



farmshoring in virginia

*Domestic Outsourcing Strategies for Linking Urban
and Rural Economies in the Commonwealth of Virginia*



Summary Report of the Economic Development Studio @ Virginia Tech

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THE BOTTOM LINE ON FARMSHORING: INCREASED COMPETITIVENESS

What it is:

Farmshoring means exploring business expansion opportunities in low-cost locations of Virginia while enhancing business retention in the Commonwealth's higher, cost regions.

What it is not:

Farmshoring is not about stealing jobs from urban areas. It is also not a "one size fits all" solution to the challenges facing Virginia communities or companies.

What it could do:

Farmshoring could increase firm efficiencies and make companies more competitive. It may also address the urban-rural disparities that are a window of vulnerability in Virginia's ranking by Forbes and others as the #1 state for doing business.

For these things to come to pass...

...Virginia's urban and rural economic developers need to:

- consider farmshoring as a tool at their disposal,
- build leadership capacity and political support to address the issue, and
- develop a deeper understanding of key industries and location assets.

We must also remember:

It's about China versus
Chilhowie... not about
Arlington versus Abingdon.

These conclusions are simple, but they are substantiated by an extensive research effort documented in this report. *Farmshoring in Virginia* presents the findings of a year long study conducted by the Economic Development Studio @ Virginia Tech.

Executive Summary

Farmshoring: The business case for domestic outsourcing

Offshoring – the relocation of jobs overseas – deeply affects our communities. For some time firms have relocated manufacturing activities and services to far-flung places like India or China. Jobs in established industries are lost, and affected regions, often rural in character, struggle to restructure their economies. Other regions, frequently more urban, see concentrations of jobs develop that far outstrip their available labor supply.

However, lately firms are not just looking overseas, but to low-cost communities in rural areas in the United States. Opportunities in domestic outsourcing or farmshoring are driven by needs like lower costs, data security, skilled and stable labor forces, and geographic constraints. Firms are building the business case for “going to the farm,” moving different types of work to diverse rural areas.

Rural communities will see benefits from job creation and new investment. At the same time, jurisdictions currently hosting businesses interested in outsourcing can find a silver lining in farmshoring. Efficiencies gained through farmshoring within the same state strengthen firm ties to both locations. Our study finds a win-win situation in farmshoring for communities in the Commonwealth of Virginia.

Matchmaking: Sending and receiving jurisdictions

To make farmshoring work, economic developers have to play matchmaker. They have to connect firms and jurisdictions that might send and receive farmshoring opportunities. Sending jurisdictions in Metropolitan Washington need to accept that they are already losing opportunities due to the high costs of living and doing business in their region. Labor market constraints add another factor pushing some economic activities to lower-cost locations.

In this report we identified a 12% drop in share of employment in the region’s occupations most “at-risk” for outsourcing. Even fast-growing and successful urban regions are subject to economic restructuring!

We focused on knowledge-based occupations and industries with farmshoring potential. These include activities like computer systems design, data processing and computer programming, management, scientific and consulting services, legal services, accounting and other business process services, and industries such as aerospace, information technology, electronics manufacturing, health care information, and biotechnology/pharmaceuticals. We present the business case for farmshoring in these industries and find that parts of their business activities are a good fit for the diverse communities of rural Virginia.

We strongly recommend that Virginia’s economic development practitioners also think about the market potential of industry sectors that grow from the internal strengths of their rural communities. For example, an experienced rural manufacturing workforce is an asset for a number of the industries we studied. We also recommend additional attention to opportunities in new and emerging industries, specifically alternative energies such as wind power and specialty agriculture, in particular organic food production.

We evaluated a dozen rural communities in Virginia and believe that each one has unique assets that make them attractive for domestic outsourcing. In the Shenandoah Valley Harrisonburg boasts a growing university and has already set an example for expansions from information technology businesses from Northern Virginia. The Southside communities of Brunswick, Halifax, Henry, Martinsville, and Mecklenburg offer strong location advantages and innovative solutions to workforce challenges. Southwest communities like Carroll, Galax, Grayson, and Smyth are reaching out to the world with unique Appalachian cultural assets and strong and growing broadband infrastructure.

Going to the “farm” is indeed an option

Virginia is already a showcase for exploring innovative economic development initiatives that link urban and rural areas. The state is on the right track and has recognized the opportunities that exist in keeping business activities in the United States.

We find that the state can benefit from these activities as long as policymakers realize the following:

- Farmshoring is not just about seeking out low-cost locations in rural areas. Rather, it is about increasing firm efficiencies and making companies in urban areas more competitive and attractive to firms and their workers.
- Farmshoring should not be understood as a redistributive economic development policy. Businesses seek out locations because of certain value propositions that make domestic or international locations attractive. Internal firm dynamics and unique community assets play an important role.
- Rural Virginia must offer firms a value proposition that goes beyond “lower costs.” Our analysis shows that rural communities, all of whom differ greatly in terms of development capacity, can offer unique assets beyond simply a cheap location, and that needs to be a focus of marketing activities.
- It is about China versus Chilhowie and not about Arlington versus Abingdon. Communities in the Commonwealth need to cooperate and work with each other to compete in the global economy.

Moving forward with farmshoring

While Virginia has already set an example in attracting and supporting farmshoring activities, more can and should be done. Virginia’s policymakers and its economic developers first need to keep in mind that farmshoring will only work if they:

- create links and interfaces between urban and rural communities
- gain intimate knowledge of the industry sectors and their products and processes
- engage in and support “place-making” to address quality of life issues in localities
- help build leadership capacity on this issue in communities and the economic development profession

In order to do this, the Commonwealth needs to continue to play the role of matchmaker and intermediary between communities. The state also needs to identify and support localities engaged in place-making activities and infrastructure building and provide them with the tools, resources and flexibility they need to do this important job. The state should further support targeted initiatives for training and recruiting workers that will help meet the needs of industries that will engage in farmshoring and back them up with good research into those industries.

Sending jurisdictions need to understand their industry sectors and the opportunities that exist to increase firm efficiencies. Keeping a firm headquarters or research and development office in Arlington will be more likely if back office or manufacturing functions are in Martinsville rather than Mumbai. For economic developers to open their doors to colleagues from other parts of the state requires a leap of faith, but can pay off in the long term.

Finally, receiving communities need to realize that farmshoring will not be the silver bullet for their revitalization efforts. Rather, farmshoring is one of many approaches to community and economic development that need to be considered. It requires a careful look at local assets and limitations and the political will to address problems and embrace changes needed to attract, develop and retain these industries.

Immediate actions

Three quick steps in the right direction

Studying the strategies and tactics identified above, we believe our clients could develop and implement several concise actions that would advance their capacity to address the opportunities and challenges presented by farmshoring.

- 1)** VEDP and other economic developers involved in this project should continue to meet and talk directly about the implications of this study.
- 2)** A broader statewide conversation on urban-rural economic linkages must begin in order to develop leadership capacity on the issues involved. This could involve existing organizations like the Virginia Economic Developers Association or initiatives like the Virginia Chamber of Commerce's *LEAD Virginia* program.
- 3)** While we are pleased with the support this project received, it is only a first take on the topic. Farmshoring requires further efforts to develop methodologies for the state and its regions. A much deeper understanding of certain industry sectors and the dynamics that may lead to opportunities is required. The capacity to take up this research may exist within VEDP alone or in partnership with others around the state.



Taking a closer look at outsourcing

"Going to the farm" instead of overseas

Outsourcing is a hotly debated topic in the popular press and among business leaders, legislators and policymakers. As most discussions take place at the national and international levels, it is less clear how the state and local levels can respond to the opportunities and challenges of outsourcing. One answer is emerging as firms begin to see potential in *domestic outsourcing*, or *farmshoring*.¹ This concept describes the nascent practice of firms to locate or contract out work to lower-cost domestic locations, such as rural areas, as an alternative to offshoring. Farmshoring can play an important role in connecting urban and rural areas in the Commonwealth of Virginia.

The era of outsourcing

Outsourcing is not a new concept. The overseas location of jobs began in the 1970s when firms responded to increased competition from Japan and Europe by relocating manufacturing activities abroad. This produced shifts in blue-collar jobs and large-scale economic restructuring. Industries such as automobile, high-tech and textiles sought out lower-cost locations, primarily in Southeast Asia. As a result, traditional manufacturing cities in the Rustbelt of the United States, such as Detroit, Cleveland and Pittsburgh, experienced tremendous job losses. Smaller manufacturing towns in the Southeast, such as Martinsville, once a nationally important textile and furniture center, were also hit hard.

But the changes in the economy did not stop with the relocation of manufacturing work. Beginning in the 1990s a second wave of outsourcing in service and information sectors began. Increasingly firms began to outsource services such as customer services and help desk functions, as well as higher-order activities such as research and development. India, China, Russia, Israel, and Ireland emerged during the second wave as important locations for outsourced services. The economic success these countries have experienced during the same time period is stunning: For example, India's information technology-enabled services sector employs over 200,000 workers. A full 70% of its \$2.3 billion in business activity comes from US customers.²

It is almost impossible to provide data on the number of US workers who have lost their jobs due to overseas outsourcing, since there is no regularly collected data source that accounts for the shifts. Estimates indicate that about 315,000 service sector jobs may have been outsourced overseas by the end of 2003. The same source projects that a total of 3.4 million service jobs might move overseas by 2015.³ Even though the numbers sound large, they represent only about 2% of total US employment. Researchers have also estimated about 4 million jobs, or 11% of total US employment in 2001, are at risk of outsourcing and could go abroad.

Some economists and business experts argue that outsourcing is good for the United States.⁴ When a firm outsources a non-core function, it frees capacity for new opportunities and business development. As a result, new jobs might be created, and efficiencies are gained. Software and information technology (IT) service sectors, for example, have experienced a shift towards high-value occupations such as systems analysts and engineers.⁵ Occupations in these sectors such as computer support, have likely been outsourced to lower-cost locations. Cost savings that result from outsourcing may be reinvested in the firm. Others have argued that firms can retain and enhance their competitiveness when they enter into partnerships with firms abroad because they gain abilities and insights from these external relationships.

¹ The terms *domestic outsourcing* and *farmshoring* will be used interchangeably throughout this report.

² See Bardhan and Kroll (2003).

³ Estimates come from Forrester Research and are quoted in Levine (2005).

⁴ Farrell and Rosenfeld (2005).

⁵ For detailed data on the occupational shifts in the software and IT sector, see Farrell and Rosenfeld (2005).

The many sides of outsourcing

Outsourcing may not only mean shifting work overseas. Firms take a variety of approaches in response to competitive pressures from the global economy. The internationalization of work through outsourcing is simply one of many strategies. Domestic outsourcing can provide advantages when business activities may suffer in a distant location. There are various ways to take advantage of outsourcing in the domestic context. For example, firms can outsource to home-based employees. This is referred to as “home-shoring.”

The discount airline JetBlue devised an innovative reservation system and employs home-based employees in Salt Lake City, Utah. In doing so, the company avoids costs associated with real estate and office maintenance thereby lowering costs and benefiting from the same cultural context, language and manageable time zones. Other terms such as off-sourcing and in-sourcing describe work that is provided at the job site or at another company’s site. These sites are typically in the same geographic region.

Typology of outsourcing

Geographic Scope	Type	Definition
Domestic	Home-Shoring	The provider company contracts or employs workers who are based in their own homes as part of a virtual call center. Example: JetBlue outsourced its reservation system to home-based employees in Salt Lake City, Utah.
	In-Sourcing	Work that is provided on a work site by a company contracted to provide services or business functions previously done by the contracting company or government agency. Example: Contractors working within federal government agencies.
	Off-Sourcing	Offsite relocation of work to another location of the same company. It can also mean offsite outsourcing of work to a contracted company that is located in the same geographical region. Example: Federal government agencies contracting with the private sector.
	Farmshoring	Work is outsourced to a rural area in the same country. Example: CGI-AMS and Northrop Grumman in Lebanon, Virginia.
International	Near-Shoring	Work is outsourced to another country geographically close to the location of the company. Example: AOL opening a customer contact center in Canada.
	Off-Shoring	Work is outsourced to another region of the world. Example: Fabless semiconductor firms in Silicon Valley outsource manufacturing to so-called <i>foundries</i> in Taiwan.

⁶ For more information about JetBlue’s home reservation system, see <http://itmanagement.earthweb.com/career/article.php/3589071>

Source: Adapted from Gurstein (2005)

Farmshoring represents a new type of domestic outsourcing and refers to the shift of business activities from an urban to a rural location. It benefits from the absence of cultural and language barriers, foreign laws and regulations, political uncertainties, or multiple time zones. Rural areas are typically lower-cost. They also have a stable and loyal workforce, less congestion and traffic, and a different quality of life. That quality of life may also appeal to skilled rural expatriates who can be found in the workforce in many metropolitan areas.

Domestic outsourcing and farmshoring are attractive alternatives to sending work overseas. When JetBlue used home-shoring for its online reservation system, the firm was able to gain cost savings while avoiding the hassles associated with going overseas. Language barriers, differences in legal and political systems, and quality concerns are some of the problems that can impact a firm's decision not to go abroad.⁷

Increasingly customers and contractors are concerned with issues associated with privacy and security. Privacy, for example, is an important concern when business services related to medical information are outsourced.⁸ Countries like India or China may have only lax or poorly enforced laws for the protection of personal data and privacy, important considerations when firms contract out activities such as medical transcription or radiology. Data security is another major concern, as government security clearances are required for most defense-related contracting.

Case study: Lebanon, Virginia

Lebanon, is a small town in far Southwest Virginia. The town is closer to Kentucky and Tennessee than to the state's urban hub in Northern Virginia. Lebanon's 3,300 residents have experienced economic hardship with the decline of coal mining and agriculture. Since early 2006, however, the town has benefited from farmshoring.

⁷ An MIT study found that firms compete in a variety of ways and that they increasingly realize the benefits domestic locations offer (Berger, 2005).

⁸ United States Government Accountability Office (2006).

Two high-technology companies have set up operations and are expected to create more than 700 good-paying jobs. CGI-AMS, plans to hire about 300 software engineers for its Lebanon-based software integration and development center. Northrop-Grumman won a \$2 billion state technology contract that will bring the community about 430 employees. Both firms expect to save 30 to 40 percent over costs in a metropolitan location. Average salaries will be around \$50,000, a fraction of what they are in urban areas. Lebanon provides favorable real estate costs. In addition, Russell County is providing financial support for the development of facilities. So far the firms have not had trouble finding employees. CGI-AMS received more than 600 resumes following its announcement and many Russell County expatriates are eager to return and obtain a job in their home community. Virginia's Department of Business Assistance is heading an interagency task force to support the firm's efforts in recruitment and retention.

Case study: Harrisonburg, Virginia

Harrisonburg, is located along Interstate 81 about two hours south of Washington DC. One of the Virginia's Business Solutions Initiative's pilot communities, Harrisonburg boasts a number of success stories, indicating its attractiveness to firms and research institutions.

In 2006, the Reston-based government contracting firm SI International received a business process outsourcing contract from the United States Patent and Trademark Office (USPTO). The \$138 million contract involves patent classifications and can run for 10 years. SI International will recruit and train 150 employees, many of whom are expected to be recent graduates of James Madison University (JMU). The proximity to the USPTO headquarters in Alexandria and Harrisonburg's location assets, including the presence of JMU, played a pivotal role in the location decision. Late last year SRI International announced the creation of a multi-million dollar drug research center, which is projected to create 100 jobs over 10 years. Most recently, Alexandria-based Criticon Corporation announced plans to create a \$115 million data storage and continuity of operations facility in Harrisonburg.

Discovering domestic outsourcing: Virginia is among the first

Domestic outsourcing is becoming a common business development strategy, and policymakers around the globe are adjusting to the new economic realities. The Canadian provinces of Manitoba and New Brunswick are important locations within North America for customer contact centers and call centers. Both provinces have devised unique public policy strategies to attract business activity from the United States. Manitoba is home to an estimated 90 customer contact centers, which employ more than 10,600 people.⁹ New Brunswick employs about 15,000 people in the customer contact service and business process outsourcing industries. Firms such as CGI, Nortel, IBM, and Dun & Bradstreet value outsourcing to Canada because of the benefits resulting from a similar cultural and geographic context. Both provinces aggressively target the outsourcing industry. The provinces offer tax incentives, workforce development programs and relocation services. New Brunswick is looking beyond customer contact centers and has identified e-learning and online universities as a major growth market. The province even passed legislation that allows private firms to grant online degrees.

While Canada is taking advantage of near-shoring, a recent report in Australia identified domestic outsourcing as a growth industry with potential for rural economic development.¹⁰ The report points to the potential of small to medium-sized firms located in rural areas to serve as suppliers to urban firms. Sectors with the greatest potential are software development, human resource management, and accounting and customer services. Here in the United States, several states focus on outsourcing.

Nebraska and North Dakota are traditional locations for call centers and back office functions. Also, Washington State focuses on the potential of telework and outsourcing for rural economic development. The effort is led by Washington State University's Center to Bridge the Digital Divide. The center provides technical assistance to firms interested in locating in rural Washington. Since its inception, the project has created 56 living-wage jobs and received the Governor's Best Practice Award in Workforce Development. Entrepreneurs have started firms in rural areas, and existing firms have relocated there. In most cases quality of life was the major reason for business relocation.¹¹

These efforts show that the Virginia Business Solutions (BSI) is in good company. BSI aims to position the Commonwealth as an alternative to overseas locations. The program focuses primarily on the information technology sector, targeting activities in software development, testing, remediation, continuity of business operations and disaster recovery, business process outsourcing, and data storage, digitization and retrieval. It is hoped that firms located in Northern Virginia will relocate such activities in rural jurisdictions such as Blacksburg, Danville, Harrisonburg, and Lynchburg while maintaining a presence in Northern Virginia.

⁹ For an analysis of the reasons why this industry is located in Manitoba, see: <http://www.uswa.ca/program/content/1976.php>.

The province selected the Customer Contact Center industry as a target sector: <http://www.gov.mb.ca/iedm/profiles/contact/index.html>.

¹⁰ Standen and Sinclair-Jones (2005).

¹¹ For more info about the Center, see: <http://cbdd.wsu.edu/atc/overview.html>.

Is farmshoring right for Virginia?

In August 2006, students and faculty in the Economic Development Studio @ Virginia Tech started to examine the issue of farmshoring and linking urban and rural economies in the Commonwealth of Virginia. This report, *Farmshoring in Virginia*, presents the studio's findings and recommendations.

The studio project followed on the heels of a new economic development initiative in the state. Virginia's *Business Solutions Initiative* (BSI)¹² is a program undertaken by the Virginia Economic Development Partnership (VEDP) to market Lynchburg, Harrisonburg, Blacksburg, and Danville as locations for domestic outsourcing to companies located in Northern Virginia. Others have reached across the urban-rural divide through joint marketing efforts, such as Arlington and Martinsville, or through direct business to business marketing, which is a the focus of the Radford-based Virginia Economic Bridge.

The studio participants asked the following question:

Are there domestic outsourcing opportunities in high-cost jurisdictions that low-cost jurisdictions in Virginia can capitalize on or capture?

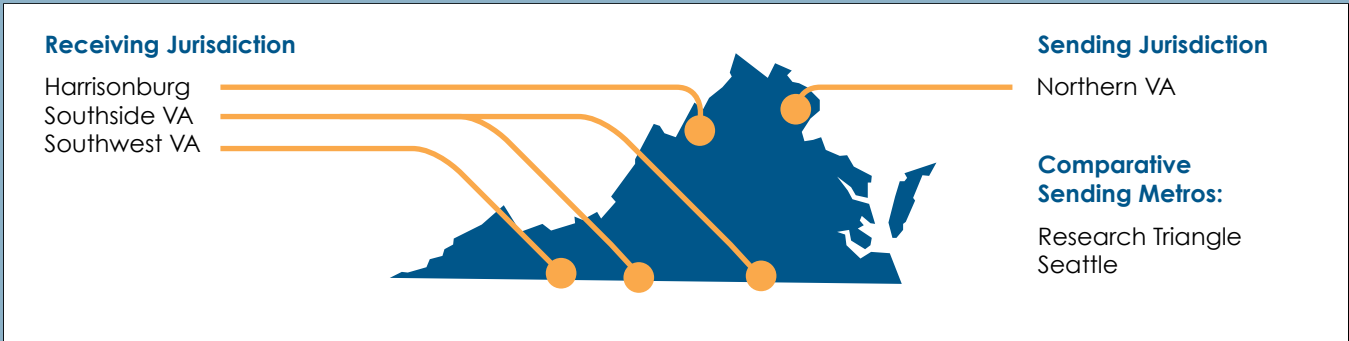
Drawing on existing research into outsourcing, student teams developed a set of underlying criteria for domestic outsourcing. Their further analysis of occupational characteristics and industry demand was conducted through research into three case study regions. These included the metropolitan statistical areas of Washington, DC, Seattle, Washington and North Carolina's Research Triangle Area.¹³ Seattle was selected because the region is home to industries such as aerospace, software and biotechnology that might benefit from outsourcing to Virginia. In contrast, we selected Research Triangle Park because of its proximity to Virginia jurisdictions in the Southwest and Southside, which might be suitable to industries considering outsourcing. Our client jurisdictions in the Shenandoah Valley, Southwest, and Southside Virginia were examined in much the same way as VEDP's BSI communities, with an eye towards the strengths, weaknesses, opportunities, and threats they offer industry interested in farmshoring.

Domestic Outsourcing Criteria

Sending Jurisdictions	Receiving Jurisdictions
<ul style="list-style-type: none"> • Industry growth and concentration • Occupations at-risk • Occupational requirements • Cost considerations • Location considerations • Security concerns • Firm-level considerations • Agglomeration • Unmet demand • Match with rural resources • Infrastructure requirements • Local supplier presence 	<ul style="list-style-type: none"> • Cost • Workforce • Infrastructure • Housing stock • Business climate • Business friendliness • Geographic location • Demographics • Unique advantages and amenities • Cultural compatibility • Safety and security

¹² For more information see <http://yesvirginia.org/businesssolutions>

¹³ This report focuses on data for the Washington DC metropolitan region. The analysis of outsourcing opportunities in Seattle and Research Triangle Park is presented in the accompanying technical report.



A note about sending and receiving jurisdictions: Sending jurisdictions are urban areas that have significant economic development potential. As a result they may host industries and occupations at risk of outsourcing and with the potential to shift to rural, low-cost locations. Receiving jurisdictions are low-cost areas in relatively close proximity to the sending jurisdictions.

Why would industry leave urban areas?

Metropolitan Washington, DC, is a bustling hub of economic activity. The region is a leading information and communication center and home to many national and international organizations. Encompassing the nation’s capital, the region also offers a competitive advantage to industries that work with federal government agencies.

Why would firms want to leave such a place and set up shop in distant locations overseas, or even closer at hand in rural Virginia? While there are a number of factors that attract industries and individuals to the Washington region (see table), there are also some that may repel them from locating there.

Labor costs are high, as is the cost of living, and commute times are some of the highest in the country. These factors act as disincentives for workers and businesses to locate in the region and may create opportunities for domestic outsourcing. A firm may find it attractive to locate non-core functions or back office activities in a lower-cost area within a relatively short drive of its urban offices.

Rationales for outsourcing from urban areas

Cost of living	Strong incentive
Wages	Strong incentive
Commute	Strong incentive
Education	Weak incentive
Urban lifestyle/ “creative class”	Weak incentive
Innovation	Weak incentive
Security	Strong incentive
Open space & recreation	Strong incentive

Keeping an eye on the risks and rewards of outsourcing

Outsourcing may present opportunities for receiving jurisdictions. But the process of relocating economic activities either overseas or to rural areas may also present challenges to sending jurisdictions. Sending locations may be at risk of losing sectors and occupations because the work performed can be accomplished somewhere else at lower cost. Thus, economic developers in sending jurisdictions in Metropolitan Washington need to be aware of industries and occupations that are at risk to relocation.

On the other hand, the sectors and jobs that could be outsourced may present economic development potential in the receiving jurisdictions, and the firm in the sending jurisdiction may gain efficiencies. For example, CGI's move to Lebanon, Virginia, may have freed up capacity at the firm's Northern Virginia location.

Characteristics of occupations at-risk:

- no face-to-face contacts with customers
- information is the major component of the "product"
- work via remote communications: telecommunications and Internet
- low set-up barriers
- low social networking requirements
- high wage differentials compared to the receiving country
- tasks reducible to a set of instructions with a measurable output

Source: Kroll (2005)

Occupations at-risk in Metropolitan Washington

Because of the potential danger of losing jobs and the potential benefit relocating non-core functions into rural areas may have, we identified industries and occupations at risk of outsourcing and with potential for farmshoring. Occupations that can be outsourced have certain characteristics. Work in these jobs can be done somewhere else because it does not involve social interaction, and the work can be performed at a distance using communication technology.

The Washington, DC metropolitan region is losing jobs that are at risk to outsourcing. Our analysis shows that from 2000 to 2003, the region's share of employment in at-risk occupations declined by 12%.

Though the region continues to lose its at-risk labor force, the US is losing the same kinds of jobs at a slightly faster rate. Office support occupations experienced the largest percent change, demonstrating the highest vulnerability to outsourcing compared to other at-risk occupations. It was followed by medical, legal and sales occupations and business and financial operations occupations. However, computer and mathematical occupations and graphics, design and writing occupations experienced job gains in at-risk occupations, indicating further agglomeration in industry sectors that draw on these occupations.

Employment in at-risk service occupations in the Washington region

Occupation	Employment 2000	Employment 2005	Percent Change
Office support	162,222	105,160	-35.2%
Business and financial operations	95,810	93,150	-2.8%
Computer and mathematical	149,470	159,662	6.8%
Medical, legal and sales	21,680	16,660	-23.2%
Graphics, design and writing	9,380	10,152	8.2%
At-risk total/ share of US jobs	438,562 0.33%	384,784 0.29%	-12.3% -13.37%

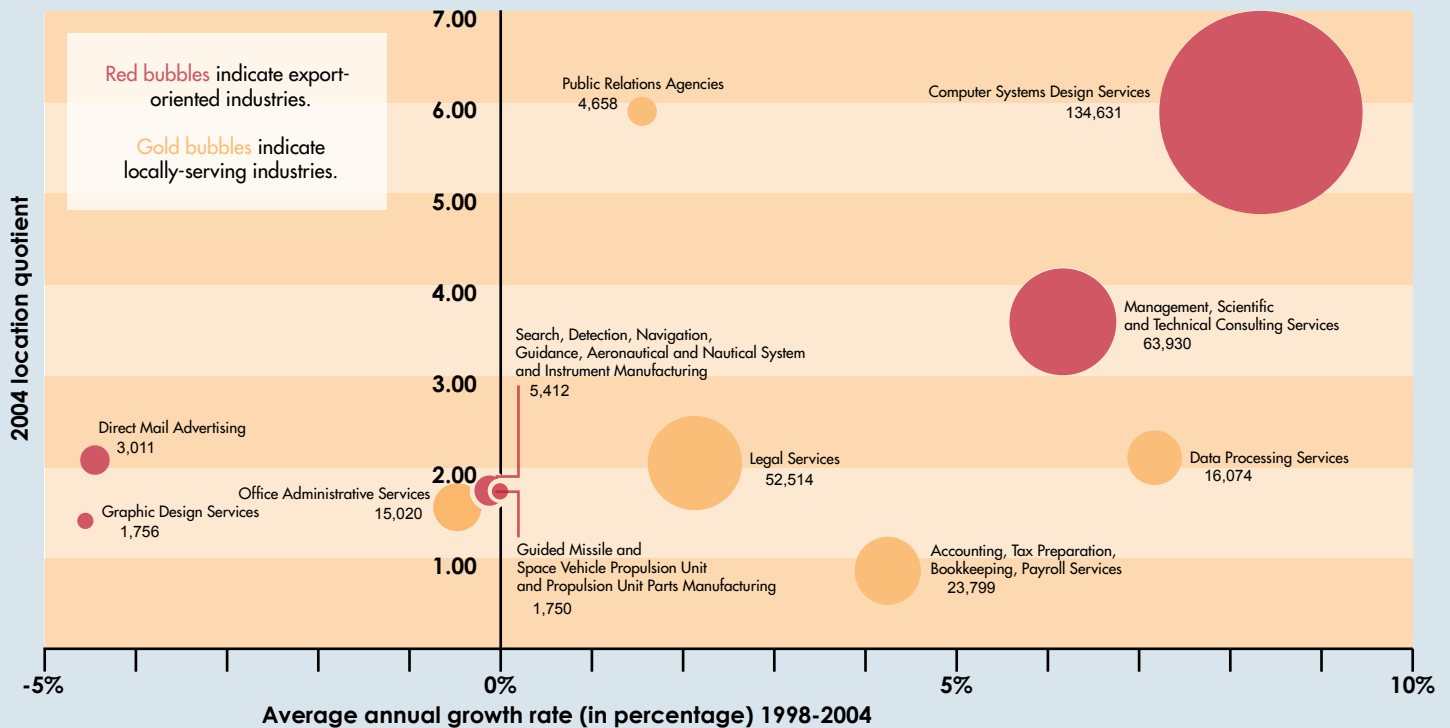
Source: Bureau of Labor Statistics, Occupational Employment Statistics (2000, 2005)

Industries with farmshoring potential

We identified a range of industries that have farmshoring potential. They can be classified into industries, all of which are export-oriented or locally serving. In analyzing and selecting the industries we considered industry growth and industry concentration, as well as the industry's share of

high-skilled and low-skilled professions, their scale of employment (large and small firms) and the nature of the industry (either new economy or traditional industries). The bubble chart illustrates those industries with high concentration and high average annual growth rates.¹⁴

Industries with outsourcing potential in the Washington region



Note: Not Shown are the following industries: prefabricated wood building manufacturing, software reproducing, magnetic and optical recording media manufacturing, community care facilities for the elderly and coffee and tea manufacturing. Please see technical report for data on all sectors with outsourcing potential.

Source: County Business Patterns, 1998-2004.

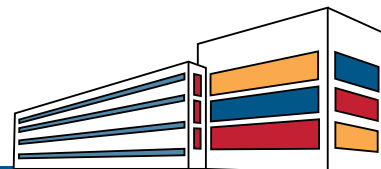
¹⁴ For a full list of industries, please see The Technical Report on Farmshoring in Virginia.

We analyzed the share of occupations at risk within industries that are highly concentrated and growing in the Washington, DC, region. Industries with the highest percentage of occupations at risk were primarily in the information technology sector. Almost one third of the occupations that make up the computer systems design and related services sector (NAICS 5415) are at risk of outsourcing. Other sectors with high shares are data processing services, legal services and management, scientific and consulting services.

Economic development practitioners and policymakers should pay particular attention to the following:

- Computer systems design and related services (NAICS 5415)
- Data processing, hosting, and related services (NAICS 5182)
- Management, scientific, and technical consulting services (NAICS 5416)
- Legal services (NAICS 5411)
- Accounting, tax preparation, bookkeeping, and payroll services (NAICS 5412)
- Business support services (NAICS 5614)
- Navigational, measuring, electrometrical, and control instruments manufacturing (NAICS 3345)
- Pharmaceutical and medicine manufacturing (NAICS 3254)

These industries have high proportions of occupations at-risk, but also have farmshoring potential. If certain business activities in these sectors are farmshored, expanding to rural areas, firm functions in urban areas may gain efficiencies and improve their competitive position. As a further result, Virginia as a whole may gain jobs in both urban and rural areas, rather than lose them to India or China.



Industry Demand

Beyond identifying industries and occupations with farmshoring potential, it is important to know the specific industry demand for domestic outsourcing. We conducted a market analysis of industries that have high concentrations in the targeted sending jurisdictions. Our results show that economic developers in Virginia should not only focus on industries that have obvious outsourcing potential, such as information technology. Rather, we suggest that policymakers also focus on sectors that have location requirements that fit with rural areas, such as specialty agriculture and alternative energy sources, or utilize assets like an existing manufacturing workforce. Diversifying the list of target sectors will give policymakers a broader and thus more resilient portfolio for linking urban and rural communities.

Looking outside: Exogenous development

Developing rural economies through an infusion of outside business activities is commonly referred to as exogenous economic development. Domestic outsourcing or farmshoring can be considered an exogenous economic development strategy. When CGI-AMS moved to Lebanon, the small town in Southwest Virginia gained a new industry sector from outside. Further endogenous development will be spurred as a result of the jobs created and the demand for services that came with CGI-AMS.

We scrutinized the following industries with potential for farmshoring:

- Aerospace**
- Information Technology**
- Electronics Manufacturing**
- Health Care Information**
- Biopharmaceuticals**

Segments of the *aerospace industry* might be a good fit for Virginia. Firms moving to Virginia would benefit from the proximity to federal government agencies such as the Department of Defense (DoD). Defense-related aerospace business activities should be targeted because on the civilian side the industry uses offsets rather than outsourcing, making competition with countries like China almost impossible.¹⁵

The defense-related sector, however, presents great potential for domestic outsourcing as this segment has reached record levels of spending in the wake of 9/11. As a matter of law, aerospace jobs that result from defense contracts cannot be fulfilled outside the United States, and this is one reason why Virginia has a chance. Virginia also has a rich history involving the industry, particularly in respect to NASA. Currently there are more than 290 aerospace companies in Virginia with over 30,000 employees. They include firms such as Boeing, Rolls-Royce, Airbus, and General Dynamics. The state also has strong research and development capacities with the National Institute of Aerospace, the Virginia Space Grant Consortium and research centers at several state universities.

¹⁵ Offsets are compensatory trade arrangements where the exporter grants concessions to the importer (e.g., in exchange for producing aircraft parts, China placed orders with Boeing).

Information technology and professional services are major industry clusters in Metropolitan Washington. Most of the firms in these clusters depend on contracts with the federal government. Data security and privacy concerns play an important role in ensuring the trustworthiness of the firms. Rural Virginia may offer firms expansion opportunities as a secure, a low-cost, domestic alternative to countries like India and China. In addition, the Department of Defense is engaged in a trend towards in-sourcing and outsourcing of functions such as military housing, food services, aircraft maintenance, IT enterprise software/hardware development, and professional consulting and management. Most of these outsourcing opportunities require security clearances that only US-based workers can fulfill. Partnering with federal agencies will be key in exploiting these opportunities. Existing small and medium sized firms in rural Virginia could contract with federal government agencies. Parallel to this development, federal contractors located in Northern Virginia could locate back office functions in rural Virginia.

The Virginia Economic Development Partnership and Virginia Community College System identified **electronic equipment and instrument manufacturing** as an emerging industry for Northern Virginia. With higher labor rates and real estate prices, operating manufacturing plants in metropolitan Washington could place a substantial cost burden on the firms. This suggests that rural Virginia areas with a manufacturing legacy should target outsourcing opportunities in these high-tech manufacturing sectors. There are already some success stories in this area. The high-tech manufacturing firm EIT, located in Sterling, Virginia, has opened a manufacturing plant in Danville.

The **biotechnology and pharmaceutical industries** offer potential opportunities for domestic outsourcing. These are especially promising industries for Southwest and Southside Virginia because of the area's proximity to Research Triangle Park, one of the top biotechnology centers in the United States.¹⁶ These industries are characterized by a differentiated value chain that benefits from outsourcing. So-called contract research organizations (CROs) perform late-stage research, clinical trial management and administrative tasks. Research Triangle Park is a hub for such companies. Clinical management organizations provide pharmaceutical manufacturing services. CROs are rapidly taking work overseas, and India, Russia and Eastern Europe are poised to take on outsourcing in this area. The industry also outsources administrative functions such as human resource management. So-called professional employer organizations offer packaged services. Human resource outsourcing may benefit from a domestic location because these services are strictly licensed and regulated. Most business is conducted over the phone or the Internet.

Health care information and informatics is a growing field and one that has potential for domestic outsourcing. The industry relies on security and privacy because sensitive personal information is given out when services are contracted from a doctor's office or a hospital to private firms. Foreign countries like India often do not have data privacy laws in place, and there have been cases where security was breached. Most work in this area is contracted to domestic firms, however it is unclear how much is subcontracted out to firms overseas.¹⁷ Health care is a growing field, and support functions such as radiology, registration and referral services, human resource management, and medical transcriptions can be outsourced. In the informatics industry services such as web hosting, application hosting, application services, and data processing and management are outsourced and should be considered as potential candidates for farmshoring.

¹⁶ Cortright and Mayer (2002).

¹⁷ For more information on contracting and privacy concerns, see a report by GAO (United States Government Accountability Office, 2006).

Case Study: Holston Medical Group

Late last year the Holston Medical Group (HMG), a multi-specialty physician practice, announced plans to invest \$3 million to open its first medical records data center in Scott County in Southwest Virginia. HMG also intends to augment the medical records facility with a multi-physician facility offering a full range of diagnostic services for Southwest Virginia. Streamlining administrative practices such as this could save several million dollars on costs that are typically passed along to taxpayers and patients.

The company, which will create 40 new high-paying and high-tech jobs, will access and store the digital medical records of patients for multiple practices and hospitals in Northeast Tennessee and Southwest Virginia. Officials cited investments in high-speed fiber infrastructure in the region as key to making this opportunity possible.

Looking inside: Endogenous development

Attraction of new industries is not the be-all and end-all strategy for rural economic development. Rural economies can also benefit from economic development approaches that focus on an area's internal capacities. This is commonly referred to as *endogenous* development. For example, when IKEA selected Southside for its only US manufacturing facility, building on the capacities of an existing manufacturing workforce was important. We examined two industries with great endogenous development potential for rural areas in Virginia. The industries are alternative energy sources (specifically wind power) and specialty and organic agriculture. Both industries have promising futures because the demand for their products is likely to increase.

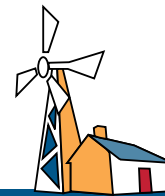
Wind power is an emerging industry with great profit potential. It is integral to the nation's energy future and has great prospects for Virginia's rural development. There are two ways in which Virginia can benefit from this industry: Rural jurisdictions can produce wind power, and they can manufacture the wind turbines. Virginia has existing resources such as wind and electricity transmission lines that can facilitate the distribution of generated power.

Case Study: Polyface Farm

In addition, the Virginia Wind Energy Collaborative, created in 2001 as a research center at James Madison University, can provide useful information inputs into the development of the industry. Policies are already in place to assist land-owners around the state to develop wind resources on their property.¹⁸ Going beyond wind power production, Virginia is in a strong position to manufacture the necessary equipment. The Commonwealth is one of the top 20 states with existing manufacturing plants that produce or are capable of producing at least one of the 20 wind turbine components.

Specialty agriculture, organic food production in particular, is another area to consider. Consumer demand for specialty food products has risen tremendously over the years. The organic food industry has outpaced much of the food industry and experienced growth between 17% and 20% (as compared to about 3% growth for conventional food sales). Supermarkets like Whole Foods are partnering with small farms to provide “local” products requiring seven hours or less transportation. In addition, more and more restaurants in the DC region rely on quality produce that is locally produced. Virginia already already participates in this market.

Polyface Farm is a small enterprise located in Swoope, Virginia, near the city of Staunton. The owner, Joe Salatin, is a grass farmer who raises chicken, cattle, pork, and rabbits. According to their website, they “began with on-farm sales, and now also have home buyers’ clubs in Maryland, restaurant accounts in Virginia, and sales all over the region via EcoFriendly Foods.”¹⁹ Polyface was also featured in Michael Pollan’s bestselling book *The Omnivore’s Dilemma*.



¹⁸ Virginia State-Based Anemometer Loan Program.

¹⁹ For more information about Polyface Farm see <http://www.polyfacefarms.com>.

Receiving jurisdictions

A hard look at rural Virginia's readiness for domestic outsourcing

What are firms looking for in jurisdictions when they consider farmshoring? Analyzing the criteria presented earlier in the report, our study shows that opportunities for farmshoring are not uniform across industries and regions. To illustrate the differences we studied strengths, weaknesses, opportunities, and threats (SWOT) relevant to farmshoring opportunities in more than a dozen rural communities in Virginia. We drew our findings from a review of publicly available data on occupational, industrial, and demographic assets and trends, as well as discussions with key stakeholders in the communities.

Shenandoah Valley *Opportunities outside the "Blast Zone"*

As a growing market, just beyond metropolitan Washington's "blast zone,"²⁰ the Harrisonburg region's experiences are not dissimilar to other exurban growth centers around the country.²¹ Relatively accessible to the Washington region and with substantially cheaper costs of living and doing business, Harrisonburg has been a magnet for people and firms. The region's attractiveness represents an important strength in analyzing its readiness for farmshoring opportunities.

The flip side of rapid growth has been chronically tight labor markets. This expansion is also leading to demands on infrastructure and threats to the area's rural heritage from an increasingly urbanized future. These issues may all intersect as new and old industries compete for similar segments of available labor. For example, locals describe the 2003 opening of a one million square foot Wal-Mart distribution center in Rockingham County in as a factor in worker shortages in the region's traditional poultry industry.

Labor market dynamics may shape the types of industries appropriate for farmshoring. For example, some information technology (IT) firms have given serious attention to the potential for retaining some of the 15,000 students at JMU. With a growing base of IT firms, investments in advanced IT infrastructure and research assets in IT at JMU, the region has an array of existing assets that should be attractive for exogenous strategies aimed at attracting IT firms.

The region has next-generation Internet capacities required for certain federal contracts in the near future. This has been an asset in attracting firms involved in contract research and information management for the federal government. The cutting-edge infrastructure is an asset in attracting other firms that rely on federal contracts. Additionally, as Rockingham Memorial Hospital continues its expansion into a diversified portfolio of health-related fields, we identified healthcare information technology as another promising industry segment.

A look at other internal assets suggests opportunities for developing endogenous industries in alternative energy sources and specialty agriculture. Wind generation has long been studied in the area, and while it has also been a source of controversy in nearby Highland County, it does connect with assets available at JMU, which includes the state's only research center devoted to wind energy. Specialty agriculture is a sector under consideration in many transitioning rural communities around the country. However, the proximity of Harrisonburg to the sophisticated Washington market may make this a particularly viable opportunity. Given the specific nature of agriculture in the region, relatively large-scale poultry production, farmers may require significant technical and marketing assistance to transition into this specialty production.

²⁰ MacGillis (2006).

²¹ Our study focused on the City of Harrisonburg and Rockingham County.

Shenandoah Valley

	Strengths	Weaknesses	Opportunities	Threats
People	<p>Population/job growth</p> <p>Marketable quality of life, college town, natural and cultural amenities</p>	<p>Low unemployment rate, limited available workforce</p> <p>Some quality of life elements missing for certain age cohorts</p>	<p>JMU graduates: a potential high skilled human capital pool</p> <p>Anecdotal accounts of a growing presence of retirees</p>	<p>Wage levels may be insufficient to retain recent graduates, especially under federal contracts</p>
Places	<p>Regional cooperation</p>	<p>Residential infrastructure constraints</p>	<p>Window to plan now for “place-making” in the near future</p>	<p>Challenge of reconciling urban growth and rural heritage</p>
Industries	<p>Industry, office, and IT infrastructure</p> <p>IT presence, 40+ firms</p> <p>JMU IT research assets</p> <p>Agricultural heritage</p>	<p>Diversity appears lacking in existing industry base</p> <p>Tight labor market, untapped elements most suitable for IT</p> <p>Wind power controversy nearby</p> <p>Agricultural base in a vulnerable commodity crop</p>	<p>Hospital expansion leverage for related industries, such as healthcare IT</p> <p>“Next generation” IPv6 Internet technology, required for federal contracts in 2008, in place</p> <p>Wind power research at JMU</p> <p>Proximity to Washington market with demand for high-end agricultural products</p>	<p>During transition IPv6 not interoperable with earlier systems</p> <p>Development pressures on farmland</p>

Southside

Workforce challenges and location advantages

Southside presents a very different picture of rural Virginia and contrasts sharply with the Shenandoah Valley.²² Southside communities are both losing residents and seeing their remaining population age. Further, they have experienced substantial job losses in key industries such as textile and furniture manufacturing since implementation of the North American Free Trade Act (NAFTA) in 1994. While these jurisdictions have generally seen persistent levels of high unemployment, observers in some localities describe a tightening of the availability of qualified workers—seeing not just a shortage of workers with appropriate skills, but in some fields a shortage of workers capable of passing a drug test. Some observers in the region point to the pending arrival of IKEA’s only US furniture plant to Danville as likely to create challenges for the whole region’s labor market, as it will likely attract the most qualified workers for advanced manufacturing positions.

There are still untapped pools of highly qualified labor in the region, although it may be challenging to develop opportunities to tap into them. Nearby Virginia and North Carolina universities graduate legions of students. While many of them may have regional connections making Southside attractive to them, wage differentials between Southside and more urban areas represent a substantial barrier to their retention. Also, a growing number of retirees, often from the military, are settling around Lake Gaston in Mecklenburg County. However, documentation of their interest in work or business opportunities remains anecdotal.

While the region does offer a unique, marketable and low-cost, rural quality of life, anchored by assets such as Lake Gaston and the Martinsville Speedway, its appeal may not be uniform to all segments of the labor market. One Ph.D. research scientist recruited to Southside by a firm described himself as “living like a king” compared to Princeton, New Jersey, or the San Francisco Bay area.

However, low costs in the housing market may signal issues with the overall quality of available housing in some communities. For good or ill, new workers recruited into the region will bring with them expectations about housing and quality of life that are shaped by their previous experiences.

For industries, low cost of living for workers is echoed in low wage bills to the firms, low land costs and low tax rates. This is certainly a consideration for firms in North Carolina’s nearby Research Triangle, or elsewhere, that may be looking at Southside as an option for farmshoring. The region has good transportation infrastructure, including Interstates, rail and access to Virginia’s growing port. It offers a number of well serviced greenfield development sites and shell buildings, generally with multiple options for high-speed Internet service and with various financial incentives attached. These options may be particularly appealing to manufacturing segments of research-driven industries such as biotech and pharmaceuticals with substantial presence nearby in North Carolina.²³

Southside is also home to innovative assets in postsecondary education and workforce training. The New College Institute at Martinsville is a public, four-year institution that specializes in education relevant to growing occupations in the region. Halifax has organized its students around clusters of industry-focused skills in career academies. The county is also home to Virginia International Raceway, which boasts the high performance engineering research program of the Institute for Advanced Learning and Research. Brunswick, Halifax, and Mecklenburg Counties have one of the state’s most extensive dual-enrollment programs at Southside Virginia Community College Community College (SVCC). A growing nursing program at SVCC’s campuses is bolstered by very advanced technology, including simulation software. The growth of the medical services field may offer opportunities in healthcare IT.

²² Our study focused on the Southside jurisdictions of Brunswick, Halifax, Henry, Martinsville, and Mecklenburg.

²³ As this study went to press recent layoffs announced by Pfizer may have substantial impact on opportunities in bio-pharma manufacturing.

Southside

	Strengths	Weaknesses	Opportunities	Threats
People	<p>Available workforce</p> <p>Marketable quality of life, rural lifestyle, natural and cultural amenities</p>	<p>Limited educational attainment, skill levels and other qualifications</p> <p>Declining and aging population/jobs base</p>	<p>Potentially large pool of high skilled human capital among graduates from 4-year institutions within 50 miles</p> <p>Influx of youthful retirees with skills</p>	<p>Challenge of stemming emigration/stimulating attraction</p>
Places	<p>Low cost of living/doing business</p>	<p>Issues regarding quality of housing stock</p>	<p>Presence of specific assets and amenities: New College, Lake Gaston, Martinsville Speedway</p>	<p>Mixed experiences with fostering regional cooperation</p>
Industries	<p>Transportation and other infrastructure</p> <p>Available shell buildings, existing buildings and greenfield development sites</p> <p>Array of financial incentives for businesses</p>	<p>Limitations on IT infrastructure outside of nodes</p> <p>Suitability of existing building, primarily warehousing in some communities</p>	<p>Proximity to transportation infrastructure, and to North Carolina</p> <p>Growing healthcare sector, auto racing industry</p> <p>Innovative facilities/programs for secondary and post-secondary workforce training</p>	<p>Entrenched commitment to generally declining industries</p>

Southwest

Reaching the world through Appalachian culture and high-speed fiber

Yet another picture of rural Virginia emerges in Southwest Virginia.²⁴ Like Southside, the region has been losing population and seeing its remaining population age. The region has also experienced major job losses in traditional manufacturing industries like furniture, as well as extractive industries like coal and timber. These losses even predate NAFTA. The region is isolated not only economically, but is also distanced from the Commonwealth's political and social hubs. Some of the communities are closer to five other state capitols than Virginia's seat of government in Richmond.

Notwithstanding these distances, the state has turned its attention to the region in recent years. Support has included efforts to highlight the region's crafts and music through the creation of cooperative marketing ventures such as the Crooked Road Heritage Music Trail, thereby extending the already impressive reach of numerous small venues extending an already impressive reach (e.g., the annual Galax Fiddler's Convention draws up to 40,000 visitors annually). While these efforts support local entrepreneurship, their significance lies in the complementary development of the region's quality of life. This can be part of selling the region to firms.

Place-making and quality of life are important considerations in making farmshoring a success. In the case of Russell County's attraction of Northrop Grumman and CGI-AMS, local and regional officials have realized that they need to bring new quality-of-life elements to the region. Features such as coffee shops, health clubs and expanded housing market options have been identified as vital to ensuring the firms' long-term success in recruiting and retaining skilled workers.

Finding qualified workers for certain industries has been a longstanding problem. Smyth County, which has enjoyed success in sustaining a manufacturing base, stands as an example of identifying specific challenges in finding qualified workers and taking action.

²⁴ Our study focused on Carroll, Smyth, Galax, and Grayson Counties.

The county partners with neighboring Washington County in the National Association of Manufacturers program *Dream It, Do It*, which promotes career exploration in advanced manufacturing fields. Smyth County and its neighbors also participate in a regional program that targets "expatriate" college graduates with ties to the region through a program called *Return to Roots*. Scouring college and high school alumni lists, informal "grandma networks," as well as more traditional marketing, they connect skilled individuals with employment opportunities in the region.

In addition to workforce development, the region recognizes the need to invest in high-speed telecommunication infrastructure. The presence of fiber capacity extending from existing regional "trunk lines" to a Russell County industrial park was critical to location decisions by Northrop Grumman and CGI-AMS. The role of the state in opening such "off-ramps" may be critical as limitations in high-speed capacity to key nodal points is an important deficiency we identified. The right infrastructure is critical to expand the nascent health care IT industry in the region, which was recently bolstered by Holston Medical Group's announced \$3 million dollar investment in a data records management center that will create 40 jobs in Scott County.

Aerospace manufacturing presents a particularly promising farmshoring opportunity. A General Dynamics aircraft components facility is located in Smyth County. The County's initiatives to support manufacturing are also an asset. Specialty agriculture is already pursued by the region's stakeholders. Appalachian Sustainable Development is an Abingdon-based nonprofit working with farmers around the region. It provides technical assistance to farmers converting from conventional agriculture, such as tobacco farming, to organic crops. They also manage a very successful cooperative marketing program that offers their Appalachian Harvest brand for sale in the Food City stores across Southwest Virginia and Northeast Tennessee and the Ukrop's supermarkets throughout the Fredericksburg, Richmond and Williamsburg areas.

Southwest

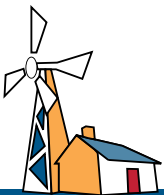
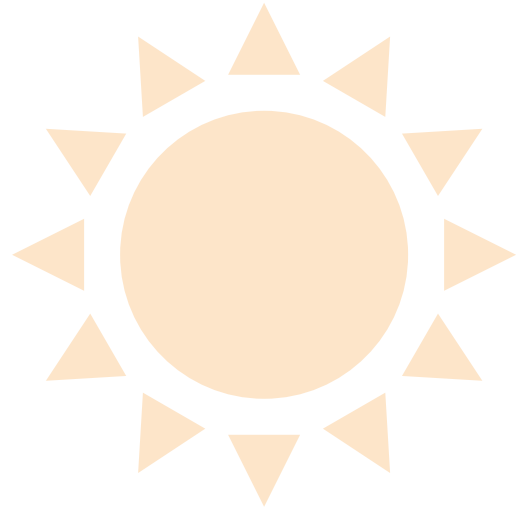
	Strengths	Weaknesses	Opportunities	Threats
People	<p>Available workforce</p> <p>Growing levels of educational attainment</p> <p>Marketable quality of life, rural lifestyle, natural and cultural amenities</p>	<p>Limited existing workforce skill sets, other qualifications</p> <p>Population/job loss</p>	<p>Innovative entrepreneurial and educational initiatives, such as the Crossroads Institute at Galax</p> <p>Outreach efforts to expatriates</p>	<p>Lacking critical mass of high skilled workers</p> <p>Time-lag to address demand for specific new skill sets</p>
Places	<p>Low cost of living</p>	<p>Lack of "destination" retail</p>	<p>Progressive local leadership supporting IT infrastructure and human capital investments</p>	<p>"Chicken and the egg" issue with new infrastructure investments</p>
Industries	<p>Excess capacities in basic infrastructure</p> <p>Strong nodes of broadband deployment</p> <p>Business-friendly planning</p>	<p>Deficiencies in IT infrastructure and available office space</p>	<p>Development sites/parks coming on line</p> <p>Potential for expansion of manufacturing, existing aerospace components in Smyth</p>	<p>Place-making challenges to address retention of new industries/workers</p>

Opportunities do exist

Jurisdictions in the regions we considered are all in very different states of development. They possess very different strengths and weaknesses and face very different threats and opportunities relevant to domestic outsourcing.

People, specifically graduates from James Madison University, are a key source of strength in the Shenandoah Valley and present a very real opportunity for solving the region's chronic labor shortages.

Southside has long traded on its location, and the places we studied there can do so again. This will however require careful attention to emerging labor problems and responses in the area of innovative workforce and educational programs. New industries are appearing in Southwest Virginia, thanks in part to the aggressive construction of new IT infrastructure supported by the state and federal governments. The retention of those firms and attraction of others will require not only expansion of those networks, but attention to place-making as new firms and workers move into the region.



Recommendations

Going to the “farm” is indeed an option

Virginia is a leader in this nation in looking at innovative economic development solutions connecting urban and rural economies. The VEDP’s Business Solutions Initiative was the only statewide effort we identified that was driven by an economic, rather than rhetorical, case about urban and rural connections. VEDP’s pilot program is further supplemented by other regional and local efforts such as Southwest Virginia’s Economic Bridge and Return to Roots programs and Arlington County’s engagement with several jurisdictions, including the City of Martinsville and Carroll County.

We find that the state will benefit from these activities as long as policymakers realize the following:

- Farmshoring is not just about seeking out low-cost locations in rural areas. Rather, it is about increasing firm efficiencies and making companies in urban areas more competitive and attractive to firms and their workers.
- Farmshoring should not be understood as a redistributive economic development policy. Businesses seek out locations because of certain value propositions that make domestic or international locations attractive. Internal firm dynamics and unique community assets play an important role.
- Rural Virginia must offer firms a value proposition that goes beyond “lower costs.” Our analysis shows that rural communities, which vary greatly in terms of development capacity, can offer more than just a cheap location, and those assets needed to be a focus of marketing activities.
- It is about China versus Chilhowie, and not about Arlington versus Abingdon. Communities in the Commonwealth need to cooperate and work with each other to compete in the global economy.

Moving forward with farmshoring

While Virginia has already set an example in attracting and supporting farmshoring activities, more can and should be done. Virginia’s policymakers and its economic developers first need to keep in mind that farmshoring will only work if they:

- create links and interfaces between urban and rural communities,
- gain intimate knowledge of the industry sectors and their products and processes,
- engage in and support place-making in the localities, and
- help build leadership capacity on this issue in communities and the economic development profession.

In order to do this, the Commonwealth needs to continue to play the role of matchmaker and intermediary between communities. The state also needs to identify and support localities engaged in place-making activities and infrastructure building and provide them with the tools, resources and flexibility they need to do this important job. The state should further support targeted initiatives for training and recruiting workers that will help meet the needs of industries engaged in farmshoring and back them up with good research into those industries.

Building an action agenda for the state

Strategy	Tactics
<p>Be the matchmaker: Understand community assets and limitations, function as an intermediary, and provide support to all participants</p>	<ul style="list-style-type: none"> - Broker linkages between people, communities, and industries - Continue and expand funding for rural broadband initiatives - Grant localities flexibility to act appropriately when the private sector fails to meet infrastructure needs - Support targeted training and targeted recruiting of workers - Assist sending and receiving communities in researching their readiness and suitability for domestic outsourcing

Sending jurisdictions need to understand their industry sectors and the opportunities that exist to increase firm efficiencies. Keeping a firm headquarters or research and development office in Arlington will be more likely if back office

or manufacturing functions are in Martinsville rather than Mumbai. For economic developers to open their doors to colleagues from other parts of the state requires a leap of faith, but can pay off in the long term.

Building an action agenda for sending communities

Strategy	Tactics
<p>Focus on efficiencies: Domestic outsourcing is beneficial to your community by helping your industries' bottom lines through increased efficiencies</p>	<ul style="list-style-type: none"> - Anticipate outsourcing in your industries by understanding their internal dynamics and needs - Help industries realize potential synergies with Virginia communities - Connect with representatives of low-cost regions of Virginia - know what they have to offer

Finally, receiving communities need to realize that farmshoring will not be the silver bullet for their revitalization efforts. Rather, farmshoring is one of many approaches to community and economic development that need to be considered.

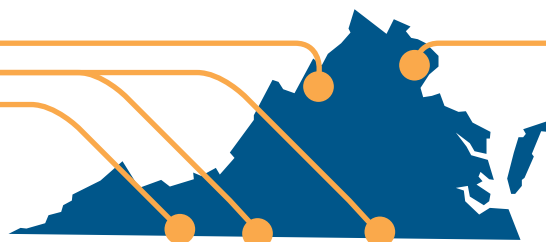
It requires a careful look at local assets and limitations and the political will to address problems and embrace changes needed to attract, develop and retain farmshored industries.

Building an action agenda for receiving communities

Strategy	Tactics
<p>Be realistic and prepared to work hard: This is not a magic bullet - it is another strategy in your portfolio and will require time and effort to realize</p>	<ul style="list-style-type: none"> - Consider both short-term and long-term strategies <ul style="list-style-type: none"> • Short term: Pursue outsourcing opportunities that fit local assets and limitations • Long term: Address local limitations; cultivate additional workforce and infrastructure assets - Consider both the exogenous and endogenous routes to domestic outsourcing - Connect with representatives of sending jurisdictions, possibly through brokered exchanges - Develop strategies for retention of outsourced business functions

Receiving Jurisdiction

Harrisonburg
Southside VA
Southwest VA



Sending Jurisdiction

Northern VA

Comparative Sending Metros:

Research Triangle
Seattle

Immediate actions

Three quick steps in the right direction

Studying the strategies and tactics identified above, we believe our clients could develop and implement several concise actions that would help them address the opportunities and challenges presented by farmshoring.

- 1) VEDP and the other economic developers involved in this project should meet now and talk directly about the implications of this study.**

Discussion of a farmshoring agenda for the Commonwealth needs to begin now. The stage is set for a broader audience to become aware of the topic, particularly as the discussion begins around the state about the progress and future of the *Virginia's Business Solutions Initiative* (BSI).

- 2) Beginning a statewide conversation on urban-rural economic linkages and developing leadership capacity on the issues involved could be as simple as building on existing initiatives and narrowing their focus.**

The Virginia Chamber of Commerce *LEAD Virginia* Program; the Virginia's *Future's Forum*, a joint effort of the Council of Virginia's Future and Virginia Tech; the Virginia Economic Developers Association; and many others host networking and educational programs. While they often target different business, political and professional audiences, they should all have an interest in farmshoring as a statewide economic development strategy.

- 3) While we are pleased with the support this project received, it is only a first take on the topic. Farmshoring requires further efforts to develop methodologies for the state and its regions and localities. A much deeper understanding of certain industry sectors and the dynamics that may lead to opportunities is required.**

BSI and other initiatives could be greatly strengthened by a strong and consistently supported effort at further developing the data and methodologies explored in this study. The capacity to take up this research may exist within VEDP alone or in partnership with others around the state.



Glossary

“At-risk” occupations

These are occupations with potential to be outsourced. Characteristics may include no face-to-face contacts with customers, information as the major component of the “product,” work via remote communications, low set-up barriers, low social networking requirements, high wage differentials compared to other locations, and tasks reducible to a set of instructions, with a measurable output.

Domestic outsourcing

The practice by which firms locate or contract out work to lower-cost domestic locations.

Endogenous development

An approach to economic development focusing attention on internal or existing assets.

Exogenous development

An approach to economic development focused on new or external attraction of outside business activities

Farmshoring

A variation on domestic outsourcing specifically focused on opportunities in rural areas.

Outsourcing

Removing non-core business functions from firms through contracts with other firms. Identified variations on outsourcing are defined by the location the contracting firm utilizes to accomplish the work.

Receiving jurisdictions

Receiving jurisdictions are typically rural areas, with a relatively low cost of doing business. When these areas are relatively close to urban regions, and possess appropriate telecommunications infrastructure and other assets, they may have potential as sites for domestic outsourcing or farmshoring of certain business functions.

Sending jurisdictions

These are typically urban areas with significant levels of business activity and often high costs of doing business. They may host business functions at risk of outsourcing and with the potential to shift to lower-cost locations.

Virginia’s Business Solutions Initiative (BSI)

BSI markets opportunities in rural regions of the state to companies considering business expansion opportunities that might otherwise go overseas. This is a cooperative effort between the Virginia Economic Development Partnership and regional and local partners around the Commonwealth. The inaugural class of participants includes the Blacksburg, Danville, Harrisonburg, and Lynchburg regions.

For more information see the BSI website <http://yesvirginia.org/businesssolutions/>

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About the Economic Development Studio @ Virginia Tech

The Economic Development Studio @ Virginia Tech is a resource for communities throughout the Commonwealth of Virginia.

We conduct research on economic development issues, inform communities, and provide ideas for economic development strategy and action.

The studio is a joint effort of Virginia Tech's Urban Affairs and Planning program and Office of Economic Development.

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