Innovation*, recommended that the region devise an updated economic development vision and cluster-focused action plan to ensure continued competitiveness in the changing new economy.

To move from the initial cluster analysis to implementation, the Research Triangle Regional Partnership, in collaboration with other regional, state, and local economic development organizations, created a high-level task force of business and education leaders to chart a new vision and plan for the region. This thirty-seven member committee, called the Future Cluster Competitiveness Task Force, commissioned additional studies to inform the cluster strategy.

In early 2004 the task force released its final report, *Staying on Top: Winning the Job Wars of the Future*. The report sets forth the details of a five-year, $5 million cluster-based strategy to create 100,000 new jobs and expand employment in all thirteen counties that constitute the Research Triangle region. It recommends actions to promote the growth of ten industry clusters in which the region has a competitive advantage.

The Research Triangle region, which is considered a model of economic development success around the world, is well positioned for continued prosperity. Despite its past success and tremendous assets, the region's leaders recognize that they cannot rest on their laurels. The new economy is changing so rapidly that the region must try to stay in front of the trends if it is to respond effectively to opportunities and remain competitive.

The Research Triangle cluster strategy has an explicit regional focus and is deliberate in its efforts to connect the region's nonmetropolitan counties to its future economic prosperity. Also, the strategy is expected to produce a higher-quality workforce, with the skills that target industries need, by strengthening linkages between institutions of higher education and economic development entities.

Workforce development is a common issue around which a cluster strategy might form. The special skills required to produce a particular good or service are one of the shared needs that cluster firms may want to address collectively. The firms and the institutions involved in a particular cluster can collaborate to match the supply and the capabilities of the local workforce to industry needs.

For example, Arizona has adopted a comprehensive workforce development plan that forecasts worker demand in the state's key industry clusters, identifies gaps in training for cluster-specific occupations, and ensures that all training programs teach the skills needed by cluster firms.[30] Indiana's state-level Workforce Department now targets specific industry clusters. As part of the Advance Indiana program, staff are assigned to work with certain industries and specialize in understanding the workforce needs of the state's major economic growth engines.

In North Carolina the Community College System developed a plan for creating Industry Cluster Resource Centers on certain community college campuses around the state.[31] The plan was completed in 2000 but has not yet been implemented. These specialized knowledge and training centers would focus on the needs of key industry clusters in each of the state's seven economic development regions. They would be "one-stop shops for an industry cluster, somewhere member firms can go for help in translating their organizational needs into education and training requirements, or for expertise that can enhance their competitiveness."[32]

The plan identifies the target clusters in each region that the proposed centers would serve, and it outlines a competitive-bid process for colleges interested in hosting a center. Also, it recommends that the Research Triangle be the location of a cluster center focused on biotechnology and pharmaceuticals; that the proposed center in eastern North Carolina emphasize medical services and laboratories; and that the Piedmont Triad and Advantage West regions host centers with expertise in metalworking and plastics, respectively.

The experience of cluster-based economic development in a number of states and regions offers the following guidance for increasing the likelihood that a cluster strategy will be effective.

1. Find a niche and fill it.
Cluster-based economic development involves identifying the areas in which a region or a community is best suited to add value in the new economy. Using critical mass and industrial specialization as starting points makes sense. The next step entails examining the needs of a region's existing industry concentrations and devising ways to keep them competitive. The idea is for a region to figure out what it has to offer that is special in the new economy and to devise ways to leverage its strengths.

It is important to be both strategic and realistic in sizing up a region and positioning it to capitalize on future economic opportunities. Many communities and regions try to imitate what others are doing in economic development. Cluster-based development helps a region figure out what is special about its economy and gives it distinction. A

Harry Lynch / News & Observer

The state's Research Triangle is home to numerous biotechnology enterprises. Here a worker checks whether a system to purify substances is working properly.

region's competitive advantage could very well be related to its traditional economic base, which may be undergoing transition.

Winston-Salem, in the Piedmont Triad region of North Carolina, is a good example. Biotechnology companies are attracted to the biomedical research capacity at Wake Forest University. Biotechnology-related production is a logical extension of the region's traditional manufacturing base. As biotechnology evolves from ideas in the laboratory to products in the marketplace, there will be an increasing need for production workers. The people in the Piedmont Triad region already know how to make furniture and textile products. With additional training and upgrading of skills, they can make biotechnology-related products. So this is a viable cluster for Winston-Salem to target. An indicator of the demand for jobs in biomanufacturing is that Forsyth Technical Community College had more than 100 applicants last fall for its new biotechnology training program. When students graduate, they almost are guaranteed a job, according to the president of the college.[33]

Every region and community seems to want a biotechnology cluster, but not every region has the appropriate conditions, institutional infrastructure, and economic base to support one. Indeed, for many regions a biotechnology cluster is wishful thinking—a long shot at best. The point is to connect a cluster strategy to the areas in which a region has some existing or realistically potential strength.

Focusing on economic niches means that companies and regions will specialize in certain activities. One of the counterarguments to cluster-based development is that it sacrifices economic diversification for increased specialization. According to this view, specialization connotes a lack of economic diversity and vice versa. If so, then the promotion of industry clusters runs the risk of creating highly specialized regional economies that are vulnerable to cyclical declines in certain industries.

However, another view suggests that specialization and diversity are not necessarily incompatible.[34] The ideal scenario is to have a regional economy that is both specialized within certain niches and industrially diverse. In other words, the goal is to pursue multiple specializations within a broader context of economic diversity.[35] Regional economies can be highly specialized in certain industries and still possess a healthy mix of economic activities overall.

2. Move beyond critical mass.
Clusters can be more than a critical mass of firms. They represent a process and an existing or potential set of relationships. Theoretically the scale and the critical mass of industry alone will generate a competitive advantage when firms are located in proximity to one another. From this perspective, increased competitiveness is essentially an unintentional byproduct of firms in an industry being physically located together.

However, a more systematic approach to cluster-based development places more weight on the role of deliberate interaction and collaboration in generating competitive advantage. That is, the economic development benefits of clusters are likely to be enhanced when the region moves beyond critical mass to leverage its key industries.

Thus it is useful to distinguish between industry clusters defined in terms of critical mass and clustering as a deliberate, collaborative process. Regions that recognize this distinction and attempt to link the two elements will likely derive a wider range of economic development benefits. Clusters must be understood in terms of industrial concentration but also as a qualitative process for organizing a region to support target industries in which a critical mass already exists. A critical mass in a particular industry can form in a region somewhat serendipitously. Taking full advantage of cluster-based economic development requires a region to institute a process for systematically facilitating synergy within target clusters.

3. Focus on the ties that bind.
To figure out how best to intervene to support a particular cluster requires an understanding of what holds the cluster together and what is the rationale for its location. In most cases, some unique factors cause firms to cluster in a certain place. Regional economist Ann Markusen suggests that regions can learn from "sticky places" that have been successful in attracting and keeping increasingly mobile private investment. She notes that the Italian industrial districts she studied "owe their stickiness to the role of small, innovative firms, embedded within a regionally cooperative system of industrial governance which enables them to adapt and flourish despite globalizing tendencies."[36]

Although cluster firms may compete for business, they also do business with one another and have common needs for specialized resources, technology, or infrastructure. The reliance on shared resources partially explains why certain clusters tend to emerge in particular locations. For example, the Yadkin Valley region of North Carolina has a rapidly growing cluster of wine companies, in part because of the region's ability to grow the right kinds of grapes. Transportation and logistics firms are attracted to the Memphis, Tennessee, region, which is known as America's distribution center because of its extensive network of interstate highways and rail lines and its substantial air freight capacity. Similarly the Piedmont Triad region of North Carolina is positioned to become a distribution and logistics center with the arrival of the FedEx mid-Atlantic hub.

By focusing on clusters of businesses, rather than individual firms, the public sector can take advantage of economies of scale in delivering economic development services.

4. Strengthen linkages.
Collaborative linkages are the mechanism through which clusters come to life and create a truly competitive advantage for a region. What differentiates clusters from traditional industry sectors is the linkages and the interdependencies that exist, or could potentially exist, among firms and between firms and supporting institutions. By strengthening critical linkages such as those identified in the next sections, regions will position themselves to compete better in the global economy.

Linking Firms within Clusters
Proximity affords the opportunity for higher levels of interaction among firms, but it offers no direct means for such interaction. Typically, some forum for facilitating collaboration and networking must be in place to activate a cluster and create the synergy that translates into competitive advantage.

Louisville has instituted a process for bringing together firms in target industry clusters. Through its Business Networks Program, the city provides a mechanism for collaboration among firms on a number of issues affecting the competitiveness of member companies. The program represents a practical example of how cluster-based networking among firms is being applied as part of a regional economic development strategy. It is not yet known whether these cluster-based business networks are producing any tangible economic development results in Louisville, but the process by which they are attempting to do so is itself instructive (see the sidebar on page 49).

The Catawba Valley Hosiery Technology Center, in Hickory, North Carolina, is an example of an institutionalized process for bringing together the firms in a particular industry cluster to collaborate on the issues that threaten their ability to compete in the new economy.[37] The Hosiery Technology Center opened in 1990 at Catawba Valley Community College to help hosiery and sock manufacturers in the region modernize their production processes in order to compete with low-cost producers overseas. The center trains production workers and educates managers in the latest technologies and innovations in the industry. It also facilitates networking among the region's hosiery companies, which has given them a greater sense of collective identity in the face of stiff foreign competition. As a result of the center's work, hosiery firms in the Catawba Valley collaborate more with one another, invest more in training workers and new technologies, and have a better sense of what they need to do in order to stay competitive and survive in a somewhat unstable industry.[38]

Linking Political Jurisdictions
Many jurisdictions recognize the need to collaborate across political boundaries in pursuing economic development, but find it difficult to do so. Clusters can serve as a framework to help them approach economic development as a regional issue.

In an increasingly global economy, regions consisting of multiple jurisdictions are the most viable economic units.[39] Economic activities do not recognize political boundaries, so it is important to understand the economic interdependencies that cut across city, county, and state lines. Going it alone in the global economy is nearly impossible, given that individual jurisdictions usually do not possess the scale and the comprehensive sets of critical inputs and services required to compete. The question is how to overcome the barriers to regional collaboration and provide incentives for jurisdictions to work together on economic development.

Conclusion: Lessons for Governance and Policy

Some analysts debate whether industry clusters can be created from scratch in a region. The prevailing wisdom suggests that, in most instances, clusters locate in certain regions mostly because of historical accident or chance rather than because of any deliberate strategic effort.[40] Yet the proliferation of cluster-based strategies and policies suggests that communities might play a role in developing industry clusters.

A critical mass can form within an industry without much direct intervention and support from government. But can or should government do more to help a region move beyond critical mass and capitalize on its key industries and economic drivers?

Government intervention at some basic level appears crucial. Many observers prefer a limited but supportive

NC Grape Council

The Yadkin Valley region of North Carolina has a rapidly growing cluster of wine companies, in part because of the region's ability to grow the right kinds of grapes.

role for government in cluster-based development. Government's role in cluster-based development could be more focused, though not necessarily enlarged. The cluster approach is useful for assessing the structure of a regional economy and identifying critical linkages. When local policy makers better understand how their regional economy functions and which industries are the drivers, then they can deploy economic development resources more strategically to enhance regional competitiveness. By focusing on clusters of businesses, rather than individual firms, the public sector can take advantage of economies of scale in delivering economic development services. In addition, clusters provide an opportunity for a region to improve the skills of its workforce by providing training more tailored to the specific needs of key industry groups.

Industry clusters tend to thrive in places where their needs for specialized inputs and services are being met. So a logical role for government in cluster development is to make cluster-related investments in education and job training, infrastructure, innovation, and the organizations that provide these services.

Clusters provide a forum for dialogue between business and government, and a framework for collaboration. Government can be the catalyst for collaboration on a cluster strategy when no other entity is willing to assume such a role. It can facilitate the process by engaging the appropriate local institutions and coordinating public resources to support the effort. When collaboration is facilitated and institutionalized, clusters are a means for strengthening a region's social capital, which is captured in social relationships and the capacity of organizations to work together toward shared goals. Research suggests that regions rich in social capital tend to generate more economic prosperity. To encourage collaboration, government might require that firms applying for incentives, grant funds, and other types of public assistance do so in partnership with other firms in a particular cluster.

The ultimate question for policy makers contemplating an industry cluster strategy is whether such a strategy truly makes a difference in economic development. The competitive advantage that industries enjoy from clustering can spill over to give communities and regions a competitive edge. What a region does to leverage the potential of its industrial concentrations may matter more than simply having a critical mass of firms.

The promise of cluster-based economic development appears to be based on a completely logical premise: the way to achieve competitive advantage is to identify strengths and systematically build on them. Policy makers and practitioners around the globe hope that the approach bears fruit. Over time, as communities and regions implementing cluster strategies begin to assess and evaluate their impacts, more information will become available about their effectiveness.

In the meantime the most significant value of industry clusters lies in their use as a framework for understanding how regional economies function, organizing economic development efforts, and enabling collaboration. If nothing else, clusters aid public-sector planning by providing a new way of thinking about the structure of regional economies and the delivery of economic development services. The cluster approach helps decision makers to identify the drivers of the regional economy and the sources of competitive advantage. It helps a region determine what it does well—what its niche is in the new economy.

Notes

1. Stuart A. Rosenfeld, Creating Smart Systems: A Guide to Cluster Strategies in Less Favoured Regions (Luxembourg: European Comm'n, 2002).

2. *See* www.researchtriangleregion.com for more information on the Research Triangle cluster strategy.

3. *See* Greensboro and Guilford County Cluster Analysis, 2001, at www.forwardgreensboro.com/graphics/cluster.pdf. In summer 2001 the Greensboro Economic Development Partnership hired the Natelson Company, a California-based consulting firm, to conduct the Guilford County cluster study. A team of graduate students from the Sloan School of Management at the Massachusetts Institute of Technology conducted a more detailed follow-up study for the partnership in June 2002. *See* www.forwardgreensboro.com/graphics/MIT_Industry_Cluster_Study.pdf. Davidson County identified target business clusters as part of a larger strategic planning effort. For more information, *see* www.davidsoncountyworks.org/davidsonvision.pdf.

4. The current interest in industry clusters is due in part to the effective advocacy of scholars and analysts like Harvard professor Michael Porter and consultant Stuart Rosenfeld, a contributor to this special issue of POPULAR GOVERNMENT (see the article on page 23). *See* Michael E. Porter, *Clusters and the New Economics of Competition*, HARVARD BUSINESS REVIEW, Nov.–Dec. 1998, at 77; Rob Gurwitt, *Michael Porter: Cluster Power*, GOVERNING MAGAZINE, Apr. 2000, at 72; STUART A. ROSENFELD, INDUSTRIAL STRENGTH STRATEGIES: REGIONAL BUSINESS CLUSTERS AND PUBLIC POLICY (Washington, D.C.: Aspen Inst., 1995).

5. Jennifer P. Montana, *The Changing Nature of Regional Competitiveness*, JOURNAL OF CITY AND STATE PUBLIC AFFAIRS, Spring 2001, at 9.

6. Jan G. Lambooy, *Knowledge and Urban Economic Development: An Evolutionary Perspective*, URBAN STUDIES, May 2002, at 1019.

7. Michael Storper, *The Resurgence of Regional Economies, Ten Years Later: The Region as a Nexus of Untraded Interdependencies*, 2 EUROPEAN URBAN AND REGIONAL STUDIES 191 (1995). Tacit knowledge in particular tends to be place based. In contrast to knowledge that can be readily codified and transmitted across distance and space, tacit knowledge is less amenable to such dissemination. Maryann P. Feldman, *Location and Innovation: The New Economic Geography of Innovation, Spillovers, and Agglomeration*, in OXFORD HANDBOOK OF ECONOMIC GEOGRAPHY (Gordon L. Clark et al. eds., Oxford, Eng.: Oxford Univ. Press, 2000). Proximity facilitates the face-to-face interactions through which tacit knowledge is exchanged.

8. Porter, *Clusters and the New Economics*, at 78.

9. ALFRED MARSHALL, PRINCIPLES OF ECONOMICS (8th ed., London: Macmillan, 1920).

10. Bennett Harrison, *Industrial Districts: Old Wine in New Bottles?* 26 REGIONAL STUDIES 469 (1992).

11. Ron Martin & Peter Sunley, *Deconstructing Clusters: Chaotic Concept or Policy Panacea?* 3 JOURNAL OF ECONOMIC GEOGRAPHY 5, 10 (2003).

12. Michael E. Porter, *Location, Competition, and Economic Development: Local Clusters in a Global Economy*, 14 ECONOMIC DEVELOPMENT QUARTERLY 15 (2000).

13. STUART A. ROSENFELD, OVERACHIEVERS—BUSINESS CLUSTERS THAT WORK: PROSPECTS FOR REGIONAL DEVELOPMENT 13 (Chapel Hill, N.C.: Regional Tech. Strategies, Inc., 1996).

14. Michael E. Porter, *Clusters and Competition: New Agendas for Companies, Governments, and Institutions*, in ON COMPETITION 225 (Michael E. Porter ed., Boston: Harvard Business Sch. Publ'g, 1998).

15. ROSENFELD, OVERACHIEVERS.

16. Bjorn T. Asheim, *Industrial Districts as Learning Regions: A Condition for Prosperity*, 4 EUROPEAN PLANNING STUDIES 379 (1996).

17. Ian R. Gordon & Philip McCann, *Industrial Clusters: Complexes, Agglomeration and/or Social Networks?* 37 URBAN STUDIES 513 (2000).

18. Mark S. Miller et al., *Location Quotient: A Basic Tool for Economic Development Analysis*, 9 ECONOMIC DEVELOPMENT REVIEW 65 (1991).

19. Michael J. Enright, *The Globalization of Competition and the Localization of Competitive Advantage: Policies toward Regional Clustering*, in THE GLOBALIZATION OF MULTINATIONAL ENTERPRISE ACTIVITY AND ECONOMIC DEVELOPMENT (N. Hood & S. Young eds., Hampshire, U.K.: Macmillan, 2000).

20. *See* Edward J. Feser & Edward Bergman, *National Industry Cluster Templates: A Framework for Applied Regional Cluster Analysis*, 34 REGIONAL STUDIES 1 (2000).

21. EMIL MALIZIA & EDWARD J. FESER, UNDERSTANDING LOCAL ECONOMIC DEVELOPMENT (New Brunswick, N.J.: Center for Urban Policy Research, 1999).

22. Chris Hendry et al., *Industry Clusters as Commercial, Knowledge and Institutional Networks*, in INTERFIRM NETWORKS: ORGANIZATION AND INDUSTRIAL COMPETITIVENESS (A. Grandori ed., London: Routledge, 1999).

23. The literature refers to these nonmarket relationships as "non-traded" interdependencies. *See* Storper, *The Resurgence*.

24. L. Gelsing, *Innovation and the Development of Industrial Networks*, in NATIONAL SYSTEMS OF INNOVATION (B. Lundvall ed., London: Pinter, 1992); Stuart A. Rosenfeld, *Does Cooperation Enhance Competitiveness? Assessing the Impacts of Inter-firm Collaboration*, 25 RESEARCH POLICY 247 (1996).

25. Rosenfeld, *Does Cooperation Enhance Competitiveness?* at 248.

26. Edward J. Feser et al., *A Descriptive Analysis of Discrete U.S. Industrial Complexes*, JOURNAL OF REGIONAL SCIENCE (forthcoming), available at www.urban.uiuc.edu/faculty/feser/PUBS/Complexes.pdf.

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28. *See* STUART A. ROSENFELD, A GOVERNOR'S GUIDE TO CLUSTER-BASED ECONOMIC DEVELOPMENT (Washington, D.C.: National Governors Ass'n, 2002); ROBERT TURNER, A FRAMEWORK FOR CLUSTER-BASED ECONOMIC DEVELOPMENT POLICIES, Working Paper (Albany, N.Y.: Nelson Rockefeller Inst. of Gov't, 2001).

29. For more information on the Research Triangle cluster strategy and for access to a number of background reports, *see* www.researchtriangleregion.com.

30. Mary Jo Waits, *The Added Value of the Industry Cluster Approach to Economic Analysis, Strategy Development, and Service Delivery*, 14 ECONOMIC DEVELOPMENT QUARTERLY 35, 48 (2000).

31. *See* LUCY GORHAM ET AL., MAINTAINING COMPETITIVENESS IN THE NEW MILLENNIUM: A PLAN TO ESTABLISH INDUSTRY CLUSTER RESOURCE CENTERS IN NORTH CAROLINA (Chapel Hill, N.C.: Office of Economic Dev., Univ. of N.C., Dec. 2000).

32. GORHAM ET AL., MAINTAINING COMPETITIVENESS, at 1.

33. *See Forsyth Tech's Getting Wave of Biotech Students*, BUSINESS JOURNAL OF THE GREATER TRIAD AREA, Aug. 6, 2003, available at http://triad.bizjournals.com/triad/stories/2003/08/04/daily25.html.

34. Amy K. Glasmeier, *Economic Geography in Practice: Local Economic Development Policy*, in OXFORD HANDBOOK OF ECONOMIC GEOGRAPHY (Gordon Clark et al. eds., Oxford, Eng.: Oxford Univ. Press, 2000).

35. MALIZIA & FESER, UNDERSTANDING LOCAL ECONOMIC DEVELOPMENT.

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37. *See* ROSENFELD, INDUSTRIAL STRENGTH STRATEGIES, for a detailed discussion of the background of the Hosiery Technology Center. *See also* REGIONAL TECHNOLOGY STRATEGIES, INC., CULTIVATING SUCCESSFUL RURAL ECONOMIES: BENCHMARK PRACTICES AT COMMUNITY & TECHNICAL COLLEGES (Carrboro, N.C.: Regional Tech. Strategies, 2001), available at www.rtsinc.org/benchmark.

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39. WILLIAM R. BARNES & LARRY C. LEDEBUR, THE NEW REGIONAL ECONOMIES: THE U.S. COMMON MARKET AND THE GLOBAL ECONOMY (Thousand Oaks, Cal.: Sage Pubs., 1998).

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Loeb Retires

Following four decades of service to the Institute of Government and North Carolina citizens, Professor of Public Law and Government Ben F. Loeb Jr. retired March 31, 2004.

Specializing in the law of motor vehicles, fire protection, alcoholic beverage control, animal control, eminent domain, and wildlife protection, Loeb was a legendary teacher and respected author and adviser.

Loeb received his undergraduate and law degrees from Vanderbilt University and joined the Institute in 1964. He began his Institute career teaching motor vehicle law. In the 1980s he added wildlife protection law and training for magistrates in criminal law.

For more than twenty years, Loeb served as the legal staff for legislative study committees and commissions that rewrote the North Carolina alcoholic beverage control and motor vehicle laws. Loeb also drafted North Carolina's first seat-belt bill.

"Ben Loeb is one of the state's largely hidden treasures," said Willis Whichard, dean of Campbell University's law school and former chair of the legislative study commission that rewrote the state's motor vehicle law in the 1970s. "He has worked quietly but very effectively for more than three decades to improve the law and public policy of the state, especially in the areas of motor vehicle law and highway safety. The people of North Carolina will benefit from his efforts long after his retirement."

George Miller Jr., a Durham attorney who worked extensively with Loeb while in the state legislature, said, "Ben Loeb provided valuable service to the legislature. Many items of legislation and many study commission reports are replete with his handprints.

"He knew and observed the line between being a careful draftsman of legislation and making policy decisions. Also, he had a keen awareness of the legislative process and the personality of each session.

"He was particularly helpful to me in serving as counsel to my Committee on Highway Safety and in drafting the child-safety-seat legislation, which took more than six years to be enacted into law. He knew not only the law but the history behind it, and he knew well the political process through which ideas become law."

In addition to logging thousands of hours advising and teaching, Loeb published extensively, including widely used books on the effectiveness of child-passenger restraint systems, traffic law and highway safety, wildlife protection law, arson in North Carolina, and dental practice law.

"Ben was the quintessential faculty member, who always could be counted on to do whatever needed to be done, and always with good cheer," said Dean Michael R. Smith. "His outstanding contributions and his enormous value to the School of Government are deeply appreciated, and we wish him all the best in his retirement."

MPA Program Rises to Top Ten in News Magazine Ranking

In the 2005 edition of *U.S. News and World Report*'s "America's Best Graduate Schools," the School's Master of Public Administration Program rose two places to tie for tenth. In a subcategory the program's city management training tied for sixth place. Congratulations!

Ammons Elected to ASPA Council

Professor David Ammons has been elected to the National Council of the American Society for Public Administration (ASPA). He will serve a three-year term, representing public administration professionals in nine southern states.

Ammons specializes in productivity improvement, performance measurement, and benchmarking in local government. Before joining the School faculty, he taught in the public administration programs of the University of Georgia and the University of North Texas. He currently serves as the director of the School's Master of Public Administration Program.

ASPA is the largest and most prominent professional association in public administration. Its mission is to advance excellence in public service.

Stenberg Reelected Chair of National Academy

Professor Carl W. Stenberg has been reelected chair of the National Academy of Public Administration. Congress chartered the independent, nonpartisan organization to assist federal, state, and local governments in improving their effectiveness, efficiency, and accountability.

Stenberg joined the School faculty in 2003, with a background in intergovernmental administration, leadership, regionalism, bureaucratic politics, and strategic planning. Previously he served as dean of the Yale Gordon College of Liberal Arts at the University of Baltimore, director of the Weldon Cooper Center for Public Service at the University of Virginia, executive director of the Council of State Governments, and assistant director of the U.S. Advisory Commission on Intergovernmental Relations. He also is a past president of the American Society for Public Administration.

Major Gifts Support MPA Students, Building, and Judicial Education

Stafford Local Government Scholarship Established in MPA Program

Ms. Betsy Ross Howe Stafford of Greensboro has endowed a scholarship fund to support graduate students in the school's Master of Public Administration (MPA) Program. Stafford Scholars are MPA students, preferably women, who have distinguished themselves academically and aspire to careers in local government.

Michael R. Smith (left), dean of the School of Government, and Bill Farthing, managing partner of Parker, Poe, Adams & Bernstein

Stafford's interest in practical training for local government leadership began with local volunteer service before retirement from her position as the federal area director for the U.S. Department of Housing and Urban Development (HUD) in North Carolina and in Louisiana. Stafford's personal work at the local level and her contact with local officials through her HUD position impressed on her the importance of professional education in public administration for local city and county officials.

The Stafford Scholars selected for 2004–05 are second-year MPA students Heather Drennan and Erin Schwie Langston. Each will receive a scholarship of $3,000.

Classroom Named for Parker, Poe, Adams & Bernstein

The law firm of Parker, Poe, Adams & Bernstein L.L.P. has pledged $40,000 to the Knapp-Sanders Building capital campaign. The School will recognize this gift by naming a classroom in honor of the firm.

"In public finance and similar areas covered by the firm, we frequently hear praise of the Institute's faculty and training programs and see the results of this work in our dealings with officials at many levels," said managing partner William Farthing.

"Private financial support such as this gift is important to the School," said Dean Michael R. Smith. "We also highly appreciate the message it conveys—that businesses dealing regularly with public officials view the education provided by the School and Institute of Government as an effective service that enhances and improves the professionalism of local government."

Guests at the ribbon-cutting celebration of the classroom named for Parker, Poe, Adams & Bernstein

Photos by Kevin Taylor

Parker, Poe, Adams & Bernstein L.L.P. employs 160 lawyers in the Carolinas, in offices based in Charlotte, Raleigh, Charleston, Columbia, and Spartanburg. The firm has expertise in a complete range of legal services, including antitrust and business torts; banking and finance; bankruptcy, reorganization, and creditors' rights; commercial litigation; corporate and commercial law; employee benefits; employment; environmental, international, real estate, and commercial development; securities; taxes; torts; and insurance.

Tharrington Smith Supports Statewide Judicial Education

The law firm of Tharrington Smith has donated $12,500 to the School's Judicial Education Endowment Fund, in support of its professional education program to improve North Carolina's judicial processes.

Under the program, faculty members provide nonpartisan continuing education for judges, magistrates, clerks of court, district attorneys, public defenders, and other court officials. The highly regarded program received the American Bar Association's prestigious Judicial Education Award in 1998.

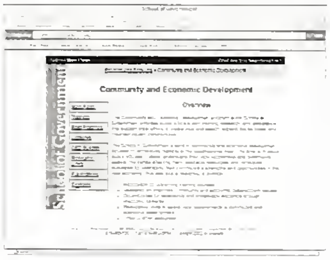
"The firm's support of this fund is based on our belief that the Institute's training programs for North Carolina court officials benefit every citizen of the state by improving the knowledge and professionalism of those who serve in our judicial system," said Michael Crowell, a partner in Tharrington Smith. "The courts deal with complex issues, and the faculty of the Institute serve an important function by providing court officials with education, advice, and research that help them do their jobs better."

Established in 1964, Tharrington Smith is based in Raleigh. It employs 28 lawyers, whose primary areas of practice include criminal defense, education law, family law, civil litigation, local government law, business organization, and appeals. The lawyers practice in state and federal courts, at both trial and appellate levels. Several are certified mediators.

—Heather Drennan

Off the Press

Community and Economic Development Website



The School of Government's work in community and economic development focuses on enhancing capacity at the local and regional levels. The goal is to help public officials understand their local economies and community assets, the trends affecting those economies, available resources, and innovative strategies for leveraging their community's strengths and opportunities in the new economy. The Community and Economic Development website, located at www.cednc.unc.edu, is designed to provide the following:

- Information on upcoming training courses
- Research on important community and economic development issues
- Opportunities for networking and knowledge exchange through electronic listservs
- Web-based tools to assist local governments in community and economic development
- Links to other resources

Visit the site today to join the School's Community Development listserv or its Economic Development listserv and learn about the new *Community and Economic Development Bulletin* series. The first issue, "2003 Legislative Action in Community and Economic Development," is posted online at the site.

Locally Initiated Inclusionary Zoning Programs: A Guide to Local Governments in North Carolina and Beyond

Edited by Anita R. Brown-Graham
2004 • $21.00*

A guide to help local governments balance the myriad legal and policy concerns raised by "inclusionary zoning," a strategy for local governments to create more affordable housing for low- and moderate-income residents. This publication also contains appendixes on inclusionary zoning ordinances and research methodology. It is a collaborative effort of the Schools of Government and Law at UNC at Chapel Hill.

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