



# Decentralizing Federal Employment: Feasibility and Impact on Ohio Cities



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## Executive Summary

The Federal Government is facing a human capital “crisis.” The average federal employee is 45 years old and by 2004 over 50 percent of the workforce -900,000 employees-will be eligible to retire. Approximately 71 percent of the current federal workforce will be eligible to retire by 2010. More importantly, the challenge of replacing these workers is more daunting than ever.

While the Federal Government is beginning to grapple with these issues, few are considering decentralization of federal agency functions as an option. This is unfortunate for several reasons. First, moving to a city with a lower cost of living would increase the attractiveness of current government compensation. Second, relocating agency functions away from Washington, D.C. could have national security implications in the post-September 11<sup>th</sup> environment. Third, decentralization could help to improve the perspective of some agencies often accused of being “out of touch” with main street America. Finally, decentralization of federal functions and their workforce can have substantial economic benefits for the receiving cities.

This study focuses on the potential economic benefits of relocating federal agencies, divisions, and jobs to urban areas outside of Washington, D.C. In order to assess the feasibility of decentralization, the authors examined characteristics of the agency, the importance of policy-level decision-making, and the ability of the receiving regions to accommodate new jobs. Based on this approach the authors found that:

- ❖ Recent advances in telecommunications have rendered remote communication between and within agencies feasible.
- ❖ The regions examined could absorb increased employment without creating pressures on wages or real estate prices.
- ❖ Geographic decentralization offers potential for developing synergies between local businesses and federal agencies.

The study used case studies of five Ohio cities—Akron, Cincinnati, Cleveland, Dayton, and Toledo—to more fully evaluate employment decentralization. The findings are that:

- ❖ Relocating the U.S. Trademark and Patent Office to Akron could generate almost 12,000 new jobs, almost double the number directly relocated;
- ❖ Relocating the Bureau of Economic Analysis to Cincinnati could generate 1,157 new jobs, more than double the number directly moved from Washington, D.C.;
- ❖ Moving the Heart, Lung & Blood Institute of the National Institutes for Health to Cleveland could generate 3,381 jobs, almost three times the number directly relocated;
- ❖ Relocating the Bureau of Labor Statistics to Dayton could generate 3,109 new jobs overall; and
- ❖ Moving the U.S. Geological Survey to Toledo could create 1,735 new jobs.



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## 1. Introduction

The events of September 11, 2001 and the subsequent War on Terrorism may be prompting the most thorough rethinking of the federal government's role and function in history.<sup>1</sup> The attack on the Pentagon, in particular, demonstrated the vulnerable nature of many federal jobs and facilities.

These events, however, may be reinforcing already strong trends in reorganizing and streamlining the federal workforce. The federal government has been in the process of "reorganizing" for more than two decades. Since the end of the Cold War, more than 420,000 defense-related jobs were cut from the federal payroll. President George H. W. Bush expanded the civilian labor force by 104,000 workers, reinforcing the shift to a domestically focused federal workforce. Under "reinventing government" in the 1990s, the Clinton Administration cut 115,000 federal positions.

This trend may continue under Pres. George W. Bush:

- ❖ Under the President's Management Agenda, almost 850,000 federal jobs could be subject to competitive bidding;
- ❖ More than 50 percent of the federal workforce is eligible to retire by 2004;
- ❖ By 2010, 40 percent of today's federal workforce is expected to retire.

Addressing the management challenges in this workforce climate is crucial for maintaining the efficiency and effectiveness of the federal government. Moreover, federal policymakers will have to look "outside the box" for innovative solutions to these personnel challenges.

This report examines an issue rarely considered in the debate over federal workforce management: the efficacy of moving some federal employment from the Washington, D.C. metropolitan area to other areas in the United States. Given the current climate shaped by the need to find cost effective ways to provide services and the concerns of homeland security, this may be an important practical management strategy.

This study is the first of two in a joint project of The Buckeye Institute for Public Policy Solutions and Reason Public Policy Institute that examines the potential of decentralization to address the federal government's current workforce management challenges. The second study will present a framework for using the twin strategies of privatization and decentralization as a practical, effective way to reconcile the federal government's shrinking workforce with the continuing demand to provide public services. This study, in contrast, focuses on the potential economic impact of decentralizing jobs to urban areas outside of Washington, D.C., using several Ohio cities and metropolitan areas as case studies.

The purpose of this report is not to suggest that Ohio is the only region where federal employment may be relocated. On the contrary, because of the diversity of the cities examined, the point of the cases is to show geographic dispersal would be feasible in other regions as well.

## 2. Rethinking Federal Workforce Management

Workforce issues are among any organization's most important, and vexing, management challenges. This is particularly true for employers such as the federal government that are primarily service providers. Service organizations engage in little manufacturing activity. The government's primary responsibilities include managing contracts and implementing programs.

Not surprisingly, the federal workforce is the largest portion of the federal government's operating costs. Managing its human resources is critical to its efficiency and effectiveness. Indeed, a fundamental building block to achieving an organization's mission and goals is proper attention to human capital. "Yet," notes a report from the congressional "watchdog" agency, the U.S. General Accounting Office (GAO), "many agencies have not sufficiently indicated how they will identify their human capital needs, nor how they will acquire, develop, and deploy their human capital to improve the economy, efficiency, and effectiveness with which they serve the American people."<sup>2</sup>

According to the GAO, the federal government can't waste any time. The skills and education required of its workers, and the basic employment structures and arrangements, are changing.<sup>3</sup> Furthermore, the federal workforce is aging: The baby boomers, with their valuable skills and experience, are drawing nearer to retirement and new employees joining the workforce today have different employment options and different career expectations than the generation that preceded them, making government work less attractive.

Today, the average federal employee is 45 years old, and more than half the workforce is between 45 and 69 years old.<sup>4</sup> By 2004, nearly one-third of the federal workforce will be eligible to retire and another 21 percent will be eligible for early retirement. Which means that more than 900,000 employees—over 50 percent of the workforce—will be eligible to leave federal service.<sup>5</sup> By 2010, approximately 71 percent of the current federal workforce will be eligible for either regular or early retirement and 40 percent of those employees are expected to retire.<sup>6</sup>

Additionally, fierce competition from the private sector is putting severe constraints on the ability of the federal government to attract the highest quality technology workers, lawyers, scientists, and other specialists.<sup>7</sup> While the belief in public service as a noble calling once attracted many fine federal employees, new college graduates are passing up federal employment in droves for high-paying jobs in the private sector.

At the same time, Washington, D.C. has become a less desirable place to live with high housing costs, high crime rates, and severe traffic congestion. The nation's capitol will always attract the politically ambitious, but may be increasingly less attractive to the skilled workers and managers that fill federal agencies. The federal government can't refresh its human capital fast enough. During the 1970s for every employee lost, one was gained. However, by 2007 only one employee will be replaced for every three that are lost, growing to four to one in 2012 and six to one in 2017.<sup>8</sup>

Federal human resource managers have a long way to go to address these challenges. According to Pres. George W. Bush's FY 03 budget, only three agencies received "yellow lights" for making progress in coping with improving human resource management; all the others received "red lights" indicating failure.<sup>9</sup>

### A. Federal Strategies for Coping with the Crisis

The federal government is starting to realize that the current human capital system is flawed and that serious reform is needed. According to Comptroller David Walker, the issue is really one of

leadership and political will. There is a serious need to update civil service legislation to address the government’s antiquated and rigidly defined classification and compensation system.<sup>10</sup> Walker also noted that workforce planning needs to be linked to overall strategic and budget plans, enabling agencies to get a better handle on the skills and knowledge areas necessary to accomplish their missions.<sup>11</sup>

Reform efforts are centered on two themes. First, agencies must identify what types of skills and employees they have and will need to manage in the 21st century. Second, agencies need to identify how to attract new workers and keep institutional knowledge. Both these themes raise broad questions about how the federal workforce should be organized. The federal government will need to attract and retain workers at the lowest possible cost. Where jobs are located could become as important as the specific skills needed to perform specific tasks.

Washington, D.C., for example, is one of the nation’s most expensive metropolitan areas to live in. Table 1 shows the cost of living index for selected metropolitan areas. With a score of 133, Washington, D.C. is well above the average of 100, while many Ohio cities are below average. This means that metropolitan areas such as Cleveland can offer many of the same amenities—high-quality housing, good schools, access to first-rate health care—at substantially lower costs. The cost of living in Ohio’s major metropolitan areas would result in an increase in effective buying power of 15 percent or more for federal workers.

**Table 1**  
**Cost of Living in Selected Metropolitan Areas, 2000**

Metropolitan Area	Composite Index
<b>National</b>	
Washington D.C.	133.2
<b>Ohio Metro</b>	
Akron	98.2
Cincinnati	95.2
Cleveland	95.2
Dayton	93.6
Toledo	97.7

Source: American Assoc. of Chamber of Commerce Researchers, June 2002.

In some cases, decentralizing certain positions could result in lower federal expenditures as well as an effective cost of living increase for workers. Along more conventional themes, the Office of Personnel Management (OPM) is developing “a systematic methodology for workforce planning and staff analysis that will provide user agencies with a single, integrated interface to a vast array of tools to facilitate their workforce planning.”<sup>12</sup> This will allow agencies to collect data and identify occupational and demographic trends.

The Office of Management and Budget (OMB) is also playing a role in setting government-wide management priorities and defining resource allocations. These allocations will be central to the adoption of human capital considerations across government in the years to come. In the FY 03 budget, OMB and the president added human capital management to the list of Priority Management Objectives.<sup>13</sup>

The GAO reported that the civil service system is both burdensome and inflexible.<sup>14</sup> It will also “lead by example”—by pursuing far reaching strategic planning and organizational alignment efforts. These efforts will weave their core values into all of their key decision-making while assessing their human capital systems from top to bottom, aligning their organization mission and vision.<sup>15</sup> The GAO

will also provide conceptual framework and practical tools to assist agencies along the way.

The GAO has suggested a three-step process to improve human resources management.<sup>16</sup> First, agencies must take all administrative steps available to them under current laws and regulations to manage people for results. Second, the Administration and Congress should pursue legislative opportunities to put new tools and flexibilities in place that will help agencies attract, motivate, and retain employees. Third, all interested parties should work together to determine the nature and extent of more comprehensive human capital reforms. Geography can play an important role in addressing the federal government's human capital needs.

Recently the Bush Administration and Congress sped up the adjustment process. President Bush included strategic management of human capital as one of the five pillars of his President's Management Agenda.<sup>17</sup> The President's Agenda argues that agencies must manage their human capital based on performance grounded in the agencies' goals under the Government Performance and Results Act (GPRA) and be integrated into the budget process. That means shifting to managing human capital to support the accomplishment of agency goals.

Meanwhile, Congress provided four federal agencies with special authority for hiring professionals and executives to help them compete for highly talented people in highly competitive job markets.<sup>18</sup> The special legislation gave the organizations a number of flexibilities to assist them in their challenge to adequately staff their organizations. Some examples include:

- ❖ General authority to employ;
- ❖ Pay authority for critical positions;
- ❖ Recruitment, retention, relocation incentives, and relocation expenses;
- ❖ Personnel flexibilities;
- ❖ Independence;
- ❖ Personnel management; and
- ❖ Performance awards.<sup>19</sup>

These changes in personnel management rules are part of the President's Management Agenda, which seeks to replace the old rules-based systems for controlling abuses of federal workers with a system based on output and outcome performance and accountability.<sup>20</sup>

State governments are facing similar human capital issues, although not as drastic. Several states are devolving the "locus of personnel authority" away from a centralized system in an effort to increase accountability and streamline bureaucracies. In fact, personnel authority is being delegated to line agencies while onerous controls are relaxed in a move away from traditional civil service systems.<sup>21</sup> These moves have led to greater vertical decentralization and ultimately, more managerial control over personnel practices. The systems are more flexible, and give authority to decision-makers who are closer to the point of delivery. The use of this varies among the states, but South Carolina is the most decentralized.

As the federal government inches its way toward coping with the crisis by changing human resource management at the margins, private sector best practices not only provide guidance on how to structure changes, but suggest much more radical ones. One radical strategy is to consider the potential human resource pool outside of Washington, D.C. Many federal activities are concentrated in the D.C. area more as historical legacy and habit than necessity. This confines the federal government to a very limited labor pool.<sup>22</sup>

## B. Privatization, Decentralization, and Human Capital

Outsourcing and privatization by the federal government has been growing at a rate of nearly 16 percent in recent years, even faster than at the state and local level.<sup>23</sup> This is fueled not only by tighter budgets for some departments but by the President's Management Agenda (PMA), which includes a "competitive sourcing" initiative to create a system whereby over time all of the roughly 850,000 federal employees who perform commercial activities face competition from the private sector.<sup>24</sup> The PMA makes it explicit that competitive sourcing, like strategic management of human capital, is a management tool to help agencies achieve the core objective of meeting their performance goals and better serving customers.

From the mundane, such as using mobile maintenance units to serve a region instead of fixed maintenance staff, to shifting location of centralized functions in order to capitalize on better labor markets elsewhere, governments can capitalize on what the private sector has been doing for years.<sup>25</sup> Geographic flexibility is another way the private sector manages human capital needs. Privatization offers private bidders the chance to locate work in different locations to tap different pools of human capital in diverse states and cities.

The geographic flexibility privatization brings becomes more important as the pool of federal workers draws down, more resources are needed, and as services move to contractors subject to competition on three to five year cycles. This allows services to move as needed to where the labor is located as the labor market and services change over time. Decentralization and privatization complement each other, each making the other a more effective tool for strategic management of human capital.<sup>26</sup>

The benefits of geographic flexibility may extend beyond privatization. In the current environment of homeland security, concentrating workers in one location may not serve broader policy goals. Technology allows for an unprecedented degree of decentralization if management approaches and accountability criteria are used effectively. Indeed, for this reason, telecommuting is the fastest growing segment of the "journey to work" classification.<sup>27</sup> Nationally, more passenger miles are saved via telecommuting than through transit.<sup>28</sup>

## Addressing Workforce Management Needs at the Federal Level

Agencies have broad statutory and regulatory authority to design and implement incentive programs to attract and retain staff.<sup>1</sup> Over the past five years, agencies have increased their use of monetary incentives. Examples include:

- ❖ Performance awards – monetary incentives for performance.
- ❖ Special act or service awards – one-time lump sum monetary awards.
- ❖ Quality step increases – awards that provide employees with faster than normal progression.
- ❖ Time-off awards – granting leave without charging their annual leave.
- ❖ Gainsharing – savings associated to improved productivity are distributed to the employee and organization.

The Department of Defense (DOD) has long offered college debt relief to attract recruits.<sup>2</sup> DOD has also considered a number of approaches to gaining additional flexibility with which to manage its civilian workforce—ranging from considering its own personnel system to the development of various personnel demonstration projects involving particular units or segments of the workforce.<sup>3</sup>

The most prominent change in human capital management was a result of the GAO Personnel Act of 1980.<sup>4</sup> The Act created a broad-banded pay-for-performance system. The Act established more flexible recruiting and hiring processes. For example, the GAO, unlike other federal agencies, can offer interns permanent positions after completion of 10 weeks of service without a job announcement or competition. Furthermore, besides the broad-banded pay, the Act enabled the GAO to compete for specialized skills needed and established special pay rates accordingly to address significant recruitment and retention problems.

The Internal Revenue Service is revamping its human capital policies to help achieve its congressionally mandated transformation. To start, the agency developed an agency-wide strategic plan that established a framework for meeting its new responsibilities. At the same time, the IRS used personnel flexibilities to better tailor its human capital policies and practices to its needs. Included in this was the creation of up to 40 critical pay positions to attract senior managers with special knowledge and skills that the IRS would not have been able to attract otherwise.<sup>5</sup>

<sup>1</sup> U.S. General Accounting Office, *Human Capital: Using Incentives to Motivate and Reward High Performance* (Washington, DC: Government Printing Office, July 2001), 2.

<sup>2</sup> Katy Saldarini, “Federal Agencies Neglect Workforce Planning, Officials Say,” *Government Executive*, March 2000. Agencies discussed in this report could offer similar benefits to attract additional staff, however the costs associated with such a move are probably too high.

<sup>3</sup> U.S. General Accounting Office, *Human Capital: Taking Steps to Meet Current and Emerging Human Capital Challenges* (Washington, DC: Government Printing Office, July 2001), 33.

<sup>4</sup> U.S. General Accounting Office, *Human Capital: Taking Steps*, 9.

<sup>5</sup> U.S. General Accounting Office, *Human Capital: Taking Steps*, 36.

### 3. Geographic Decentralization

When Washington, D.C. was selected as the site for the Capital of the United States, no one foresaw the large agglomeration of government and government-related activities present today. In fact, reasons for the selection of Washington, D.C. as the capital of a new nation included the fact that it was near the center of the country, accessible to the northern and southern states. The location provided no region an excessive advantage.

Today, the Washington Metropolitan Area is one of the largest in the nation. Its economic base centers on government. In addition to direct government employment, the region has attracted numerous consulting, public relations, law, advertising, lobbying and similar firms, primarily seeking to influence the government in ways large and small.

#### A. Benefits of Decentralization

The development of a metropolis with an economic base dependent upon government employment and functionaries dependent upon government was never a conscious goal. It evolved through a “tyranny” of small decisions. When an agency added a new division, function, or activity, the first choice location tended to be Washington. Perhaps each individual decision made sense; perhaps a Washington location was chosen to further the political influence of an individual; perhaps the location was selected without a great deal of consideration. Even if the concentration of agencies in Washington D.C. was a benefit in the past, that concentration may now be a liability rather than an asset. If planners could start today with a clean slate, given current technology and homeland security needs, the bureaucracy would likely be more geographically dispersed.<sup>29</sup>

The federal government should consider a carefully designed program of decentralization for several reasons. To the extent that these reasons provide the anticipated benefits, the entire U.S. economy will improve along with the enhanced government efficiency.

#### *Political Culture*

The concentration of government employment in Washington creates possible deleterious consequences for political culture. Numerous observers believe that the capital has become an insulated echo chamber, separated from the concerns of the bulk of the country and focused on a narrow set of issues on the Washington policy agenda. The extent of the gap between the perspective of individuals in Washington and people in other parts of the country is suggested by phrases such as “inside-the-beltway perspective” or a “Washington mentality.” Because D.C.-based employees are exposed to the same newspapers and other media, a similar perspective will naturally emerge. In fact, political consultants have long acknowledged that candidates for national office are often more successful when they run “against Washington,” presenting themselves as outsiders challenging the inside-the-beltway status quo.

Geographic decentralization could reduce the gap between elected officials and government employees as well as government workers and the rest of the nation.

Where one lives shapes one’s view on the world and differences in perspective influence policy. Consider the old saw, “a recession is when your neighbor is unemployed and a depression is when you are unemployed.” Washington, D.C. is resilient to recessions, typically has a low unemployment rate, and has a mean income about 135 percent above the national average. D.C.-based employees are likely to understand many issues more as statistical phenomena and less in terms

of their experiential impact on everyday life. The differences in economic environments will shape perspectives and thus indirectly shape policy and implementation.

The dominance of a single regional perspective may be exacerbated by the phenomenon of both elected and appointed officials living in Washington for long periods of time. However, elected officials are at least held accountable through the electoral process. Compared to elected officials, members of the federal civil service are perhaps more likely to have an “inside-the-beltway” perspective.

While most civil service workers do not directly create policy, often the events they choose to study, recommendations they propose and the structure of their reports have significant sway in policy development. Geographic decentralization is likely to alter the tone of many policy documents. Also, appointed officials have considerable discretion regarding how policies are implemented. Geographic decentralization would bring a different perspective to implementation.

Decentralizing federal employment is not a panacea for political culture. Government employees will still have similar perspectives even after decentralization. But, to the extent that geographic decentralization is feasible, the concern that government is dominated by the political ethos of one city could be mitigated.

### *Partisan Politics*

A principal reason for the creation of the civil service system was to shield government workers from political pressures. Geographic decentralization may help toward that end. If more non-political work were undertaken outside of the most political metropolis in America, the intended buffer would be reinforced. This may be particularly important as technical and scientific issues take on partisan importance.

### *Efficiency*

“Diseconomies of scale” refers to inefficiencies that occur as organizations increase in size. A similar phenomenon applies to urban areas as a whole. Often size brings diseconomies of scale when new residents add more to the costs of running the region than the average resident.<sup>30</sup> Diseconomies are frequently experienced in the form of longer commute time, other congestion, pollution, and high living costs, often driven by rents. Given the function of Washington, D.C. as a seat of the national government and its high visibility as a target of terrorists, the size may be too large now.

### *Homeland Security*

By limiting the growth of the capital’s employment, it will be easier to maintain security by relying on smaller clusters of employment activity (thus creating a smaller terrorist target). The lines at checkpoints will be shorter and fewer demands will be made on security resources. Furthermore, the anthrax scare following the attacks on the Pentagon and World Trade Center, and the sniper attacks in October of 2002 indicated how work could be slowed in an entire city by such events. A dispersal of Washington, D.C.-based federal employment would protect some parts of government from such disruptions and make it easier to provide security for the remaining activities.

### *Bureaucracy*

In discussions with officials at various agencies, we asked why their organizations needed to locate in Washington. Many of the answers related to the need for communications between the

persons in one office in Washington, D.C. and persons in related offices. However, personal contact was seldom seen as necessary to convey information.

A problem with expanding bureaucracies is that as the number of agencies increases, the size of liaison functions increases rapidly, sometimes with no additions to productivity. If the number of liaison functions is a constant fraction of the total number of agencies, then the coordination activities will increase exponentially as the size of the bureaucracy increases.

While not true in all cases, geographic proximity may result in excessive liaison activities. Face-to-face meetings are seen a necessary courtesy or a means of extending personal influence. These directly unproductive activities are often a form of personal rent seeking and detract from the overall efficiency of the nation.<sup>31</sup> Geographic dispersal may promote more efficient uses of time and encourage efficiency.

### *Private Business Development*

In an analysis that has withstood the test of time, Jane Jacobs cited the importance of contacts and synergies that can develop between loosely related enterprises.<sup>32</sup> The linkages can result in new products, as processes create additional, productive work. Geographic dispersal of federal employment will create a better atmosphere for developing linkages between private sector organizations, and public sector agencies will likely replace government-to-government linkages.

If geographic dispersal relocates government agencies in regions where synergies with private sector activities can emerge, positive economic consequences can be anticipated. Businesses throughout the nation will have opportunities to learn from nearby federal agencies. At least equally as important, government agencies may improve their management and technical operations from closer proximity to businesses and improve operations accordingly.

Part of the inside-the-beltway perspective may be attributed to the fact that most linkages tend to be with other government agencies. Linkages tend to develop as individuals in different organizations see commonalities in the work they do. If federal jobs were located in more diversified economies, federal agencies would form more linkages with more diverse organizations. For instance, an agency seeking a better way to communicate with individuals affected by its actions might be more likely to consult a private company about how to resolve the concern rather than contacting another government agency. The emergence of such linkages can be a great enhancement to productivity.

A significant potential problem with encouraging closer relationships between government agencies and private businesses is that the private business may capture the federal agency. While government employees may be less influenced by bureaucratic concerns when located outside of D.C. there is a countervailing danger. They may become too concerned with gaining personal advancement by excessive favoritism to private business interests. Geographic decentralization may improve the current balance, but it is important to remember that there is a balance.

### *Local Economic Impact*

With Washington, D.C. likely at a stage where more employment reduces efficiency, many communities will experience external benefits from expanded employment. Regions with underemployed resources, particularly those in the Northeast and Midwest, could receive significant benefits from an increase in demand for the underemployed resources. Some regions with slow employment growth face depopulation, as families must leave their hometowns in order to find work. Dispersal of employment to slow-growing regions would reduce the need for emigration. Expansion of government employment will provide greater benefits in such communities than in communities that are expanding too rapidly.

At the same time that concerns about the insularity of the federal government have become part of the national dialogue, technology is lessening the importance of geographic concentration for information transfer. High-speed Internet access, e-mail, fax machines, lower long-distance telephone rates, and so forth have made it possible for businesses to operate efficiently while being geographically decentralized. Private businesses have shown that geographic decentralization can be efficient. There are numerous examples of businesses that have large sections of their operations conducted in parts of the country separated from corporate headquarters. Back office employment in banks is routinely distant from the facilities the public sees. Microsoft and many banks conduct substantial operations in India. Today, even virtual corporations exist with no specific office. Geographic decentralization has been made possible by the explosion of virtual technology.

### **B. Feasibility of Relocating Federal Agencies and Employment**

Five regions in Ohio were selected for a pilot study to examine the feasibility and potential economic benefits of decentralizing federal employment. If federal decentralization is feasible within the regions selected, then the scope for employment relocation should be significant not only in Ohio, but throughout the United States.

The methodology employed to determine the feasibility of geographic decentralization was based both on the characteristics of the federal agency and the characteristics of the regions where the jobs might relocate. To conclude that relocation could be feasible, two criteria were used. First, the agency must not be tied to Washington for reasons essential to its mission. Second, the area targeted for relocation should be appropriate.

Almost all agencies address policy issues to some degree within a very specialized area. For an agency to be a candidate for geographic decentralization, however, it should be involved only in narrowly defined policy issues. For instance, several agencies test for product safety. Their work is primarily scientific although at certain times they maybe involved in larger issues (e.g., setting safety standards). If an agency were involved in policy only within a limited and technical sphere, that would not be considered a barrier to decentralization. Conversely, an agency that regularly made policy and needed to respond quickly as the political climate changed would be a poor candidate for relocation.

Thus, a third criterion was whether agency officials needed frequent, face-to-face contact with other employees that could not be replaced by remote means of communication. One of the factors that makes decentralization of many agencies feasible at this time is that remote communication has become much more robust and efficient.<sup>33</sup> In making operational this criterion, the emphasis was given to the need for top-level policymakers to meet frequently. Person-to-person meeting can sometimes convey information (e.g., through body language or voice tone) that cannot be conveyed electronically. One-on-one meetings also allow for more spontaneous interaction and brainstorming through synergies with other participants. If an agency chief were required to consult with congressional representatives frequently or if frequent discussions with a cabinet member were required, relocation would be less effective.

### **C. Nature of the Receiving Region**

In gauging the ability of the federal agency to improve the local economy, potential economic linkages were major considerations. Cluster economies are an important contributor to economic development and productivity improvement. For instance, if a federal agency were engaged in a

## Obstacles to Decentralization

Several barriers to decentralizing the federal workforce exist, regardless of the potential economic and fiscal benefits, including:

- ❖ ***Inertia***. Inertia is the most powerful locational factor.<sup>1</sup> Consequently some of the impediments to decentralization warrant consideration.
- ❖ ***Relocation Costs***. The cost of relocation will be borne immediately and will be very easy to calculate. The benefits will occur in out-years and are far less tangible. To the extent that there is a tendency to postpone long-run benefits in favor of short-run cost savings, the task of decentralizing employment will be made more difficult.
- ❖ ***Hidden Assumptions***. Another factor that may hinder decentralization is the tendency of many people throughout the country to believe that most high-level federal employment belongs in Washington because that is the seat of government. Often the link between the functions of Washington and the site of employment is assumed to be so obvious it is not critically considered.
- ❖ ***Evolution of Linkages***. A third factor contributing to inertia is that agencies have established ways of doing things that tie them to Washington. For example, a government worker might think that the monthly lunch or meeting attended with other officials is an important reason to locate in Washington. These established ways of doing things reinforce the existing geographic distribution of resources.<sup>2</sup> While such a meeting may be important, it is critical to have an open mind about both the necessity for face-to-face meetings and the benefits that may be gained from relocation.
- ❖ ***Employee Resistance***. Just as those in the court society of Louis IV feared leaving the court because of fear of losing favor or status, some federal employees may resist relocation because of concerns that other competing agencies that remain in the Washington area may gain influence by remaining closer to top decision-makers. This concern does not negate the case for decentralization, but presents an implementation concern. Finally, relocation could be costly to individual government workers who have established homes in the D.C. area. Transfers for them would be difficult. It is important to note, however, that many private sector employees of large firms face such relocations regularly.

These impediments raise significant implementation issues, some of which are addressed in the conclusion. But before jumping to implementation, the feasibility of geographic redistribution of employment should be considered.

<sup>1</sup> John P. Blair, *Local Economic Development* (Thousand Oaks, CA: Sage Publications, 1995), 42.

<sup>2</sup> Richard Norgaard, "Coevolutionary Development Potential," *Land Economics* (1984): 159-76.

function that was closely related to local industry, the potential for sharing ideas, technology, and labor skills would enhance that related private sector industry or group of industries. The cluster efficiencies also work in reverse. A federal agency could improve its operations by observing practices of similar private sector enterprises. Additionally, the federal agency may be able to access an industry-specific labor pool, either for direct hire or on private contract.

The overall potential for stimulating the local economy included overall effects of the initial increase in employment. Input-output multipliers developed by the U.S. Department of Commerce were employed to determine the total employment impact on the regions. The relocation of one federal job will need to be supported by other local jobs and the RIMS II modeling system was used to estimate the impact (See Appendix A for a detailed discussion). Since no category exactly fit the types of federal agencies examined, similar private sector counterparts were used.

The ability of local areas to absorb federal jobs was also part of the second screen. One indicator of this ability is the degree of looseness or tightness in the labor market. In general, a low unemployment rate is an indicator of a tight labor market. More workers could not be absorbed easily without putting pressure on wages in other sectors. Tight labor markets are a contra-indicator for cities to receive government activity. High unemployment indicates the opposite—a slack local economy is more able to incorporate the influx of new workers.<sup>34</sup> Other indicators of the looseness of the labor market include slow job growth or an economic base centered in slow-growth industries. The ability of the region to educate a workforce with particular skills was also considered when that issue might be of concern.

The real estate market, particularly office space availability, is another influence on the ability of the local economy to absorb transferred employees. A community with little excess space to house new jobs would suggest that if new employment were transferred to the area, there would be pressure for rents in other spaces to increase in the short term. Over the longer run, of course, real estate markets would adjust to persistently higher demand. The ability to absorb jobs is a potential advantage of cities in the Midwest, and in Ohio in particular.

A third factor used to evaluate the receiving region was the willingness of local officials to accommodate new activities. Agencies should not be moved to communities that do not wish to grow. Also if local economic development officials are willing to assist in the relocation process by helping the relocating agency find space, modify space, assist with labor force issues, perhaps assist with infrastructure such as intersections and traffic lights, the move would be more efficient. The use of these criteria does not suggest that subsidies similar to those some private sector firms are offered be made available, but a receptive attitude on the part of the receiving community is important. In the case of the Ohio communities we examined, officials interviewed for this study were universally favorable towards prospects of new economic activity.

The five regions selected for the analysis were Akron, Cincinnati, Cleveland, Dayton, and Toledo, Ohio. These cities represent a wide range of industrial bases and unique resources. As such they are well suited for the purposes of this study. Moreover, we performed a cursory examination of the local business base. Many communities had business bases that could provide significant support to the federal agencies identified for relocation to the city.

## 4. Akron

The Akron region is located in the Northwest part of Ohio. It includes Summit, Portage, and Medina counties. The city of Akron itself has experienced a population decline in the past, similar to other central cities in industrialized areas, although the Akron region as a whole has experienced an increase in population. The central business district could be strengthened by increased office activity, as shopping and other activities have tended to develop in outlying areas.

The economic base of the region has evolved from agriculture processing to the manufacturing of rubber products such as tires, and as that sector declined, the region now is centered on plastic and polymer technologies. The region also has a strong chemical research base. Akron officials unanimously supported the idea of relocation of federal employment to the area and expressed a belief that the community would be eager to work toward such ends.

Appendices B and C show the highest relative employment concentrations in Rubber and Miscellaneous Plastics Products and Industrial Machinery.<sup>35</sup> A related perspective can be gained by focusing on the occupations of workers in Akron. The occupational distributions indicate that Akron has a disproportionate representation of employment in production operations, indicating that the economy's transition from production to research probably is incomplete. Smaller occupational location quotients in Computer and Mathematical Occupations, and Architecture and Engineering Occupations suggests that some types of federal employment could help the community transition from the remnants of an industrial base to the service-research type of economy it seeks.

### A. Agriculture Research Service

The Agriculture Research Service (ARS) primarily conducts agricultural research and disseminates the results to farms and other agriculture-related businesses. The overall budget of the ARS is authorized at \$1,117,000,000 but most of that amount is dispersed outside the Washington, D.C. area.<sup>36</sup>

The feasibility of relocating the Agriculture Research Service from Beltsville, Maryland was considered as a part of a geographic dispersal of employment strategy. The Agricultural Research Service employs about 8,000 persons, but the employment is scattered throughout the United States, often at agricultural experiment stations. Employment at the Beltsville, Maryland site is about 500 persons and includes employees at an experimental station in addition to serving as headquarters for the agency.

#### *Feasibility of Relocating Out of the Washington Area*

The Agricultural Research Service conducts research into ways to grow agricultural products and develops new ways to use such products. The Service submits requests for patents, licenses new products and develops new plant varieties. While such activities may occasionally require a Washington presence, the reason for a Washington, D.C. location was not apparent. In fact, it was originally located in a rural area in Maryland before the town became part of the large Washington, D.C. urban agglomeration. Needed rapid and effective communications could be addressed through modern telecommunications.

The work of the Agricultural Research Service is only indirectly related to major public policy concerns. It has a new research initiative involving counter-terrorism as it relates to farms, but the

## Data Collection

Most of the data gathered during the course of this research was collected from telephone interviews with individuals who were either knowledgeable about the candidate agency or the regional economies. Local agencies such as Chambers of Commerce were particularly helpful as were other business organizations and academic experts. The telephone question protocol called for questions that addressed the double screen criteria.<sup>1</sup>

Washington officials were also asked about the reasons the agency had a Washington, D.C. location. Answers such as “our headquarters are here” or “this is the capital” were frequently given. The generally weak explanations for a Washington location may have been partly because the respondents had never considered another appropriate location or because of an implicit assumption that unless there was some strong contraindicator, federal agencies should be based in Washington. In fairness to the respondents, however, they may have given stronger justifications had they been given more time to consider the question.<sup>2</sup>

The protocol for discussions with officials representing local communities was less pointed and more open-ended because of the variety of information being sought. Individuals knowledgeable about each region in the pilot study were asked about the potential linkages with existing business, availability of infrastructure such as fiber optic communication lines, existing, related economic clusters, the real estate market and so forth.

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<sup>1</sup> When talking with officials in Washington-based agencies, the questions centered first, on the number of employees in the Washington area. It was necessary to gather this information by phone because, while total employment was available in the Budget of the United States, Washington-based employment was not. The definition of the Washington area was inexact, “Washington, D.C. and the surrounding area,” but the phrase did not appear to cause any confusion.

<sup>2</sup> In general few agency representatives or employees expressed interest in relocating their agency. Consequently (and not surprisingly), strong resistance to geographic dispersal of jobs from Washington, D.C. can be expected from the current employees.

research is technical rather than policymaking. Hence, the work is not directly and integrally related to broad policy decisions. Furthermore, to the extent that frequent contact with policymakers or other Washington officials is necessary, remote communications are feasible for most occasions.

### *Feasibility of Relocating in Akron*

A federal agricultural research facility located in Akron would generate moderate linkages within the region. For example, 17,234 acres are in farms within Summit County, the most urban of the counties in the region and the market value of products sold approaches \$10,000,000. Because of the region’s private sector strengths in materials research and development, there are also likely to be mutually beneficial linkages between the ARS research regarding uses of agricultural byproducts and local corporations.

In addition to potentially useful linkages between the ARS and Akron area businesses, the community has the facilities to accommodate the increased employment associated with the relocation

### Akron's Economic and Business Base

There are many existing businesses in Akron that could further enhance the appeal of the decentralization process, by providing synergies perhaps not present in the Washington, D.C. area. Selections of relevant companies for each agency are highlighted below:

#### *Agriculture Research Service*

- ❖ ***ACRT, Inc.*** ACRT is a company already on the cutting edge of agricultural technologies and innovations. It primarily provides vegetation management for municipalities, utilities and private-public properties. However, it also offers training in arboricultural practices, and a complete environmental and ecological consulting service.
- ❖ ***American Analytical Laboratories, Inc.*** This company does a significant amount of environmental and agricultural research. It is a full-service environmental laboratory specializing in air toxics, groundwater, wastewater, drinking water, industrial hygiene analyses and consulting. Furthermore, it provides general environmental consulting, environmental quality and control analysis, and environmental research, development and testing services.
- ❖ ***Blaze Technical Services, Inc.*** This company already works closely with research institutions. Blaze Technical Services designs and manufactures measurement instruments (predominantly temperature sensors, thermocouples and resistance temperature detectors) for research laboratories.
- ❖ Akron has a whole host of research laboratories, such as ***Flexsys America LP***, ***Kumho Technical Center***, or ***Smithers Scientific Services, Inc.*** to name but a few, predominantly operating with plastics, rubber, and polymers. While not directly working in the field of agriculture, this illustrates that there is a significant amount of human capital skilled in laboratory research in the Akron area.

#### *Office of Student Financial Assistance*

- ❖ ***Fair Financial Services.*** Fair Financial Services provides a number of services to consumers, one of its core services being the financing of school tuition to Ohio college students.
- ❖ Akron is home to 21 banks or credit unions, and 61 financial services companies. Akron has a large presence in the insurance industry, with 57 brokers or agents, and 21 carriers. Several of these are large global corporations, illustrating the quality of the financial professional labor force in Akron.
- ❖ The ***University of Akron*** could provide a ready pool of students from which to gather feedback on current services, or perhaps use for market research purposes.
- ❖ Akron's proximity to several universities and colleges helps support numerous businesses devoted to student assistance, such as ***KSM Careers and Consulting Ltd.***, a career development and assistance business for college students, and ***Software Answers Inc.***, a

company that provides computer training and assistance for students, but there are many others.

### *Patent and Trademark Office*

- ❖ *The Partnership for America's Future, Inc.* is an organization strongly tied to the patent and trademark office already. It helps young student inventors from across the country apply for patents, and market their new products. Although it is only a few years old, this company has already helped to launch over 70 brand new products in a wide variety of fields.
- ❖ Akron appears to have something of a specialization in the niche market of polymer innovation and invention. For example, *Ohio Polymer Enterprise Development, Inc.* lists its primary function as to assist potential entrepreneurs in the polymer industry with the business development of their idea. The corporation specializes in the commercialization of intellectual property, and also offers pilot plant services, testing and research analysis. *Edison Polymer Innovation Corp.* is in the same field, and is essentially a partnership between *Polymer Industry Member Companies, State of Ohio Edison Program, The University of Akron, Case Western Reserve University* and *The Ohio State University*; the mission of which is to enhance the Ohio polymer industry by means of research and development, innovation, technology assistance, and information services.
- ❖ Two law firms in the city of Akron alone offer intellectual property rights, patent and copyright law as their specialization, *Emerson & Skeriotis*, and *Renner, Kenner, Grieve, Bobak, Taylor & Webber*. One, *Hahn, Loeser & Parkes*, also offers this service in combination with other anti-trust and competition law services. Akron firms also use Cleveland lawyers with similar specialties.

of government jobs. Individuals familiar with the office market believe that both office space and agricultural land could be made available without experiencing cost increases.

### *Economic Impact*

The economic impact on the Akron area will include not only the approximately 888 initial new jobs, but also the results of an employment multiplier. We considered the activities of the ARS to be most similar to the private sector counterpart of Testing and Research Labs. Accordingly, a multiplier of 1.494 was employed. The results indicated a total job increase of 1,176. The sectors most affected include Business Services (of which Testing and Research Service is a part, 898 jobs), Retail Trade (47 jobs), Eating and Drinking Places (39 jobs), and Health Services (31 jobs). The detailed multiplier results are shown in Appendix D.

**Table 2**  
**Relocation Feasibility of the Agricultural Research Service**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	No
Can Important Linkages be Formed?	Some
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	1,176

**Conclusion: Relocation is feasible.**

## **B. Office of Student Financial Assistance**

The Office of Student Financial Assistance (OSFA) administers financial aid to students, primarily in the form of loans and grants. The activities of the office are akin to a bank or insurance company in that they organize and originate loans, guarantee loans, provide oversight services for loans and otherwise ensure that student assistance is administered appropriately. The office has a budget of about \$12.3 billion and a staff of about 1,200. Washington-based employment is 750 persons. About 70 percent of the staff is professional, technical or administrative.

### *Feasibility of Relocating Out of the Washington Area*

OSFA does not appear to be geographically tied to Washington, D.C. The work focuses on implementation rather than policymaking, although some of the data and analysis can serve as input into the narrow area of policy regarding types of federal educational assistance. Similarly, the work of the office appears to be self-contained, requiring few contacts with other governmental agencies on a face-to-face level. Hence the agency is a candidate for geographic dispersal.

### *Feasibility of Relocating in Akron*

Businesses in the Akron area promise numerous synergies with the OSFA. The region has targeted insurance activities as one of the niche areas that it hopes to build upon in the future.<sup>37</sup> Although both the industrial and occupational location quotients are not above the national average in this area, economic development officials believe they have or can develop a comparative advantage in this sector.

While making and insuring student loans is not exactly the type of activity envisioned in the insurance cluster, its functions would blend well with existing enterprises, since many of the activities performed by the Office of Student Financial Assistance involve insuring loans made by private banks. Also, Akron provides significant back office functions for major financial institutions such as Bank One, First Merit Bank, Charles Schwab, and Allstate Insurance. Since these operations depend upon rapid, accurate transmissions of information, the Akron environment is able to provide these resources, which should be useful to OSFA too.

The Akron area has the ability to absorb the employment in the downtown area, which could

benefit from an infusion of office activity. Alternatively, the region also has existing office space outside the downtown area where rent would be cheaper. Economic development officials expressed a willingness to work with federal officials to develop a mix of space. Finally, the fiber optic cables necessary for transmitting large quantities of data quickly are available.

*Economic Impact*

The private sector category most similar to the OSFA was determined to be Credit Agencies Other than Banks. Based on the initial employment increase of 750 jobs, an estimated total of 1,013 jobs would be created in total due to the relocation of the OSFA. In addition to the 793 jobs in the Depository and Non-depository Institutions sector (of which Credit Agencies Other Than Banks is a component) major sectors affected include Business Services (46 jobs), Miscellaneous Services, (27 jobs) Retail Trade, (34 jobs) and Eating and Drinking Places (26 jobs). See Appendix D for a detailed breakdown of the impact.

**Table 3**  
**Relocation Feasibility of the Office of Student Financial Assistance**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	No
Can Important Linkages be Formed?	Many
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	1,013

**Conclusion: Relocation is feasible.**

**C. Patent and Trademark Office**

The office determines whether patents should be granted. Specific functions include selling printed copies of patents, managing patent records, maintaining a scientific library needed for patent research, adjudicating appeals, advocating for changes in patent law, and performance of other related tasks. Employment at the Patent and Trademark Office is nearly 8,000, all working in the Washington, D.C. area.

*Feasibility of Relocating Out of the Washington Area*

The majority of the work of the Patent and Trademark Office is technical and is only indirectly related to policy. An exception is that laws on intellectual property rights are in flux and the office frequently provides input on such matters to other government agencies and to elected officials. Thus the great majority of functions are technical. Similarly, while some contacts with other agencies may be of a nature such that electronic communication may not be preferable, these contacts are tangential to the agency's principal mission.

*Feasibility of Relocating in Akron*

Akron’s economy has several institutions that could forge important and beneficial relationships with the Patent and Trademark Office. First, the National Inventors Hall of Fame is located in Akron. Its location reflects the region’s emphasis on invention and innovation, so the relocation of the Patent and Trademark Office would greatly strengthen that economic development thrust.

Second, Akron has maintained a research emphasis through the location of research facilities such as the BF Goodrich research center, Edison Materials Technology Center, Institute of Advanced Manufacturing Programs, and numerous other public and private research programs.

Individuals knowledgeable about the real estate market believe that Akron could absorb the extra demand for space without upward pressure on rents, but the location of jobs might have to be dispersed. The downtown would have trouble accommodating the employment in one place. Space vacated when tire manufacturers left the region is available and has the potential for conversion.

A drawback to relocation of the Patent and Trademark Office is that it is in the process of constructing a new campus in the Washington, D.C. area. Once complete, it is unlikely that a converted facility in Akron would be as adequate for the agency as the new campus built with the intent of housing the Office.

*Economic Impact*

The input-output model indicated that an initial increase of 6,750 jobs would result in a total of 11,977 jobs created. Other than Business Services, which registered an increase of 8,935 jobs, other sectors that would experience significant impact were Retail Trade (527 jobs), Eating and Drinking Places, (419 jobs), Health Services (354 jobs), and Transportation (195 jobs). Detailed employment breakdowns are shown in Appendices B and C.

**Table 4**  
**Relocation Feasibility of the Patent and Trademark Office**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	No
Can Important Linkages be Formed?	Many
Can Region Absorb Activity?	Uncertain
Willing to Receive New Activity?	Yes, Highly
Overall Jobs Created	11,977

**Conclusion: Relocation is feasible, but the construction of a new facility in Washington may have created a "lock-in" effect.**

**D. Summary**

A preliminary assessment of the potential for relocating three agencies to the Akron metropolitan area supports the notion that agencies could relocate and generate substantial local economic benefits. The number of new jobs could be substantial, significantly greater than the direct

effect of moving high skilled jobs to the Akron area. Moreover, Akron already has a number of businesses that could provide a general climate of support for the relocating agencies. Relocating the Agricultural Research Service, the Office of Student Financial Assistance, and the U.S. Patent and Trademark Office alone could create more than 14,000 new jobs in the Akron metropolitan area.

**Table 5**  
**Economic Impact of Federal Decentralization on Akron**

Agency	Relocated Jobs	Total Jobs Created
Agricultural Research Service	888	1,176
Office of Student Federal Assistance	750	1,013
Patent and Trademark Office	6,750	11,977
<b>Total</b>	<b>8,388</b>	<b>14,166</b>

## 5. Cincinnati

The Cincinnati region is one of the most politically diverse in the study because it spans three states. The region includes the counties of Hamilton (the central county) Clermont and Warren in Ohio, Dearborn and Ohio in Indiana, and Boone, Campbell, Gallatin, Grant, Kenton, Pendleton, and Brown in Kentucky.

The region has diversified from an industrial base concentrated in heavy industrial production to a structure more comparable to the U.S. average. Its high location quotients in chemicals are notable, (3.45) and partly attributable to the presence of Procter and Gamble Corporation.<sup>38</sup> Nevertheless, its overall location quotient for manufacturing is 1.14. See Appendix B.

The diversified economic structure is the result of steadily declining manufacturing employment with increases in other sectors including distribution and services. Currently wholesale trade/distribution, transportation services, retail trade, durable goods manufacturing, and financial services are key components of the regional economy. As a consequence, the Cincinnati region's growth has been close to the national average during the past twenty-five years.

An examination of the occupational structure shows that several white-collar occupations have high location quotients including Managers, Architecture and Engineering, and Health Care Support. The relatively high percentage of employment in Transportation and Material Moving reflects the area's distribution activities. The strength in distribution activity in turn reflects a central location and a good transportation system. Production Occupations, with a location quotient of 1.05, is near the national average.

In addition to concerns about the manufacturing base, many observers within the region are concerned that Downtown Cincinnati is losing its economic base and policies have been developed to stimulate employment and population growth in the urban core.

### A. State Justice Institute

The State Justice Institute was designed to award grants to improve judicial administration in state courts throughout the United States. Its primary goals are to: 1, ensure equality in access to an effective judicial system 2, encourage coordination and cooperation among state courts and the federal

## Cincinnati's Economic and Business Base

A selection of relevant companies that could provide synergies with the selected agencies identified for relocation includes:

### *State Justice Programs*

- ❖ Cincinnati is home to many large and well-respected law firms. There are presently 31 law firms and 61 firms in the legal support industry, all specializing in a number of different specific fields. This demonstrates the strength and variety of knowledge of Cincinnati's legal professionals.
- ❖ The *University of Cincinnati's Law School* is an institution that is likely to work very closely with the State Justice Programs, and could perhaps become a useful potential source of researchers or interns.
- ❖ The *U.S. Court of Appeals for the Sixth Circuit* reviews appeals from the federal district courts in Kentucky, Michigan, Ohio and Tennessee, and from the U.S. Tax Court and certain federal administrative agencies where the non-governmental parties are from the states that make up the Sixth Circuit. It is a very important legal institution and is headquartered in Cincinnati.

### *Bureau of Economic Analysis*

- ❖ The *Economics Center for Education and Research* at the *University of Cincinnati* is likely to forge strong links with the Bureau of Economic Analysis. Its primary areas of specialization are undertaking economic and demographic research, policy analysis, and also providing economic training for teachers and employees.
- ❖ As well as the Economics Center for Education and Research, Cincinnati also has 31 companies that engage in market research for a variety of other companies and institutions.
- ❖ The Chamber of Commerce lists 35 companies that have market research amongst their fields of activity, and many such as *Burke, Inc.* or *Marketing Research Services, Inc.*, list it as their sole activity. This illustrates the strength of the business and consumer research labor force present in Cincinnati.
- ❖ *StatKing Consulting* already works closely with a number of organizations and companies regarding data analysis and collection. It specializes in statistical consulting, data analysis, data management services, statistics, and study monitoring.
- ❖ Cincinnati also has a large pool of professionals skilled in accountancy and financial analysis. There are in fact 87 companies in Cincinnati that list Accounting as one of their services.
- ❖ Cincinnati has a firm footing in the information technology field, with 31 companies operating in this area. Indeed, the IT sector is leading the revitalization of the Over the-Rhine district near downtown.

judiciary, and 3, foster education for judges and other persons who operate the state court system. The Institute accomplishes its goals by entering into grants, contracts and other agreements with state courts and related organizations. In carrying out its work, the office has a budget of three million dollars; the new budgetary authority of the agency has been reduced significantly in 2002 compared to 2001.

The State Justice Institute office is the smallest of those considered in this report, consisting of a staff of seven persons. Since the size of the staff was small, we thought it would make a good inclusion in the case studies to determine whether relocation of such a small agency would be feasible and whether local officials could anticipate benefit from a small decentralization of federal employment.

### *Feasibility of Relocating Out of the Washington Area*

The State Justice Institute may have some policymaking authority since the nature of the grants, contracts, and other programs may influence the direction of the judiciary. However, this policymaking discretion appears very limited. The grants that it provides appear to focus on programs that would not be sources of partisan politics. The fact that it is an independent agency also suggests that it is non-partisan.

The Executive Director of the Institute said the decision not to locate in Washington, D.C., was deliberate because it was intended as a state program. However, the practical difference between a location in Washington, D.C. and its current location in Alexandria, Virginia seems to be negligible.

Another factor to consider in relocation is whether the members of the Board of Directors would be willing to serve if the Institute was not located in Washington, D.C. This study did not make a direct inquiry of the Directors to determine their preferences, but if they were not willing to serve if the Institute were located elsewhere, then it could be considered an indication of the excessive “Washington perspective,” a problem that geographic decentralization is intended to address.

Frequent direct contacts with policymakers do not appear to be critical to the functioning of the Institute.

### *Feasibility of Locating in Cincinnati*

A location in the Cincinnati, Ohio area is quite feasible. Because of the small size of the agency, the number of linkages will be limited. However, Cincinnati is an important regional legal center, exactly the type of area the Institute is designed to serve. Cincinnati is the seat of the 6th Federal District court.

The area will have no capacity problems in housing the Institute in a downtown location. Remote teleconferencing can be made available on a rental basis at downtown sites, so the burden of providing such facilities for a small office will not be significant. Even given the small size of the State Justice Institute, Cincinnati development officials appeared eager to try to accommodate the needs of the agency and welcomed the opportunity to house an agency with national scope.

Finally, Cincinnati has a well-connected airport that provides excellent access to most major areas in the United States. Air transportation may be particularly important to an agency that deals with courts throughout the United States. In this regard, the Cincinnati airport has 600 direct flights to 114 cities. It has out and back service (one work day there and back) to 86 cities.

### *Economic Impact*

The private sector category most similar to the State Justice Institute was considered to be

Accounting, Auditing and Bookkeeping. The development and awarding of contracts requires significant monitoring and oversight, so this private sector equivalent category was deemed appropriate. While the Institute deals with legal issues, the composition of the staff and the nature of the work made the Legal Service category less appropriate.

Not surprisingly, the overall impact of the program was not large since it had only eight employees. The total number of jobs created was 11.3. The sector receiving the most impact was Business Services, with 8.3 jobs (8 of which would be in the State Justice Institute). Appendix D details the total jobs created. Since most of the data indicate that less than one job would be created in most industries, it is best to consider the fractional jobs as part time or overtime work.

**Table 6**  
**Relocation Feasibility for the State Justice Institute**

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Is Agency Directly Related to Broad Public Policy Making?	Marginal
Are Frequent Face-to-Face Washington Contacts Necessary?	Few
Can Important Linkages be Formed?	Limited by Size
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	11

**Conclusion: Relocation is feasible.**

## **B. Bureau of Economic Analysis**

The Bureau of Economic Analysis (BEA) is located in the Economics and Statistics Administration, within the Department of Commerce. The BEA collects and interprets data from a variety of sources to provide a perspective on the U.S. economy. Its data provide insights on economic growth, regional development, and economic relationships with other nations.

The BEA develops the national income accounts that provide information on the level of production, investment, consumption, wages and salaries, and the balance of trade, among other variables. In addition, the agency provides local data, and information about foreign investment in the United States. In fact, the BEA develops the multipliers that are used in this report!

The agency employs about 538 professionals such as economists, statisticians, and information management specialists. The total includes only a small number of consultants. New (estimated) obligations for 2002 are about 70 million dollars.

### *Feasibility of Relocating Out of the Washington Area*

While the BEA produces many policy-relevant documents, it is not a policymaking operation. Because of the relevance of its work, the bureau is frequently contacted by individuals both within government and by individuals in the private sector seeking their reports. Given the high degree of assistance the office must provide, it has good capability of addressing questions remotely. Its Web site, for instance, provides a system whereby questions can be asked of the appropriate employees through e-mail. As it improves its ability to address issues remotely, the dependence on a Washington-

based location will further decrease. Thus, the contacts and communications needed for the agency can be accommodated remotely.

*Feasibility of Locating in Cincinnati*

Synergies that may develop from a Cincinnati location will center on the information technology sectors. The region has the development of information technology as a goal. The region can expect to benefit from advanced technology initiatives in both Kentucky and Ohio, so relocation to the region would have a multi-state interest. Useful synergies have the potential for development between a strong market research agency in Cincinnati and the data collection efforts of the BEA. Although the market research organizations in the Cincinnati area have primarily focused on consumer research, the same skills could be used to enhance business research.

The region is very concerned with stabilizing the central business district, which is the core of the area. BEA employment that could locate downtown would provide important linkages with the local development interests not only by virtue of the direct jobs, but also because the downtown jobs will create important secondary spending in restaurant and on retail activity, further strengthening the central business district agglomeration. Economic development officials believed they would have no problems finding adequate downtown office space for the entire operation and that such a job anchor would help the downtown revitalization efforts. The extra demands for space were not seen as a potential source of increased rents.

The region can accommodate the likely increase in employment. The area can provide most of the skilled labor needs through programs in local universities.

**Table 7**  
**Relocation Feasibility of the Bureau of Economic Analysis**

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Is Agency Directly Related to Broad Public Policy Making?	Indirectly Relevant
Are Frequent Face-to-Face Washington Contacts Necessary?	Few
Can Important Linkages be Formed?	Yes
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	1,157

**Conclusion: Relocation is feasible.**

*Economic Impact*

The 538 direct jobs that would be created in the region if the BEA were relocated were considered to be closest to the Management and Consulting Services private sector category. The overall multiplier was 2.14, so the direct jobs will create an additional 619 jobs. One reason for the relatively high multiplier is the large multi-state nature of the region.

The largest impact will be in Business Services (718 jobs), Retail Trade (70 jobs), and Eating and Drinking Establishments (56 jobs); Appendix D shows the employment breakdowns for all sectors.

**Table 8**  
**Economic Impact of Federal Decentralization on Cincinnati**

Agency	Relocated Jobs	Total Jobs Created
State Justice Institute	8	11
Bureau of Economic Analysis	538	1,157
<b>Total</b>	<b>546</b>	<b>1,168</b>

### C. Summary

Moving the State Justice Institute and the Bureau of Economic Analysis to Cincinnati would have economic benefits. While only 546 current jobs are being transferred from Washington, D.C. to Cincinnati, the total number of new jobs created by the relocation of these two federal agencies is estimated at 1,168.

## 6. Cleveland

The Cleveland region is large and can therefore provide numerous private sector linkages with most governmental agencies that may relocate. The Cleveland area includes six counties (Ashtabula, Cuyahoga, (the central county), Geauga, Lake, Lorain, and Medina) containing a population of over 2 million people.

The economic base of the region historically has centered on manufacturing, particularly industrial machinery, transportation, and motor vehicles equipment. This base is still important to the area as indicated in Appendix B. However, manufacturing has been a declining sector within the regional economy. Between 1990 and 2000 manufacturing sector employment declined by nearly 10 percent.

The community has numerous strong downtown anchors, yet a need to strengthen the central business district remains. Recent economic development efforts have focused on the urban core. Nevertheless, additional employment in the central business district would help strengthen that important part of the region.

In the process of restructuring, Cleveland has experienced notably rapid growth in the financial sector and in services. Health care has grown rapidly in Cleveland where location quotients indicated considerable exports of health services. In other words, individuals will travel from outside the area to receive health care in Cleveland.

The examination of occupations provides a picture of the Cleveland economy consistent with the industrial analysis. The largest location quotients are in production occupations. The region has relatively high concentrations of technical, legal, and protective service occupations as well.

Cleveland had a widely recognized infrastructure problem in the 1980s that constituted a potential impediment to growth and could have reduced the attractiveness of the area as a target for federal employment. However, since that time the community has made a substantial investment in improving a wide variety of infrastructure. Today, the region looks proactively at infrastructure questions. Processes directly involving decision-makers and businesses in infrastructure decisions are

consistent with that effort. The region displays rapid growth in broadband infrastructure capacity as well.<sup>39</sup>

### **A. The National Endowment for the Arts**

The National Endowment for the Arts (NEA) is designed to increase opportunities for arts organizations, artists and audiences. Its funding base of about \$105,000,000 is intended to encourage individuals and institutions to develop arts, provide arts education, support “arts heritage,” encourage leadership in the arts and leverage federal dollars to stimulate contributions.

In spite of the sizable budget, the National Endowment for the Arts employs only 150 persons because most of its funds are dispersed as grants.

#### *Feasibility of Relocating Out of the Washington Area*

The work of the National Endowment has very limited involvement in broad policy decisions. The contact with top policymakers often involves “crises” about the type of projects funded or about efforts to increase the agency’s own budget. There appears to be no fundamental reason for a Washington location.

#### *Feasibility of Relocation to Cleveland*

Cleveland has numerous, high-profile arts projects including a world-renowned orchestra, a well-known Arts Institute, the Rock and Roll Hall of Fame, and numerous small theater groups. The presence of the NEA will likely only indirectly improve local arts projects by dissemination of information about programs and funding opportunities. Perhaps as important, the Cleveland region could stimulate ideas that may help the NEA better address the needs of other communities throughout the United States.

Cleveland is a region that has designed an economic development strategy that includes an important arts component. Thus, the location of the Endowment in Cleveland would add to the community’s reputation as a center for arts in support of an arts based economic development approach.

The region has ample downtown office space to accommodate the needs of the NEA. The airport is of sufficient size and handles sufficient traffic to accommodate the travel that may be required due to the wide geographic dispersal of grants.

**Table 9**  
**Relocation Feasibility for the National Endowment for the Arts**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	Few
Can Important Linkages be Formed?	Yes
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	379

**Conclusion: Relocation is feasible.**

## Cleveland's Economic and Business Base

Businesses in Cleveland that could provide synergies with relocated agencies might include the following:

### *The National Endowment for the Arts*

- ❖ Cleveland already has a number of nationally recognized theatres such as the *Cleveland Playhouse*, the *Cleveland Public Theatre*, or the *Cleveland Signstage Theatre* (one of the nation's leading theatres producing plays for deaf audiences). Some, such as the Cleveland Playhouse, have already received grants from the NEA.
- ❖ *The Community Partnership for Arts and Culture*. This appears to perform a role similar to the NEA on a localized level in northeast Ohio. Its mission is to create, with broad and diverse participation, an action-based plan that assures the continued vitality of greater Cleveland's arts and cultural resources and provides greater access to these resources for all the region's people.
- ❖ Founded in 1952, the *Gund Foundation* is a private non-profit institution with the purpose of contributing to human well-being and the progress of society. It donates money solely in the greater Cleveland area, and allocates a large portion of its funding toward the arts.
- ❖ *Cleveland Cultural Coalition* works very closely with the NEA. In fact it has just received a grant of \$75,000 from the NEA in order to support the teacher professional development components of the Initiative for Cultural Arts in Education (ICARE) project. Administered by the Cleveland Cultural Coalition, ICARE supports arts-focused educational partnerships between the Cleveland Municipal School District and the northeast Ohio cultural community.
- ❖ A number of schools and institutes exclusively teach arts courses at varying levels, such as the *Cleveland School of the Arts* or *The Cleveland Theatre School*, and the world famous *Cleveland Institute of Music*.

### *Overseas Private Investment Corporation*

- ❖ Major banks such as *National City Bank* are headquartered in Cleveland, and one of its current core objectives is to expand its lending to middle-market businesses worldwide. It has in fact recently been awarded a guarantee by the Overseas Private Investment Corporation to do just this, and is one of only three banks in the United States to have such an agreement with OPIC.
- ❖ *Cleveland's World Trade Center* is in essence its centerpiece with regard to promoting international trade. More than a building or organization, the Cleveland World Trade Center brings together business and government agencies involved in international trade, provides essential trade services and stimulates the economy of the region it serves.
- ❖ Cleveland is home to several nationally recognized insurance companies such as *Progressive Insurance, Inc.*

- ❖ Cleveland and Fairport Harbor are the sole U.S. salt-shipping ports on the Great Lakes. Although demand varies given the severity of each winter, on average these two ports will load upwards of 1.5 million tons. Other major cargos delivered to Cleveland via the Great Lakes include sand, cement and petroleum products. Cleveland is also home to several major law firms with specialties in overseas investments.

### *National Institutes of Health: Heart, Lung and Blood Institute*

- ❖ The **Cleveland Clinic** is a world-renowned medical facility. With regard to the specialist areas of the NIH (Heart Lung and Blood Institute), the Cleveland Clinic Heart Center is consistently ranked the number one heart center in America, and the Department of Pulmonary and Critical Care Medicine (lungs) has been nationally recognized.
- ❖ The NIH is essentially a research institution, and hence it is likely to find the **Cleveland Medical Library Association** of great use. Founded in 1894, the Cleveland Medical Library Association offers one of the nation's largest collections of medical reference books and resources.
- ❖ Due to the fact that one of the nation's most famous and well-respected medical establishments operates out of Cleveland, and the fact that Cleveland has targeted Biotechnology as one of its core strengths, there are many medical support companies that choose to locate in the Cleveland area. Examples include, **Marconi Medical Systems, Inc.** (recently purchased by **Philips Medical Systems**), or the **Ben Venue Laboratories** (the world's largest producer of antibiotics), or the **Cleveland Functional Electrical Stimulation Center**, (a national leader in electrical stimulation advice and consulting) but there are many others.
- ❖ The Cleveland area has a number of research laboratories, and institutions. Examples include the **Case Western Reserve University's University Hospital Center**, or **The Cleveland Institute of Dental and Medical Assistants, Inc.**, but there are many others.

### *Consumer Product Safety Commission*

- ❖ The **Cuyahoga County Board of Health** is responsible for, among other things, protecting the health of all Cuyahoga county residents. It has experience not only promoting the health of a population, but also being alert and watchful for any potential threats to endanger the health of the population.
- ❖ One of the main tasks of the commission is to test products currently on the market for defects that might endanger human health. Cleveland has a workforce skilled in testing and data analysis with over 100 research laboratories, such as the **Lewis Research Center**.

*Economic Impact*

The initial increase of 150 jobs will have a multiplier impact resulting in a total of 379 jobs. In reaching this conclusion, the National Endowment for the Arts was treated as similar to Other Membership Organization. The major industries affected were Miscellaneous Services (171 jobs), Business Services (65 jobs), and Printing and Publishing (21 jobs).

**B. Overseas Private Investment Corporation**

The Overseas Private Investment Corporation (OPIC) is an independent agency that assists American investors in financing businesses through direct investment, loans and loan guaranties, encouraging U.S. investment funds that provide equity for overseas investment, insuring investments against political risk such as expropriation, and encouraging outreach activities. Currently OPIC programs are available in over 140 nations.

The OPIC employs 299 persons in the Washington area. At one time the agency tried decentralizing. The reason the decentralization did not materialize could not be determined.

*Feasibility of Relocating Out of the Washington Area*

The operations of the OPIC are very similar to private insurance companies. There is limited need for officials to meet with elected political officials or with high-level appointed policymakers. The Overseas Private Insurance Corporation collects information on foreign governments and economic conditions in foreign countries from U. S. government sources, but such information can be collected and transferred electronically, so the need for face-to-face communication is not vital to operations. In many cases it might be advisable for the OPIC to be distant from politics to provide risk assessments free of political considerations and to decrease the ability of the OPIC to influence foreign policy.

*Feasibility of Relocation to Cleveland*

The Cleveland area has a strong financial sector. The region has an insurance carrier location quotient of 1.2. High location quotients are also evident throughout the financial sector (See Appendix B). So the location of an overseas insurance operation would add to the strength of the cluster. On this basis, local respondents expressed a great deal of enthusiasm about the idea of relocating the OPIC in Cleveland.

Cleveland also has a strong international presence that blends with the core function of the OPIC. The region was rated one of the 10 best cities from which to conduct global business by *World Trade Magazine* and is home to Greater Cleveland's World Trade Center that links the region to 260 similar centers in 70 countries. Over 2,000 area businesses are engaged in international trade and fourteen countries have consulates in the area.

The Cleveland labor market could easily absorb the relatively small number of employees in the Overseas Private Investment Corporation. Increases in office space needs are small compared to the local economy, so upward pressures on cost would be minimal. Local officials expressed a willingness to help in the relocation.

*Economic Impact*

In order to estimate the multiplier impacts of the Overseas Private Investment Corporation, the

private sector equivalent of insurance carrier was used. Accordingly, the initial increase of 200 employees translated into 613 jobs. The sectors most affected were Insurance (321 jobs), Business Services (59 jobs), Retail Trade (35 jobs) and Health Services (30 jobs).

**Table 10**  
**Relocation Feasibility for the Overseas Private Insurance Corporation**

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Is Agency Directly Related to Broad Public Policy Making?	Moderately
Are Frequent Face-to-Face Washington Contacts Necessary?	Few
Can Important Linkages be Formed?	Very significant
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	613

**Conclusion: Relocation is feasible.**

### **C. National Institutes of Health: Heart, Lung, & Blood Institute**

The National Institutes of Health (NIH) operates within the Public Health Service. The functions of the Institutes are diverse including support for research, training researchers, and dissemination of research over a wide range of medical areas. In addition to the research conducted in its own laboratories and clinics, it supports research conducted elsewhere in the United States and abroad.

Within NIH, the Heart, Lung & Blood Institute provides leadership in the complex set of problems the name implies. This division employs about 1,400 persons.

#### *Feasibility of Relocating Outside of the Washington Area*

Because NIH is oriented toward research, the Heart, Lung & Blood Institute is involved in policy issues only on occasions where very specific information may be needed as input. Similarly, the number and frequency of contacts with high-level policymakers is not large. The Washington, D.C. area does not appear to have extraordinary locational advantages toward heart-oriented research. Thus, there appears to be no strong reason for a Washington-based location except for the desire not to disperse NIH. One respondent suggested that it is important to house NIH in one place because of the need for researchers to share ideas. But such linkages may be available in other places as well and medicine probably has as good a network for communications among experts in the field as any research area. In Cleveland, the potential for informal, social contacts among medical researchers is substantial.

#### *Feasibility of Relocation to the Cleveland Region*

Few areas in the United States offer more potential for synergies that are important in heart research than Cleveland. A variety of local institutions could both benefit from and contribute to a relocated Heart, Lung & Blood Institute. The Cleveland Clinic is internationally recognized for excellence in cardiology and related fields. University Hospital is also highly regarded as a leading academic medical center with special strengths in cardiology and pulmonary diseases. Several medical schools in the area could also contribute to the cluster.

The Cleveland region targeted biotechnology as one of a few areas that it desires to develop as part of its economic development strategy. A survey conducted by the Cypress Research Group (Regional Economic Development and Strategy Initiative, 1999) documented 28 such companies in

the area. The large number of private sector biotechnical/biomedical companies within the Cleveland area would contribute to the research mission of the NIH and also benefit from NIH research.

The region may have problems accommodating the Heart Blood & Lung Institute without building new facilities because the relevant research may require more specialized space than is currently available. While the demand for hospital beds has decreased in most areas because improved medicine has reduced the need for hospitalization and the length of stays, consolidation of hospitals as a way of making space available does not seem feasible.

The relocation of NIH, Heart, Lung, & Blood Institute will not place pressures on the local labor markets, primarily because most NIH professional staff are hired in a national labor market. In addition, the significant number of medical education institutions in the area will provide a source of skilled labor. The number of non-medical employees required due to the possible relocation of the NIH section to the area will not stress the local labor market.

*Economic Impact*

In order to simulate the economic impact of the relocation of the Heart, Lung & Blood Institute of the NIH, the similar private sector employment category of Hospitals was used in the RIMS-II multiplier model.

The 1,400 employees that are currently employed in the Heart, Lung & Blood Institute will have a multiplier of 2.42 resulting in a total employment change of 3,381. The sectors experiencing the largest impact will be Health Services, (1,656 jobs), Retail Trade (184 jobs), Business Services (445 jobs), and Real Estate (146 jobs).

**Table 11**  
**Relocation Feasibility for the National Institutes of Health's Heart, Lung & Blood Disease Section**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	Few
Can Important Linkages be Formed?	Many, significant
Can Region Absorb Activity?	Potential Rehabilitation Need
Willing to Receive New Activity?	Yes
Overall Jobs Created	3,381

**Conclusion: Relocation is feasible but contingent upon specialized space requirements.**

**D. Consumer Product Safety Commission**

The Consumer Product Safety Commission is directed by five commissioners appointed by the President with the advice of Congress. It is charged to protect the public from unreasonable risks associated with consumer products. It requires manufacturers to report on hazardous defects, may require actions on products already in the market, collects information, serves as a clearinghouse, conducts research and establishes safety standards.

The Commission employees about 350 persons in Washington; about half work on administrative/legal issues and the other half are involved in testing. There are small regional offices in Chicago, New York and San Francisco. Its budget authority is about \$55,000,000.

### *Feasibility of Relocating Outside of the Washington Area*

The Commission is charged with implementing policy but it also shapes policy based on the degree of safety standards it chooses to enforce. The political nature of safety standards may be reflected in the fact that the President appoints the commissioners who are confirmed by Congress. There is no consensus in the polity regarding what degree of risk is acceptable for various classes of products.

Nevertheless, the Commission is intended to work outside the political arena and although the commissioners and staff may advise policymakers and should consider their opinions on certain matters, their contact with policymakers is narrow and limited. Communications with Washington, D.C. could be handled through other means, perhaps supplemented with an occasional airplane trip. However, it is unclear how much contact with major political leaders is necessary for agency operations.

### *Feasibility of Relocating to the Cleveland Region*

The Cleveland region provides a good environment for the Consumer Product Safety Commission. The area could support product testing with over 300 industrial research laboratories. The region also is home to several major graduate university science and technology programs including Case Western Reserve University, Cleveland State University and Kent State University. The region's previously mentioned strength in biotechnical and biomedical research could also support the consumer product safety commission's work, as toxicity has become an increasingly important aspect of product safety.

In terms of space, the region can accommodate a variety of testing facilities and central business district locations are also available. In addition, the strong engineering schools should be able to accommodate employment needs, although most of the professional staff will be hired in the national job market. Ample support staff will also be available in the local market.

### *Economic Impact*

The 350 employees of the Consumer Product Safety Commission were considered analogous to the private sector category of Testing and Research Labs. The relevant input-output multiplier for Cleveland was 1.74. The total employment increase due to the relocation would be 508.

The sectors expected to experience the largest increases would be Business Services (325 jobs), Retail Trade (29 jobs), and Health Services (24 jobs).

**Table 12**  
**Relocation Feasibility for the Consumer Product Safety Commission**

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Is Agency Directly Related to Broad Public Policy Making?	More analysis needed
Are Frequent Face-to-Face Washington Contacts Necessary?	Few, Except as noted
Can Important Linkages be Formed?	Yes, significant
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	508

**Conclusion: Relocation is feasible, subject to concerns about the degree of control high-level policymakers wish to exert.**

## **E. Summary**

Cleveland is a particularly rich metropolitan area. A broad and diverse economic base provides an environment that could easily accommodate the relocation of federal agencies. Moreover, the size and diversity of the economy suggests that high-profile agencies such as the National Endowment for the Arts or Consumer Product Safety Commission could be relocated without much difficulty. Economic linkages could be significant, generating almost 5,000 new jobs if the four agencies and divisions identified in this section relocated to the metropolitan area.

**Table 13**  
**Economic Impact of Federal Decentralization on Cleveland**

Agency	Relocated Jobs	Total Jobs Created
National Endowment for the Arts	150	379
Overseas Private Investment Corporation	200	613
National Institutes for Health, Heart, Lung & Blood Disorders	1,400	3,381
Consumer Product Safety Commission	350	508
<b>Total</b>	<b>2,100</b>	<b>4,881</b>

## **7. Dayton**

The Dayton Metropolitan Region contains about 1 million people in four counties—Montgomery (the central county), Green, Miami, and Clark. The population has declined slightly as population has grown in areas just beyond the counties officially in the Metropolitan Statistical Area (MSA). The central city, Dayton, experienced sharper population declines than the rest of the region, declining by about 8 percent during the past decade.

Historically, there have been three pillars to the Dayton economy. Military employment has been centered on Wright Patterson Air Force Base (WPAFB), a major logistics center for the Air Force. Wright Patterson Air Force Base remains the largest employer in the area. As a logistic and research center, WPAFB is a source of innovation in communication, computer operations, and scientific research. The presence of the base is also seen as a wellspring of opportunity. Employment declines at the base continue to be a source of concern to regional policymakers.

Dayton is also a corporate headquarters community. Although mergers and acquisitions have diminished the corporate headquarters function somewhat, Dayton remains headquarters to several major companies such as NCR Corporation, Mead Corporation, and Reynolds and Reynolds. Many of the headquarters activities tend to be related to computers and information technology. The occupational location quotient of 1.03, while above average, perhaps understates the strength of corporate management activities.

Finally, and perhaps most important in terms of size, Dayton is an automobile town. The location quotient for Motor Vehicles and Equipment is 5.05 and high location quotients in Industrial

Machinery and Equipment, and Rubber and Miscellaneous Plastic Products also reflect the automobile presence. The region's occupational location quotient for production occupations is 141.51. See Appendix C.

### **A. Bureau of Labor Statistics**

The Bureau of Labor Statistics (BLS) collects, processes, analyzes and disseminates statistical data collection, analysis, and distribution of important statistics such as the unemployment rate, the consumer price index, the producer price index, employee benefits information, employment projects, occupational illness data and international comparisons of labor statistics. The BLS also plays an important role in scholarship regarding labor market issues. In addressing its data collection and other tasks, BLS maintains regional offices in Atlanta, Boston, Chicago, Dallas, Philadelphia, and San Francisco.

#### *Feasibility of Relocating From Washington*

The Bureau of Labor Statistics is not directly related to policymaking. Maintaining the integrity of the data, despite political pressures, is a concern of the BLS, suggesting that distance from Washington, D.C. could strengthen the Bureau. Policymakers do use both the data and the research studies provided by the agency. However, the work of the BLS is intended to support better policies, not advocate for a particular set of policies. Transfer of data is relatively easy given the modern means of communication. Face-to-face contacts are not mission-critical. As part of the transmittal process, end users are likely to have questions about the data. Such inquiries can be easily addressed by means other than in-person discussions.

The technical work of the BLS seldom requires direct contact with top-level policymakers. In fact there may be benefits by shielding persons responsible for collecting and analyzing statistics from a political environment that may desire a particular conclusion.

#### *Feasibility of Relocating to Dayton*

Relocation to Dayton would provide an important boost to the economy and holds the potential for important synergies. Dayton has a strong information technology sector. It was ranked 13th in the nation in information technology job growth and is home to Ohio's Information Technology Alliance. The IT web of businesses includes major companies like LEXIS-NEXIS, Reynolds and Reynolds, Standard Register and NCR Corporation. In addition there are numerous intermediate and small information-based companies in the region.

A characteristic of information technologies is the speed and strength that emerging cluster economies use to create new innovations in products and processes. Since the BLS collects, transmits, and analyzes information, the prospect of relocation to Dayton promises significant linkages. Another advantage of relocation to Dayton is the good fiber optic system that is available throughout the region, particularly in the downtown area. Finally, the employment that the relocation could bring to the downtown area is another important linkage. The region has been actively seeking to enhance the central business district and has supported several successful public ventures. However, a significant increase in private employment is an ultimate goal.

The local respondents did not anticipate any stresses on the labor market, even though the number of anticipated jobs is large. The region has the capacity to absorb the employment requirements except possibly in some highly technical areas. In these cases, the government's ability to

hire in the national labor market should avoid any labor shortages for the department. Several major universities are close by and could be expected to provide skilled employees in the future.

The real estate market could accommodate the space requirements easily, although locating all of the employees in one building in the central business district is problematic. The most efficient solution would be to locate some of the functions downtown and the remainder in one of several buildings within a 5 to 10 minute driving distance from the central business district. Officials with the Downtown Dayton Partnership and the Kettering Business Park expressed confidence that adequate space could be made available and a willingness to help in funding adequate space.

**Table 14**  
**Relocation Feasibility for the Bureau of Labor Statistics**

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Is Agency Directly Related to Broad Public Policy Making?	No, not directly
Are Frequent Face-to-Face Washington Contacts Necessary?	No
Can Important Linkages be Formed?	Many
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	3,109

**Conclusion: Relocation is feasible.**

*Economic Impact*

For purposes of the analysis, the Bureau of Labor Statistics was placed in the category of Management and Consulting Services because of the similarity of work, primarily focused on the analysis of data. The employment multiplier was 1.9052. The initial change of 1,636 jobs would eventually result in a permanent increase in employment of 3,109 jobs.

Other than the category of Business Services, which includes Management and Consulting Services, the principal sectors that will experience growth are: Retail Trade (186) jobs, Eating and Drinking Places (173 jobs), Health Services (154 jobs), and Miscellaneous Services (135 jobs).

**B. Office of Justice Programs**

The Office of Justice Programs provides funding, training and technical assistance to state and local governments to combat violent crime, especially drug-related crime. The OJP's budget authority for 2002 is approximately \$1,275,000,000. Its obligations are diverse, including research, evaluation and demonstration programs, criminal justice statistical programs, child protection activities, regional information sharing coordination, a white collar information clearinghouse, counter-terrorism programs, as well as general management and administration.

*Feasibility of Relocating From Washington*

In discussions with officials in the OJP, it was concluded that the functions of the agency dealt directly with issues of terrorism and therefore required frequent, sometimes spontaneous, and quick face-to-face contact with a variety of agencies including federal law enforcement agencies. In addition, the office was undergoing reorganization to help address the counter-terrorism challenges. Therefore,

## Dayton's Economic and Business Base

There are also many businesses in Dayton that could provide synergies perhaps not present in the Washington, D.C. area.

### *Bureau of Labor Statistics*

- ❖ *Innovative Fiber Optic Solutions, Inc.* deals with a number of large corporations' high-speed data transfer needs. It provides and maintains fiber optics networks for businesses, as well as offers a consulting service on how to incorporate the latest data transfer technology into existing systems.
- ❖ *RSIS Inc.* primarily operates in the field of IT network engineering and management. Its specialized knowledge is in more than setting up network systems. It also provides information transfer protection and information insurance.
- ❖ *Business Data Solutions, Inc.* already works with a number of publishers and could potentially have strong links to the BLS. It is a data transferal firm, offering services in transferring paper documents to digital documents, and transferring digital documents to microfilm, data entry, and retrieval software.
- ❖ The Dayton area already has 28 companies that list their primary field of business as information processing. These range from large IT companies such as *Lexis-Nexis* to small businesses, and illustrate that Dayton already possesses a workforce skilled in data processing and organization.
- ❖ Dayton has a significant presence in the research world. Companies such as *Beta Industries*, *Mission Research Corporation*, or the *National Composite Center* perform a variety of data analysis and research work, both scientific and non-scientific.

### *Office of Justice*

- ❖ *Lexis-Nexis* has a firm footing in the field of legal documentation, presentation and analysis. Its purpose is to provide authoritative legal, news, public records and business information; including tax and regulatory publications in online, print or CD-ROM formats.
- ❖ Dayton has a large number of companies currently involved in research and development, and a high level of research expertise, which would also provide synergies with the Office of Justice.
- ❖ *Wright Patterson Air Force Base* (with almost 20,000 civilian and military employees) contains the foremost aeronautical acquisition center in the United States along with 125 other tenant organizations. This means a number of companies have sprung up in the surrounding area that undertake military anti-terrorism work, one of the main thrusts of the Office of Justice. Examples include *Adroit Systems, Inc.*, a company that specializes in defense electronics systems, in particular national security systems, and *Sytex, Inc.*, a business management, logistics and systems engineering firm specializing amongst other things in homeland security, but there are many companies.
- ❖ The Dayton area has a strong presence in the legal field with more than 51 law firms operating in the city of Dayton alone, specializing in a wide variety of areas, which indicates the strength of the current legal workforce.

it was determined that it would not be feasible to relocate the Office of Justice Programs at this time. Added to concern about the feasibility of relocation from Washington is the fact that the agency attempted decentralization in the 1970s but that attempt was aborted. The reason the decentralization was not completed was not explored.

In spite of potential problems with decentralization, it remains likely that several of the functions within the office could be relocated to places like Dayton. However, the situation was too fluid (given the reorganizations associated with the war on terror) to warrant further analysis. Accordingly, the relocation from Washington was considered not feasible at this time.

*Feasibility of Relocating to Dayton*

The Dayton region has the resources to accommodate a relocation of The Office of Justice Programs. Housing the office would not place a significant strain on the real estate market and most of the personnel with advanced or technical skills could be hired in the national labor market. The region is home to the University of Dayton Law School, so a supply of one of the largest skilled job categories required by the Office of Justice Programs could be accommodated. One problem might be that the Office appears to need individuals with special “Washington” knowledge of rules, regulations and contacts, particularly as the office undergoes changes in functions as the result of concerns about terror.

*Economic Impact*

For purposes of impact measurement, the Office of Justice Programs was treated as the Legal Services sector. The initial increase of 966 jobs would create an additional 878 jobs for a total regional employment increase of 1,844. In addition to Business Services (1,123 jobs created) other sectors with major impact would occur in the Retail Trade sector (134 jobs), Health Services (115 jobs) and Eating and Drinking Places (97 jobs).

**Table 15**  
**Relocation Feasibility for the Office of Justice Programs**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	Possibly
Can Important Linkages be Formed?	Some
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	1,844

**Conclusion: Relocation is not feasible at this time.**

**C. Summary**

Although relatively small, the Dayton metropolitan area has several distinct advantages. The economy has a diverse base, steeped in research and development as well as high-tech skills through the presence of national IT leader Lexus-Nexus and Wright Patterson Air Force Base. While

relocating the Office of Justice Programs does not seem feasible, relocating the two agencies could create 5,000 additional jobs in the Dayton economy.

**Table 16**  
**Economic Impact of Federal Decentralization on Dayton**

Agency	Relocated Jobs	Total Jobs Created
Bureau of Labor Statistics	1,636	3,109
Office of Justice Programs	966	1,844
<b>Total</b>	<b>2,602</b>	<b>4,953</b>

## 8. Toledo

Toledo is the largest metropolitan area in Northwest Ohio. The Metropolitan Statistical Area includes Fulton, Lucas and Wood counties. The region as a whole has experienced major restricting and decline in the manufacturing sector, although it remains a manufacturing and production-oriented community. The location quotient for manufacturing of transportation equipment, at 3.31, is over three times the national average. The largest employers in the regions are Daimler Chrysler Corp, Jeep Assembly, GM Corp, power train Division, and Daimler Chrysler, machining plant. The region maintains a corporate headquarters function including three fortune 500 companies, all manufacturing-oriented—Dana Corporation, Owens Corning, and Owens Illinois.

In the future, professional and service jobs are anticipated to grow most rapidly. Production occupations are the most concentrated professions in the Toledo area, but social service occupations and healthcare support are also occupations disproportionately represented in the region. Underrepresented occupations include Business and Financial Operations and Computer and Mathematical Occupations. See Appendix C.

The central city, Toledo, experienced a decrease in population and the housing stock declined by 5 percent during the past two decades.<sup>40</sup> The central county, Lucas, has also experienced some population loss but not to the extent of Toledo, and even the region as a whole did not grow during the period.

Toledo officials expressed support for the idea of relocating some federal employment to the region and felt it would assist in economic development activities, particularly in the downtown areas. They also felt the region had assets to offer that could link with federal employment. One of the comparative weaknesses of the region is limited air transportation. However, given the congestion of Dulles Airport in Washington, and its distance from the capital area, the trade-off of less convenient flights from Toledo might be acceptable. In addition, airports at nearby cities such as Detroit enhance the area's transportation abilities.

### A. The United States Geological Survey

The agency is responsible for classifying the public lands and examining the geological structure, mineral resources, and products primarily within the United States. In addition, the agency does work outside of the country as well. The Geological Survey (USGS) provides relevant and objective scientific studies relating to its major areas of responsibility including investigating and

assessing the nation's natural resources, researching global geographic change, assisting in the management of public lands by providing information, ensuring and preparing geographic spatial data, maintaining land remote-sensing data, maintaining a national mapping program and so forth.

The agency's new budget authority for 2002 is approximately \$1,315,000,000.

### *Feasibility of Relocating Outside of the Washington Area*

The USGS is a large agency employing nearly 10,000 persons, including many consultants. However only about a tenth of the agency's employees and consultants are located in the Washington D.C. office. Nevertheless, as a technical and scientific agency, there appears to be no reason that the agency headquarters should be in Washington. When asked about the need for a Washington, D.C. location, USGS officials replied only that it was part of the Department of Interior and thus needed to be in the capital.

The work of the USGS is not directly related to public policy, and given the scientific nature of a substantial portion of what is expected from the agency, some buffers between the work of the agency and partisan politics would appear desirable.

Frequent contact with policymakers does not appear to be substantial based on the functions of the agency. Furthermore, given the research-based nature of the work of USGS, it seems likely that most of its reports, meetings, and recommendations could be handled through electronic means. Given the dispersed nature of the existing employment, the agency could be well positioned to locate in Toledo.

### *Feasibility of Relocating to the Toledo Region*

The linkages between businesses in the Toledo area and the USGS are not as direct as was the case with other agencies in this pilot study. Nevertheless, there are several institutions that would benefit from the location of the USGS in the Toledo region. Many of these agencies could also be of significant benefit to the USGS. Toledo is on the Great Lakes, one of the nation's most valuable natural resources and as a result, there are several resources-oriented organizations in the area. Among the important linkages are the Great Lakes Research Centers. The University of Toledo has a center devoted to legal issues regarding the Great Lakes and natural resources in general.

Even the strong manufacturing base could serve as a useful link with the USGS because many of the environmental concerns that the agency tracks will require an understanding of manufacturing technology to recognize the causes and solutions.

Employment that the relocation of the USGS could add would be a significant boost to the region, both in terms of increasing employment, and providing jobs suitable for the central business district. Based upon conversations with individuals within the USGS agency, a move to Toledo would represent an increase of about 900 jobs, so the office space requirements should be about 200,000 sq. ft. The office space required for that number could be accommodated within or near the central business district, so no strain on the local real estate market is anticipated.

Given the looseness of the labor market and a legacy of slow growth manufacturing activities, the region can easily accommodate the non-technical labor force needs imposed by relocation. While most of the professional staff is anticipated to come from the national labor market, the local educational institutions should be able to assist in providing skilled scientists and researchers.

*Economic Impact*

Engineering, Architectural and Surveying Services, were considered the closest private sector counterpart to USGS. Based upon the employment benchmark of 900 jobs, the probable increase in final demand was about \$89,000,000. The employment multiplier was 1.9332, so the total employment increase is estimated to be 1,735.

The sectors most affected according to the RIMS-II model are: Business Services, (1,198), falling quickly to Retail Trade, (103), Health Services (86) and Miscellaneous Services (77).

**Table 17**  
**Relocation Feasibility for the U.S. Geological Survey**

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Is Agency Directly Related to Broad Public Policy Making?	No
Are Frequent Face-to-Face Washington Contacts Necessary?	Few
Can Important Linkages be Formed?	Some
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	1,735

**Conclusion: Relocation is feasible.**

**B. National Highway Traffic Safety Administration**

The mission of the National Highway Traffic Safety Administration (NHTSA) is to reduce deaths, injuries, and economic losses due to highway accidents. In pursuit of this mission, the agency implements programs relating to the safety of cars and trucks. Its principal activities include:

- ❖ Research and development related to motor vehicles and equipment;
- ❖ Analysis of crash data;
- ❖ Investigation of motor vehicle problems;
- ❖ Administration of recalls;
- ❖ Issuance of vehicle safety standards; and
- ❖ Oversight of overseas traffic safety programs.

Total budgetary authority for the NHTSA programs is \$426,000,000 (est.) for 2002.

*Feasibility of Relocating Outside of the Washington Area*

The NHTSA is involved principally in technical safety studies. Many of its activities border on policymaking because judgments about the tradeoffs between costs and safety should be made under the direction of individuals closely responsible to the electorate. However, such direction could easily be handled through remote communications, so there is little direct necessity for a Washington location beyond the possibility of a limited liaison function.

The primary reasons given for the location in Washington were related to communications and

### Toledo's Economic and Business Base

Just as there have been for Akron, Dayton, and Cleveland, there are also many existing businesses in Toledo that could provide synergies perhaps not present in the Washington, D.C. area.

#### *The United States Geological Survey*

- ❖ As the premier Great Lakes research site in the United States, the ***Great Lakes Science Center*** is actually run by the U.S. Geological Survey. It is headquartered in Ann Arbor Michigan, a mere 52 mile drive away from Toledo, has a field office in Sandusky, Ohio, and works very closely with both the ***University of Toledo*** and ***Bowling Green State University***.
- ❖ Due to Toledo's and Ann Arbor's proximity to the Great Lakes, there are many other scientific research stations in this general area, such as the ***Great Lakes Environmental Research Laboratory*** or the ***Great Lakes Aquatic Ecosystem Research Consortium***. This indicates that there is a large pool of labor skilled in scientific, geographic and environmental research.
- ❖ The ***University of Toledo*** represents a significant learning institution in the vicinity with which numerous ties could be made. Specifically, it has a large and well-respected ***Department of Geography and Planning***, perhaps indicating a potential source of researchers or interns.

#### *National Highway Traffic Safety Administration*

- ❖ The fact that Toledo is in the heart of the U.S. automobile manufacturing region means a number of companies with close ties to the industry, such as ***DANA***, a 70,000 strong company headquartered in Toledo, can provide value-added solutions for original-equipment and aftermarket automotive customers, but there are many others.
- ❖ Automotive safety is a primary concern for ***The Guardian Industries***, (originally ***Permaglass*** and founded in the Toledo region), as one of its main areas of operation is the production of special shatterproof glass for use in the automobile industry. This invention has won numerous awards and saved countless lives.
- ❖ The Toledo area has several research facilities and companies skilled in working with high-tech research, such as ***Mettler-Toledo***, a world leader in laboratory instruments, or the ***University of Toledo's*** research labs, or the ***Medical College of Ohio's*** research labs. This demonstrates that there is an ample supply of labor in the Toledo region to support a large research and testing establishment.

coordination. The NHTSA administers a community highway safety program jointly with the Federal Highway Administration, so some coordination between the two agencies is necessary. However, the scope of the coordination appears to be manageable by remote communications. It also consults with public safety interest groups, automobile manufacturers who have D.C. lobbyists, and other government agencies. Discussion with agency officials revealed no reason that these activities could not be undertaken with remote telecommunications. Some liaison function may be required, but that necessity should not block the fact that most of the Washington-based operations could be relocated.

The NHTSA has some high-profile dealings with Congress as exemplified by the Firestone-Ford Explorer congressional hearings.

### *Feasibility of Relocating to the Toledo Region*

Toledo is in the heart of vehicle production in the United States. It is close to Detroit, Michigan and the large concentration of automobile parts producers that line Interstate 70 from the Great Lakes to the Mid South. It is ideally suited as headquarters of a government agency involved in setting and regulating safety standards for cars and trucks.

In addition, Toledo has a substantial presence in automobile production. Many of the equipment makers in the region have their own, very sophisticated design, testing and research facilities, which could assist NHTSA. It could be anticipated that a location in Toledo would benefit the private sector automobile producers and at the same time agency officials might benefit from contacts with individuals most directly working on safe designs. However, there is an important caveat to co-location of government and the businesses they regulate. Officials will have to be careful that the agency is not “captured” by the industry it regulates.

Because of the economic history of the Toledo region, including the slow growth of central city employment, there is adequate office space to accommodate a relocation of the NHTSA to the area. A relocation of 562 persons would not create significant shocks to the office market. The linkages such relocation could provide for other downtown business—restaurants and other small stores—would likely be quite significant.

The labor force in the region is adequate to handle the demands that the agency might have, particularly in light of the ability of federal agencies to hire in the national job market. Several universities in the area can also educate legal and engineering talent.

### *Economic Impact*

While recognizing that a few employees of the NHTSA may remain in Washington for liaison functions, the number is anticipated to be very small. For purposes of the impact analysis, it was assumed that the entire Washington contingent would move to Toledo. Accordingly, the impact of an increase of 562 jobs was calculated. The private sector equivalent to the work of the National Highway Traffic Safety Administration was determined to be Testing and Research Labs.

The RIMS-II model provides an employment multiplier of 1.592 and projects a total employment impact of 891. The sectors most affected will be Business Services (632 jobs). Retail Trade (48 Jobs), Health Services (40 jobs), and Eating and Drinking Places (34 jobs).

**Table 18**  
**Relocation Feasibility for the National Highway Traffic Safety Administration**

Is Agency Directly Related to Broad Public Policy Making?	Slightly
Are Frequent Face-to-Face Washington Contacts Necessary?	No
Can Important Linkages be Formed?	Many
Can Region Absorb Activity?	Yes
Willing to Receive New Activity?	Yes
Overall Jobs Created	891

**Conclusion: Relocation is feasible with possible liason function.**

### C. Summary

The Toledo economy seems to be particularly well suited to relocating the U.S. Geological Survey and the National Highway Traffic Safety Administration. Existing concentrations of federal and private employment in these industries could create economic synergies that promote further regional development beyond the initial relocation. While about 1,500 jobs would be located initially, more than 2,625 jobs could be created through multiplier effects.

**Table 19**  
**Economic Impact of Federal Decentralization on Toledo**

Agency	Relocated Jobs	Total Jobs Created
U.S. Geological Survey	900	1,735
National Highway Traffic Safety Administration	562	891
<b>Total</b>	<b>1,462</b>	<b>2,626</b>

## 9. Conclusions and Considerations

This study shows that a more balanced geographic dispersion of federal employment is feasible and could provide substantial benefits to local regions, thereby strengthening the economy as a whole. At the same time such a policy could reduce congestion in Washington, reduce security requirements and enhance the political culture.

As a feasibility study, only a few agencies were considered and in almost all cases employment decentralization was feasible. Nevertheless, this report undoubtedly understates the feasibility of employment decentralization because the level of analysis was the agency as a whole. Within agencies there are numerous functions that could be decentralized. While it is easy to recognize these possibilities with particular functions such as data entry or telephone center functions, even high-level, technical work could be decentralized.

The evolution of large federal government employment concentrations in Washington, D.C. may be an unintended consequence of bureaucratic expansion, but decentralization creates some

implementation problems.

First, based upon interviews conducted in the course of this study, many Washington-based officials believe that Washington, D.C. is the natural location for government employment that is not intended to provide direct services. Some local officials who were asked whether there were any federal agencies that would fit well in their regions evidenced similar attitudes. Thus a critical but subtle implementation problem is the need to overcome the implicit assumption that all non-routine federal government employment should be located in Washington, D.C.

A second implementation problem is that over time linkages between government agencies have evolved that are seen as essential. In spite of the enhanced ability to develop virtual offices, many officials see this face-to-face contact as critical to their agency's operations. While never discussed, it is also likely that many government workers believe, (perhaps correctly) that "face-time" with persons who can promote them is an important aspect of career advancement.

A related implementation problem is the natural reluctance of employees currently living in Washington to relocate. They have roots in the area. Yet the knowledge of federal employees will be needed to determine how best to decentralize federal employment. Since many of the workers who might have to be relocated are nearly invaluable to the operation of their agency, and since they may not choose to relocate, decentralization risks the loss of critical "institutional knowledge." Counterbalancing this concern is the fact, noted previously, of the aging of the federal workforce.

The third problem with immediate implementation is cost. However, relocation costs can be reduced if they are spread over time. In this case dispersal of employment will be costly if a large percentage of locations were changed immediately. The longer the time to adjust to a new spatial distribution of employment, the lower the cost will be. But it is sometimes easy to postpone immediate actions when plans are long term.

In light of substantial and serious implementation problems, several policy suggestions may be useful.

In order to overcome the assumption that Washington, D.C. is the proper site for all federal employment, a policy manual should set forth a set of criteria for geographic location. Agencies should be required to consider alternate locations when employment is expanded.

Consider connecting the much publicized privatization movement with the decentralization movement. Privatization constitutes an important institutional change point when geographic relocation could be addressed. At the same time there is a very real danger that privatization may contribute to geographic concentration because of the desire of government officials to keep their subcontractors close or because subcontractors may recognize advantages to being near their principals. In some cases the proximity may carry economic efficiencies, but in other cases, the proximity may just reflect advantages of personal acquaintanceships in the contracting process.

Finally, in order to minimize the costs of employment decentralization, it should be implemented as part of a long-term policy. There are critical points within each agency when the costs of relocation may be especially low. Two points when employment decentralization will be opportune are when reorganization occurs and when a new building is being considered or an existing building is renovated. Federal guidelines should require a consideration of potential decentralization at these points.

## Notes

- <sup>1</sup> Thanks are due to anonymous reviewers for constructive comments and suggestions. This study would not have been possible without the assistance of numerous representatives of public organizations and private businesses who provided information and perspectives about the local regions. Finally, many representatives of federal agencies provided insights about activities, employment requirements, and location needs of their organizations.
- <sup>2</sup> U.S. General Accounting Office, *Human Capital: Key Principles From Nine Private Sector Organizations* (Washington, DC: Government Printing Office, January 2000), 1.
- <sup>3</sup> U.S. General Accounting Office, *Human Capital: Managing Human Capital in the 21<sup>st</sup> Century* (Washington, DC: Government Printing Office, March 2000), 2.
- <sup>4</sup> U.S. Senate, Committee on Governmental Affairs, Subcommittee on Oversight of Government Management, Restructuring, and the District of Columbia, *Report to the President: The Crisis in Human Capital* (Washington, DC: December 2000), 2.
- <sup>5</sup> Conservative estimates based on the current retirement rate suggest that over 660,000 employees will retire by 2010.
- <sup>6</sup> U.S. Office of Management and Budget, *The President's Management Agenda: FY 2002* (Washington, DC: Government Printing Office, 2002), 12.
- <sup>7</sup> Gail C. Christopher and Robert J. O'Neill, "The Federal Government's People Crisis," *Federal Times*, December 2000.
- <sup>8</sup> Peggy Mattei, *Acquisition Workforce 2005: "Managing the Crisis,"* (Washington, DC: Office of Acquisition Education, Training and Career Development, 2002). Data generated from the Social Security Administration.
- <sup>9</sup> Brian Friel, "Reality Check," *Government Executive*, 15 May 2002.
- <sup>10</sup> Specifically, Walker noted that narrow job descriptions are inconsistent with what happens in the real world.
- <sup>11</sup> Christopher and O'Neill, "The Federal Government's People Crisis."
- <sup>12</sup> U.S. General Accounting Office, *Human Capital: Managing Human Capital*, 14.
- <sup>13</sup> U.S. General Accounting Office, *Human Capital: Managing Human Capital*, 14.
- <sup>14</sup> U.S. General Accounting Office, *Human Capital: Managing Human Capital*, 11.
- <sup>15</sup> U.S. General Accounting Office, *Human Capital: Managing Human Capital*, 15.
- <sup>16</sup> U.S. General Accounting Office, *Human Capital: Taking Steps to Meet Current and Emerging Human Capital Challenges* (Washington, DC: Government Printing Office, July 2001), 2.
- <sup>17</sup> U.S. Office of Management and Budget, *The President's Management Agenda*, 11-15.
- <sup>18</sup> Those agencies are the Federal Aviation Administration, the U.S. Patent and Trademark Office, the U.S. Office of Student Financial Assistance and the Internal Revenue Service. See, Hal G. Rainey, "A Weapon in the War for Talent: Using Special Authorities to Recruit Crucial Personnel," *The Pricewaterhouse Coopers Endowment for the Business of Government*, December 2001, 4.
- <sup>19</sup> Rainey, "A Weapon in the War for Talent," 19-27.
- <sup>20</sup> U.S. Office of Management and Budget, *The President's Management Agenda: FY 2002*.
- <sup>21</sup> Sally Coleman Selden, Patricia Wallace Ingraham, and Willow Jacobson, "Human Resource Practices in State Government: Findings From a National Survey," *Public Administration Review* (September/October 2001): 601.
- <sup>22</sup> This study examines the potential for decentralizing some federal activities to take advantage of human capital in other parts of the country. By implication, this strategy might also provide an important new mechanism for managing costs more effectively. This issue will be explored in detail in a subsequent study.
- <sup>23</sup> Nick Wakeman, "Foreign Nations Outpace U.S. in Outsourcing," *Washington Technology*, 28 August 2000.
- <sup>24</sup> U.S. Office of Budget and Management, *The President's Management Agenda*, 17-18. The 850,000 estimate is derived from inventories by federal agencies in compliance with the Federal Activities Inventory Reform Act (FAIR). For example, see Jay Whitehead, "Outsourcing's Brother Act," *Washington Times*, 24 November 2002.
- <sup>25</sup> Trevor Colling, "Contracting Public Services: The Management of Compulsory Competitive Tendering in Two County Councils," *Human Resource Management Journal* 3, no.4 (Summer 1993), 5.
- <sup>26</sup> Geographic decentralization must be distinguished from other types of decentralization. Decentralization of authority is common in business and government. The federal government is founded on the idea of separation of powers among the three branches. The federal system of government is predicated on separation of governing responsibilities between national and state governments (federalism). States in turn delegate authority to local jurisdictions. The concern of this paper is not with the decentralization of authority among

- jurisdictions. This study is motivated by concerns about the excessive concentration of employment in a particular geographic area.
- <sup>27</sup> Wendell Cox, "U.S. Journey To Work National Data Since 1960: Detailed." Available on-line at <http://www.publicpurpose.com/ut-jtw2000usataxi.htm>. See also, "Is Rail a Transit Success Story?" *Policy Note* (Columbus, OH: The Buckeye Institute for Public Policy Solutions, November 2002).
- <sup>28</sup> Samuel R. Staley, *If You Build It, Will They Ride? The Potential of Rail Transit in Ohio's Major Cities* (Columbus, OH: The Buckeye Institute for Public Policy Solutions, October 1999), 27.
- <sup>29</sup> Today there is significant dispersal of federal employment engaged in service provision. For instance, federal postal workers, Social Security employees, and Veteran Affairs hospital workers are employed throughout the country. This study is concerned with activities that are not intended to service only a local area but can provide services for the entire country from a non-Washington, D.C. location. Similarly, military facilities were not considered for geographic decentralization.
- <sup>30</sup> There are also benefits from urban growth. The "best size" for a city depends upon a variety of factors including the economic structure of the region.
- <sup>31</sup> Jagdish Bagwati, "Directly Unproductive Profit-seeking (DUP) Activities," *Journal of Political Economy* 90, no. 5 (1982): 988-1002.
- <sup>32</sup> Jane Jacobs, *The Economy of Cities* (New York, NY: Random House, 1969), especially chapter 3.
- <sup>33</sup> Robert K. Weiler, "How to Sharpen Virtual Business," *Informationweek.com*, 12 November 2001. Also, "The Real Virtual Business," *The Economist*, vol. 351 (1999): 71-72.
- <sup>34</sup> Unemployment, however, may temporarily be high almost everywhere during an economic downturn.
- <sup>35</sup> Appendix B shows location quotients for the area. The larger the location quotient, the greater the representation of each sector in Akron compared to the U.S. economy as a whole.
- <sup>36</sup> U.S. Office of the Federal Register, *The United States Government Manual, 2001/2002* (Washington, DC: Government Printing Office, 2001) and U.S. Office of Management and Budget, *Budget of the United States, Fiscal Year 2003* (Washington, DC: Government Printing Office, 2002). These sources were used for most of the agencies studied in this report but will only be cited here.
- <sup>37</sup> See, for example, the key regional industries for the Cleveland/Akron corridor cited by the Cleveland Growth Association at [http://www.clevelandgrowth.com/Market\\_data/Clusters/KRI/index](http://www.clevelandgrowth.com/Market_data/Clusters/KRI/index).
- <sup>38</sup> The location quotient is an index for comparing an area's share of a particular activity with the area's share of some basic or aggregate phenomenon. For example, if region A has 10 percent of the manufacturing employment of the region but 30 percent of the total employment, its location quotient for manufacturing in area A is  $10/30 = 0.333$ . Location quotients can be interpreted thusly:
- ❖ If the location quotient for activity X is greater than one, this indicates that activity X is relatively concentrated in an area compared to the entire region;
  - ❖ If the location quotient for activity X is equal to one, this indicates that the amount of activity X undertaken in an area is comparable to the entire region; and
  - ❖ If the location quotient for activity X is less than one, this indicates that activity X is less concentrated in a particular area compared to the entire region.
- <sup>39</sup> The Ohio Plan Study Committee, *The Third Ohio Frontier of Knowledge*, 15 March 2002.
- <sup>40</sup> U.S. Bureau of the Census, *County and City Data Book 2000*, (Washington, DC: Government Printing Office, 2002).
- <sup>41</sup> U.S. Department of Commerce, Bureau of Economic Analysis, *Benchmark Input-output Accounts of the United States, 1987* (Washington, DC: Government Printing Office, 1994).
- <sup>42</sup> In the case of this report, IC is the initial change in federal employment due to decentralization.
- <sup>43</sup> Sharon M. Brucker, Steven Hasting, and William R. Latham III, "The Variation of Estimated Impacts from Five Regional Input-Output Models," *International Regional Science Review* 13 (1990): 119-39. Also see U.S. Department of Commerce, *Regional Multipliers* (3<sup>rd</sup>; Washington, DC: Government Printing Office, 1997).
- <sup>44</sup> In the case of Akron and Cleveland, the more specific Primary Metropolitan Statistical Area (PMSA) was used.
- <sup>45</sup> U.S. Department of Commerce, *Regional Multipliers*, 10.

## Appendix A RIMS-II Multiplier Methodology

The Regional Input-output Modeling System, developed by the Department of Commerce, served as the foundation for measuring the multiplier effects used in this study. The model is based on an input-output table that shows the value of inputs purchased from each industry and sold to every other sector in the local economy.<sup>1</sup>

The ability of the input-output models to show detailed impact is superior to the aggregated approaches used in some impact studies. A standard formula for expressing economic impact is:

1)  $TC = k * IC$

where TC is the total change in output, k is a multiplier, and IC is the initial change in economic activity.<sup>2</sup>

If a multiplier was 2 and the initial change in employment was 100, the simple multiplier would suggest a total impact of 200. Input-output analysis allows the total change in economic activity and the multiplier to be treated as a vector, so that changes in individual industries can be observed individually rather than lumped together. In the example above, the 200 employee increase in jobs could be expressed as 10 jobs in industry A, 3 jobs in industry B and so forth, totaling to 200. The high degree of desegregation in the input-output models enables analysts to observe how changes in output can be expected to differ among diverse types of activities and how different parts of the local economy will experience unique impact from the same changes in economic activity.

An additional strength of the RIMS-II model is that a separate set of impact multipliers can be generated for each region. This advantage is important because the size of a region's multipliers can differ significantly among regions. Larger multipliers are associated with areas that are: 1. More isolated, 2. Larger, 3. Economically integrated, and 4. Have lower incomes. Each of the factors above is associated with a greater degree of responding within the local economy.

The RIMS-II multipliers reflect input-output data for the 1997 annual input-output table and 1999 regional data. The technical coefficients of an input-output table typically change rather slowly, so the use of 1997 coefficients should not introduce significant errors. The estimates based on the RIMS- II model are as accurate as more expensive models such as surveys.<sup>3</sup>

### A. Definition of the Regions

The first step in applying the RIMS-II multipliers to the initial change in export employment was to determine the area of impact. The regions selected for analysis were Metropolitan Statistical Areas (MSAs) in Ohio.<sup>4</sup> MSAs are functional economic areas composed of a central city, the central county(ies) plus all contiguous counties that have close economic ties to the central county and are metropolitan in character. Multiplier effects diminish over distance. Since MSAs are defined on the basis of the degree of economic integration, MSAs are well suited to represent the area over which the multiplier effects spread due to an initial increase in employment. However, it is important to note that if the regions were defined larger geographic areas, for instance, if outlying counties not technically part of the MSA were included in the definition of the region, the impact would be larger.

## **B. Types of Impact**

The multiplier analysis is usually applied to two distinct types of impact, one time and continuous effects. Construction of new facilities is a frequently considered one-time effect. If projects require new buildings or other facilities, construction expenses will directly influence the levels of output, income and employment. However, these effects will be short-lived.

The best way to conceptualize the impact of one time construction spending is as a temporary increase in the level of activity gradually returning to the pre-construction level. In other words, the long-run equilibrium level of economic activity will not be influenced directly by construction impacts. A new facility may, however, set off other changes that will alter the long-run equilibrium level of economic activity.

The longer-term, continuing impacts are more important because they will permanently increase the level of economic activity. The more important impacts will be due to the increased flow of money coming into the region due the new activity itself.

This report assumed that the transfer of jobs could be achieved without significant new construction. The reasons for this assumption are three. First, the impacts related to construction are one time only whereas the focus of this study is on continual, year after year, changes. Second, most of the communities used in this report have sufficient real estate capacity to absorb employment changes. Third, any estimate of construction impacts would be very inaccurate.

Our analysis often found that federal employment could be relocated to areas with little immediate new construction. While adaptation of existing structures might be necessary, the research needed to determine specific space requirements for each federal agency and the types of real estate available in each region was beyond the scope of this study. To the extent that regions analyzed would experience any new construction, the total economic impact of the transfer of employment would be larger than the simulated results.

Finally, the input-output model will not show the impacts of the likely synergies that the relocation of new activities will have. When two or more related activities are located together, the economic efficiency of the entire cluster may increase and new ideas may result in better production techniques, improvement in existing products, or the development of new products. While such agglomeration economies are an important source of beneficial impacts, the synergies tend to be subtle and difficult to forecast. Economic synergies were not ignored in this report. On the contrary they are an important part of the evaluation criteria for each agency. However, they cannot be treated within the framework of traditional impact studies.

## **C. Identifying the Affected Industry**

The input-output multipliers are very detailed, except for employment in the government sector. Therefore, it was necessary to determine which private sector industry in the input-output table most closely resembled the particular government agency being considered.

The RIMS-II model has three sectors that related to federal government employment: U.S. Postal Service, Federal Electric Utilities, and Other Government Enterprises. There is also a category for State and Local Government Enterprises. These categories did not reflect the types of jobs being considered for relocation. Even the category Other Government Enterprises was an amalgamation of activities that represented only a general average, not a distinct activity.

Consequently, greater accuracy could be obtained by assigning the same multipliers to the

federal agencies as were developed for close, private sector counterparts. For example, in determining the impact of the Overseas Private Investment Corporation, the federal agency was assumed to have the same impact as private insurance companies of the same size. The determination of the appropriate private sector counterpart was based on discussions with agency officials about the nature of their work.

#### **D. Determining the Initial Change in Economic Activity**

The initial change in activity is intended to reflect the initial demand increase imposed on a local economy due to the change in the federal government activity being considered. Total budgets of federal agencies being considered for relocation were not used as the estimated changes in total final demand because the budgets normally contained a pass through of funds to other agencies or to state and local governments. Consequently, the change in employment was the benchmark for measuring the initial annual change.

The number of total agency employees provided in the 2002 Budget of the United States was not used because some agencies had non-Washington, D.C.-based employees. Consequently, conversations with officials of the potential relocation targets were used to determine the number of federal employees in the Washington, D.C. office as well as the number of on-site consultants. Thus the number of employees that would be transferred or hired in each region was the basis of the economic impacts. Employment fluctuates over the course of the year for most agencies but the inaccuracies introduced by this complication will be small even if an agency were operating significantly above or below its typical employment level.

Changes in the dollar value of final demand are necessary to determine the disaggregated multiplier impacts—how specific industries will be affected by the change in activity. In order to convert the employment changes to final demand increases the following approach was employed:

If only data on the initial change in earnings or employment are available, the RIMS-II user can still estimate the change in final demand and thus estimate the output impacts. First, the final-demand multiplier for earnings (or employment) is divided by the direct-effects multiplier for earnings (or employment) per dollar of final demand. Next, the initial change in earnings (or employment) per dollar of final demand is divided by the change in earnings (or employment) per dollar of final demand to yield the change in final demand.<sup>5</sup> The change in final demand was then multiplied by the final demand employment multipliers (Table 1.3 in the RIMS-II set of multipliers) to calculate the total impact by sector.

The input-output-based impact analysis is a state-of-the-art evaluation technique. However, as the discussion above clearly showed, it is not a comprehensive measure. It excludes numerous impacts such as quality of life, impact on taxes and revenues, long-run agglomeration economies and population flows. In this report, efforts have been made to consider these qualitative impacts as well as the multiplier effects of increased economic activity.

#### **E. Alternate Models**

Other models have been employed to answer questions about economic impacts similar to those addressed in this paper. IMPLAN, sold by the Minnesota Implan Group Inc., and REMI, Regional Economic Models Incorporated, are both based on input-output models similar to the model used in this paper. In fact they are both based on the BEA data. The multipliers are based on the

same theoretical relationships as well.

The competing models are more flexible than the RIMS-II multipliers used in this paper because they can be combined with other data to trace other impacts and perform other types of simulations or “what if” analysis. For example, they could be used to examine possible impacts on public services from an initial increase in government employment. However, simulation of many impacts can become problematic, particularly for large changes where alternate policy decisions regarding how to respond to increased employment are an unknown, but important determinant of outcomes.

The Department of Commerce model was employed because estimates of the impacts on other variables would not add significantly to the purpose of this manuscript. In fact, additional impacts could have the deleterious effect of giving the impression that the impacts are more accurate than may be the case. Often, additional complexity can result in additional errors. The purpose of the employment multipliers was to provide a measure of the overall impact of increased federal employment changes of various sizes and to illustrate the impacts of various sectors. The impacts on other variables can be approximated based upon the employment impacts.

## Appendix B Industrial Location Quotients

**Table B1**  
**Employment Location Quotients for Akron Metropolitan Area (2001)**

	National	Akron PMSA	LQ
<b>Total</b>	131,922	336.1	
<b>Goods-Producing Industries</b>	24,944	78.6	1.237
Construction	6,685	16.1	0.945
Manufacturing	17,695	62	1.375
Durable Goods	10,636	32.5	1.199
Fabricated Metal Products	1,483	6.8	1.8
Industrial Machinery and Equipment	2,011	10.4	2.03
Metalworking Machinery	306	4.2	5.389
Electronic and other Electric Equipment	1,631	2.9	0.698
Transportation Equipment	1,760	3.5	0.781
Nondurable Goods	7,059	29.5	1.64
Food and Kindred Products	1,691	2.5	0.58
Chemicals and Allied Products	1,022	4.5	1.728
Rubber and Miscellaneous Plastic Products	958	15.9	6.514
Tires and Inner Tubes	75	5.6	29.23
<b>Service-Producing Industries</b>	106,978	257.5	0.945
Transportation and Public Utilities	7,065	14.9	0.828
Communications, Electric, Gas Services	2,569	4.5	0.688
Wholesale Trade	6,776	20.8	1.205
Retail Trade	23,522	65	1.085
General Merchandise Stores	2,897	6	0.813
Food Stores	3,451	8.6	0.978
Finance, Insurance and Real Estate	7,712	14.9	0.758
Finance	3,800	7	0.723
Services	40,970	99	0.948
Business Services	9,572	22.7	0.931
Personal Supply Services	3,446	10	1.139
Amusements, Including Motion Pictures	1,721	8.3	1.893
Health Services	10,381	29.3	1.108
Nursing and Personal Care Facilities	1,847	5.8	1.233
Hospitals	4,096	11.8	1.131
Social Services	3,057	7	0.899
Engineering and Management Services	3,593	6.7	0.732
Government	20,933	42.9	0.804
Federal Government	2,616	3.2	0.48
State Government	4,885	10.1	0.812
State Government Education	2,096	7.8	1.461
Local Government	13,432	29.6	0.865
Local Government Education	7,646	14.6	0.749

**Table B2**

**Employment Location Quotients for Cincinnati Metropolitan Area (2001)**

	National	Cincinnati MSA	LQ
<b>Total</b>	131,922	896.1	
<b>Goods-Producing Industries</b>	24,944	184.2	1.09
Construction	6,685	45.5	1
Manufacturing	17,695	137.9	1.15
Durable Goods	10,636	70.6	0.98
Fabricated Metal Products	1,483	12.4	1.23
Fabricated Structural Metal Products	502	4.9	1.44
Industrial Machinery and Equipment	2,011	16.2	1.19
Electronic and other Electric Equipment	1,631	6.4	0.58
Transportation Equipment	1,760	18.6	1.56
Motor Vehicles and Equipment	947	8.3	1.29
Nondurable Goods	7,059	67.3	1.4
Food and Kindred Products	1,691	14.1	1.23
Beverages	194	3.1	2.36
Apparel and Other Textile Products	560	2.2	0.58
Paper and Allied Products	634	4.7	1.09
Printing and Publishing	1,491	13.4	1.32
Commercial Printing	539	6.6	1.8
Chemicals and Allied Products	1,022	24	3.46
Rubber and Miscellaneous Plastic Products	958	7.2	1.11
<b>Service-Producing Industries</b>	106,978	711.9	0.98
Transportation and Public Utilities	7,065	48.5	1.01
Transportation	4,497	32.9	1.08
Trucking and Warehousing	1,848	9.4	0.75
Communications, Electric, Gas Services	2,569	15.6	0.89
Communications	1,717	9.3	0.8
Wholesale Trade	6,776	57.9	1.26
Wholesale Trade-Nondurable Goods	2,752	33.2	1.78
Retail Trade	23,522	165.1	1.03
General Merchandise Stores	2,897	18.8	0.96
Finance, Insurance and Real Estate	7,712	57.3	1.09
Finance	3,800	29	1.12
Depository Institutions	2,053	14.7	1.05
Commercial Banks	1,434	11.1	1.14
Insurance	2,369	19.1	1.19
Insurance Carriers	1,595	14.9	1.38
Life Insurance	479	6.8	2.09
Fire, Marine, and Casualty Insurance	544	4.8	1.3
Services	40,970	285.7	1.03
Personal Services	1,223	10.6	1.28
Business Services	9,572	71.9	1.11
Services to Buildings	1,023	7.9	1.14
Computer and Data Processing Services	2,225	12.3	0.81
Amusements, Including Motion Pictures	1,721	22.9	1.96
Health Services	10,381	77.4	1.1
Nursing and Personal Care Facilities	1,847	15.6	1.24
Hospitals	4,096	31.9	1.15

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Legal Services	1,037	5.7	0.81
Educational Services	2,434	9.5	0.57
Social Services	3,057	19.8	0.95
Residential Care	864	5.7	0.97
Engineering and Management Services	3,593	26.3	1.08
Engineering and Architectural Services	1,054	7.2	1.01
Government	20,933	97.4	0.68
Federal Government	2,616	16.8	0.95
State Government	4,885	15.5	0.47
State Government Education	2,096	10.5	0.74
Local Government	13,432	65.1	0.71
Local Government Education	7,646	34.6	0.67

**Table B3**  
**Employment Location Quotients for Cleveland Metropolitan Area (2001)**

	National	Cleveland-PMSA	LQ
<b>Total</b>	131,922	1188.1	
<b>Goods-Producing Industries</b>	24,944	268.5	1.2
Construction	6,685	54.5	0.91
Special Trade Contractors	4,301	36.7	0.95
Manufacturing	17,695	213.1	1.34
Durable Goods	10,636	148.1	1.55
Primary Metal Industries	656	17.7	3
Fabricated Metal Products	1,483	37.1	2.78
Screw Machine Products, Bolts, etc.	99	5.9	6.62
Metal Forgings and Stampings	231	12.4	5.97
Industrial Machinery and Equipment	2,011	32.2	1.78
Metalworking Machinery	306	12.7	4.61
Electronic and other Electric Equipment	1,631	15	1.02
Electrical Industrial Apparatus	142	2.5	1.95
Electric Lighting and Wiring Equipment	173	3.4	2.19
Transportation Equipment	1,760	21.5	1.36
Motor Vehicles and Equipment	947	17.4	2.04
Instruments and Related Products	839	10.4	1.38
Measuring and Controlling Devices	298	5.8	2.16
Nondurable Goods	7,059	65	1.02
Food and Kindred Products	1,691	6.4	0.42
Paper and Allied Products	634	6.9	1.21
Printing and Publishing	1,491	16.4	1.22
Chemicals and Allied Products	1,022	17.4	1.89
Rubber and Miscellaneous Plastic Products	958	14.8	1.72
Miscellaneous Plastic Products	709	10.5	1.65
<b>Service-Producing Industries</b>	106,978	919.6	0.95
Transportation and Public Utilities	7,065	49.3	0.77
Transportation	4,497	32.6	0.8
Trucking and Warehousing	1,848	11.9	0.72
Communications, Electric, Gas Services	2,569	16.7	0.72
Communications	1,717	10.1	0.65
Electric, Gas, and Sanitary Services	852	6.6	0.86

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Wholesale Trade	6,776	75.6	1.24
Wholesale Trade- Durable Goods	4,024	51.4	1.42
Motor Vehicles, Parts, and Supplies	502	4.9	1.08
Professional and Commercial Equipment	919	11.3	1.36
Retail Trade	23,522	201.3	0.95
General Merchandise Stores	2,897	20.1	0.77
Finance, Insurance and Real Estate	7,712	81.7	1.18
Finance	3,800	42.2	1.23
Depository Institutions	2,053	25.7	1.39
Commercial Banks	1,434	18.2	1.41
Insurance	2,369	25.7	1.2
Insurance Carriers	1,595	19.5	1.36
Fire, Marine, and Casualty Insurance	544	10.6	2.16
Services	40,970	370.7	1
Business Services	9,572	82.4	0.96
Personal Supply Services	3,446	40	1.29
Computer and Data Processing Services	2,225	12.5	0.62
Amusements, Including Motion Pictures	1,721	20	1.29
Health Services	10,381	116.9	1.25
Nursing and Personal Care Facilities	1,847	23.8	1.43
Hospitals	4,096	53.9	1.46
Legal Services	1,037	11.2	1.2
Educational Services	2,434	20.1	0.92
Social Services	3,057	22.7	0.82
Residential Care	864	5.9	0.76
Engineering and Management Services	3,593	30.8	0.95
Engineering and Architectural Services	1,054	7.6	0.8
Accounting, Auditing, and Bookkeeping	700	10.2	1.62
Government	20,933	141	0.75
Federal Government	2,616	20	0.85
State Government	4,885	8.6	0.2
State Government Education	2,096	2.9	0.15
Local Government	13,432	112.4	0.93
Local Government Education	7,646	50.8	0.74

**Table B4  
Employment Location Quotients for Dayton Metropolitan Area (2001)**

	<b>National</b>	<b>Dayton MSALQ</b>	
<b>Total</b>	131,922	477.6	
<b>Goods-Producing Industries</b>	24,944	111.8	1.24
Construction	6,685	20.4	0.84
Manufacturing	17,695	91.2	1.42
Durable Goods	10,636	65.2	1.69
Fabricated Metal Products	1,483	6.8	1.27
Industrial Machinery and Equipment	2,011	24.3	3.34
Metalworking Machinery	306	7.2	6.5
General Industrial Machinery	240	1.7	1.96
Electronic and other Electric Equipment	1,631	4.5	0.76
Transportation Equipment	1,760	20	3.14
Motor Vehicles and Equipment	947	17.3	5.05
Nondurable Goods	7,059	26	1.02
Food and Kindred Products	1,691	3.2	0.52
Paper and Allied Products	634	3.2	1.39
Printing and Publishing	1,491	8.1	1.5
Rubber and Miscellaneous Plastic Products	958	8.5	2.45
<b>Service-Producing Industries</b>	106,978	365.8	0.94
Transportation and Public Utilities	7,065	23	0.9
Transportation	4,497	17.2	1.06
Trucking and Warehousing	1,848	7.4	1.11
Communications, Electric, Gas Services	2,569	5.8	0.62
Communications	1,717	3.1	0.5
Wholesale Trade	6,776	22.7	0.93
Wholesale Trade- Durable Goods	4,024	15	1.03
Wholesale Trade-Nondurable Goods	2,752	7.7	0.77
Retail Trade	23,522	89.4	1.05
General Merchandise Stores	2,897	10.3	0.98
Finance, Insurance and Real Estate	7,712	18.4	0.66
Finance	3,800	10.1	0.73
Depository Institutions	2,053	5.8	0.78
Insurance	2,369	4.5	0.52
Services	40,970	144.6	0.97
Business Services	9,572	35.7	1.03
Computer and Data Processing Services	2,225	10.9	1.35
Health Services	10,381	48.4	1.29
Nursing and Personal Care Facilities	1,847	10.2	1.53
Hospitals	4,096	20.6	1.39
Educational Services	2,434	6.9	0.78
Social Services	3,057	8.6	0.78
Engineering and Management Services	3,593	10.6	0.81
Government	20,933	67.7	0.89
Federal Government	2,616	19.4	2.05
State Government	4,885	6.1	0.34
State Government Education	2,096	3.4	0.45
Local Government	13,432	42.2	0.87
Local Government Education	7,646	22.7	0.82

**Table B5**  
**Employment Location Quotients for Toledo Metropolitan Area (2001)**

	National	Toledo MSA	LQ
<b>Total</b>	131,922	329.9	
<b>Goods-Producing Industries</b>	24,944	77.5	1.24
Construction	6,685	18.6	1.11
Manufacturing	17,695	58.6	1.32
Durable Goods	10,636	42.1	1.58
Stone, Clay, and Glass Products	571	5.9	4.13
Primary Metal Industries	656	2.7	1.65
Fabricated Metal Products	1,483	6.9	1.86
Metal Forgings and Stampings	231	2.3	3.99
Industrial Machinery and Equipment	2,011	5.6	1.11
Transportation Equipment	1,760	14.6	3.32
Nondurable Goods	7,059	16.5	0.93
Food and Kindred Products	1,691	3.1	0.73
Rubber and Miscellaneous Plastic Products	958	5	2.09
<b>Service-Producing Industries</b>	106,978	251.5	0.94
Transportation and Public Utilities	7,065	16.3	0.92
Transportation	4,497	12.4	1.1
Communications, Electric, Gas Services	2,569	3.9	0.61
Wholesale Trade	6,776	17.6	1.04
Wholesale Trade- Durable Goods	4,024	11.1	1.1
Wholesale Trade-Nondurable Goods	2,752	6.5	0.94
Retail Trade	23,522	62.9	1.07
General Merchandise Stores	2,897	6.7	0.92
Finance, Insurance and Real Estate	7,712	11.8	0.61
Finance	3,800	5.1	0.54
Insurance	2,369	4	0.68
Services	40,970	100.7	0.98
Business Services	9,572	22.5	0.94
Health Services	10,381	34.7	1.34
Nursing and Personal Care Facilities	1,847	6.7	1.45
Hospitals	4,096	15.1	1.47
Engineering and Management Services	3,593	7.7	0.86
Government	20,933	42.2	0.81
Federal Government	2,616	2.7	0.41
State Government	4,885	12.7	1.04
State Government Education	2,096	8.3	1.58
Local Government	13,432	26.8	0.8
Local Government Education	7,646	14.1	0.74

## Appendix C Occupational Location Quotients

**Table C1**  
**Occupational Location Quotients for Akron Metropolitan Area (2001)**

	National Employment	National Rate	Akron Employment	Akron Rate IQ
Management Occupations	7,782,680	6.00%	18,570	5.86%
Business and Financial Operations Occupations	4,619,270	3.56%	7,910	2.49%
Computer and Mathematical Occupations	2,932,810	2.26%	4,070	1.28%
Architecture and Engineering Occupations	2,575,620	1.99%	5,050	1.59%
Life, Physical, and Social Science Occupations	1,038,670	0.80%	2,470	0.78%
Community and Social Services Occupations	1,469,000	1.13%	2,920	0.92%
Legal Occupations	890,910	0.69%	1,420	0.45%
Education, Training, and Library Occupations	7,450,860	5.74%	16,900	5.33%
Arts, Design, Entertainment, Sports, and Media Occupations	1,513,420	1.17%	3,210	1.01%
Healthcare Practitioners and Technical Occupations	6,041,210	4.66%	15,500	4.89%
Healthcare Support Occupations	3,039,430	2.34%	7,290	2.30%
Protective Service Occupations	3,009,070	2.32%	6,620	2.09%
Food Preparation and Serving Related Occupations	9,955,060	7.67%	28,320	8.93%
Building and Grounds Cleaning and Maintenance Occupations	4,318,070	3.33%	10,180	3.21%
Personal Care and Service Occupations	2,700,510	2.08%	6,710	2.12%
Sales and Related Occupations	13,506,880	10.41%	34,350	10.83%
Office and Administrative Support Occupations	22,936,140	17.68%	55,260	17.43%
Farming, Fishing, and Forestry Occupations	460,700	0.36%	130	0.04%
Construction and Extraction Occupations	6,187,360	4.77%	12,550	3.96%
Installation, Maintenance, and Repair Occupations	5,318,490	4.10%	10,510	3.32%
Production Occupations	12,400,080	9.56%	43,870	13.84%
Transportation and Material Moving Occupations	9,592,740	7.39%	23,230	7.33%
<b>Total</b>	<b>129,738,980</b>		<b>317,040</b>	

**Table C2**  
**Occupational Location Quotients for Cincinnati Metropolitan Area (2001)**

<b>Employment</b>	<b>National Employment</b>	<b>National Rate</b>	<b>Cincinnati Employment</b>	<b>Cincinnati Rate</b>	<b>I.Q.</b>
Management Occupations	7,782,680	6.00%	54,490	6.26%	104.34%
Business and Financial Operations Occupations	4,619,270	3.56%	30,080	3.46%	97.05%
Computer and Mathematical Occupations	2,932,810	2.26%	17,490	2.01%	88.87%
Architecture and Engineering Occupations	2,575,620	1.99%	19,080	2.19%	110.40%
Life, Physical, and Social Science Occupations	1,038,670	0.80%	6,540	0.75%	93.84%
Community and Social Services Occupations	1,469,000	1.13%	9,380	1.08%	95.16%
Legal Occupations	890,910	0.69%	5,610	0.64%	93.84%
Education, Training, and Library Occupations	7,450,860	5.74%	39,250	4.51%	78.51%
Arts, Design, Entertainment, Sports, and Media Occupations	1,513,420	1.17%	9,080	1.04%	89.41%
Healthcare Practitioners and Technical Occupations	6,041,210	4.66%	39,270	4.51%	96.87%
Healthcare Support Occupations	3,039,430	2.34%	23,290	2.68%	114.20%
Protective Service Occupations	3,009,070	2.32%	21,460	2.47%	106.28%
Food Preparation and Serving Related Occupations	9,955,060	7.67%	68,180	7.83%	102.07%
Building and Grounds Cleaning and Maintenance Occupations	4,318,070	3.33%	25,640	2.95%	88.49%
Personal Care and Service Occupations	2,700,510	2.08%	18,580	2.13%	102.53%
Sales and Related Occupations	13,506,880	10.41%	92,910	10.67%	102.51%
Office and Administrative Support Occupations	22,936,140	17.68%	161,120	18.51%	104.69%
Farming, Fishing, and Forestry Occupations	460,700	0.36%	700	0.08%	22.64%
Construction and Extraction Occupations	6,187,360	4.77%	33,700	3.87%	81.17%
Installation, Maintenance, and Repair Occupations	5,318,490	4.10%	35,950	4.13%	100.74%
Production Occupations	12,400,080	9.56%	87,390	10.04%	105.03%
Transportation and Material Moving Occupations	9,592,740	7.39%	71,370	8.20%	110.88%
<b>Total</b>	<b>129,738,980</b>		<b>870,560</b>		

**Table C3**  
**Occupational Location Quotients for Cleveland Metropolitan Area (2001)**

	National Employment	National Rate	Cleveland Employment	Cleveland Rate	I.Q.
Management Occupations	7,782,680	6.00%	69,270	6.01%	100.25%
Business and Financial Operations Occupations	4,619,270	3.56%	40,590	3.52%	98.97%
Computer and Mathematical Occupations	2,932,810	2.26%	19,470	1.69%	74.77%
Architecture and Engineering Occupations	2,575,620	1.99%	24,780	2.15%	108.36%
Life, Physical, and Social Science Occupations	1,038,670	0.80%	7,370	0.64%	79.92%
Community and Social Services Occupations	1,469,000	1.13%	12,640	1.10%	96.91%
Legal Occupations	890,910	0.69%	9,760	0.85%	123.39%
Education, Training, and Library Occupations	7,450,860	5.74%	53,820	4.67%	81.36%
Arts, Design, Entertainment, Sports, and Media Occupations	1,513,420	1.17%	10,460	0.91%	77.85%
Healthcare Practitioners and Technical Occupations	6,041,210	4.66%	62,080	5.39%	115.74%
Healthcare Support Occupations	3,039,430	2.34%	30,340	2.63%	112.43%
Protective Service Occupations	3,009,070	2.32%	33,790	2.93%	126.48%
Food Preparation and Serving Related Occupations	9,955,060	7.67%	75,740	6.58%	85.69%
Building and Grounds Cleaning and Maintenance Occupations	4,318,070	3.33%	35,190	3.05%	91.79%
Personal Care and Service Occupations	2,700,510	2.08%	19,280	1.67%	80.41%
Sales and Related Occupations	13,506,880	10.41%	123,340	10.71%	102.85%
Office and Administrative Support Occupations	22,936,140	17.68%	199,830	17.35%	98.13%
Farming, Fishing, and Forestry Occupations	460,700	0.36%	430	0.04%	10.51%
Construction and Extraction Occupations	6,187,360	4.77%	48,300	4.19%	87.92%
Installation, Maintenance, and Repair Occupations	5,318,490	4.10%	46,170	4.01%	97.78%
Production Occupations	12,400,080	9.56%	144,640	12.56%	131.38%
Transportation and Material Moving Occupations	9,592,740	7.39%	84,600	7.34%	99.33%
<b>Total</b>	<b>129,738,980</b>		<b>1,151,890</b>		

**Table C4  
Occupational Location Quotients for Dayton Metropolitan Area (2001)**

	National Employment	National Rate	Dayton Employment	Dayton Rate	I.Q.
Management Occupations	7,782,680	6.00%	28,770	6.19%	103.20%
Business and Financial Operations Occupations	4,619,270	3.56%	16,820	3.62%	101.65%
Computer and Mathematical Occupations	2,932,810	2.26%	8,760	1.88%	83.38%
Architecture and Engineering Occupations	2,575,620	1.99%	12,950	2.79%	140.36%
Life, Physical, and Social Science Occupations	1,038,670	0.80%	2,690	0.58%	72.30%
Community and Social Services Occupations	1,469,000	1.13%	5,190	1.12%	98.63%
Legal Occupations	890,910	0.69%	1,850	0.40%	57.97%
Education, Training, and Library Occupations	7,450,860	5.74%	23,400	5.03%	87.67%
Arts, Design, Entertainment, Sports, and Media Occupations	1,513,420	1.17%	4,670	1.00%	86.14%
Healthcare Practitioners and Technical Occupations	6,041,210	4.66%	23,810	5.12%	110.02%
Healthcare Support Occupations	3,039,430	2.34%	12,080	2.60%	110.95%
Protective Service Occupations	3,009,070	2.32%	8,300	1.79%	77.00%
Food Preparation and Serving Related Occupations	9,955,060	7.67%	39,230	8.44%	110.01%
Building and Grounds Cleaning and Maintenance Occupations	4,318,070	3.33%	14,020	3.02%	90.64%
Personal Care and Service Occupations	2,700,510	2.08%	7,870	1.69%	81.35%
Sales and Related Occupations	13,506,880	10.41%	46,100	9.92%	95.28%
Office and Administrative Support Occupations	22,936,140	17.68%	77,490	16.67%	94.31%
Farming, Fishing, and Forestry Occupations	460,700	0.36%	190	0.04%	11.51%
Construction and Extraction Occupations	6,187,360	4.77%	16,300	3.51%	73.54%
Installation, Maintenance, and Repair Occupations	5,318,490	4.10%	19,040	4.10%	99.94%
Production Occupations	12,400,080	9.56%	62,860	13.53%	141.51%
Transportation and Material Moving Occupations	9,592,740	7.39%	32,360	6.96%	94.17%
<b>Total</b>	<b>129,738,980</b>		<b>464,750</b>		

**Table C5  
Occupational Location Quotients for Toledo Metropolitan Area (2001)**

	National Employment	National Rate	Toledo Employment	Toledo Rate	LQ
Management Occupations	7,782,680	6.00%	17,850	5.57%	92.79%
Business and Financial Operations Occupations	4,619,270	3.56%	8,150	2.54%	71.38%
Computer and Mathematical Occupations	2,932,810	2.26%	3,740	1.17%	51.59%
Architecture and Engineering Occupations	2,575,620	1.99%	5,160	1.61%	81.06%
Life, Physical, and Social Science Occupations	1,038,670	0.80%	1,550	0.48%	60.38%
Community and Social Services Occupations	1,469,000	1.13%	4,970	1.55%	136.88%
Legal Occupations	890,910	0.69%	2,220	0.69%	100.82%
Education, Training, and Library Occupations	7,450,860	5.74%	17,230	5.37%	93.56%
Arts, Design, Entertainment, Sports, and Media Occupations	1,513,420	1.17%	2,700	0.84%	72.18%
Healthcare Practitioners and Technical Occupations	6,041,210	4.66%	18,670	5.82%	125.04%
Healthcare Support Occupations	3,039,430	2.34%	8,300	2.59%	110.48%
Protective Service Occupations	3,009,070	2.32%	7,120	2.22%	95.73%
Food Preparation and Serving Related Occupations	9,955,060	7.67%	27,910	8.70%	113.43%
Building and Grounds Cleaning and Maintenance Occupations	4,318,070	3.33%	10,930	3.41%	102.41%
Personal Care and Service Occupations	2,700,510	2.08%	4,350	1.36%	65.17%
Sales and Related Occupations	13,506,880	10.41%	30,900	9.64%	92.56%
Office and Administrative Support Occupations	22,936,140	17.68%	49,430	15.41%	87.19%
Farming, Fishing, and Forestry Occupations	460,700	0.36%	260	0.08%	22.83%
Construction and Extraction Occupations	6,187,360	4.77%	14,360	4.48%	93.90%
Installation, Maintenance, and Repair Occupations	5,318,490	4.10%	15,250	4.76%	116.01%
Production Occupations	12,400,080	9.56%	44,490	13.87%	145.16%
Transportation and Material Moving Occupations	9,592,740	7.39%	25,130	7.84%	105.99%
<b>Total</b>	<b>129,738,980</b>		<b>320,670</b>		

## Appendix D Detailed Multiplier Results

Table D1

### Agricultural Research Service

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1 Farm Products and Agricultural , Forestry, and Fishing Services	0.0838	73.0	6.12
2 Forestry and Fishing Products	0.0001	73.0	0.01
3 Coal Mining	0.0000	73.0	0.00
4 Oil and Gas Extraction	0.0011	73.0	0.08
5 Metal mining and nonmetallic minerals, except fuels	0.0003	73.0	0.02
6 Construction	0.0914	73.0	6.67
7 Food and Kindered Products and tobacco products	0.0156	73.0	1.14
8 Textile mill products	0.0008	73.0	0.06
9 Apparel and other textile products	0.0043	73.0	0.31
10 Paper and allied products	0.0142	73.0	1.04
11 Printing and publishing	0.0934	73.0	6.82
12 Chemicals and allied products and petroleum and coal products	0.0169	73.0	1.23
13 Rubber and miscellaneous plastic products and leather products	0.0254	73.0	1.85
14 Lumber and wood products and furniture and fixtures	0.0092	73.0	0.67
15 Stone, Clay and glass products	0.0047	73.0	0.34
16 Primary metal industries	0.0028	73.0	0.20
17 Fabricated metal products	0.0136	73.0	0.99
18 Industrial Machinery and Equipment	0.0441	73.0	3.22
19 Electronic and other electric equipment	0.0231	73.0	1.69
20 Motor vehicles and Equipment	0.0015	73.0	0.11
21 Other transportation equipment	0.0001	73.0	0.01
22 Instruments and related products	0.0042	73.0	0.31
23 Miscellaneous manufacturing industries	0.0075	73.0	0.55
24 Transportation	0.2277	73.0	16.62
25 Communications	0.0404	73.0	2.95
26 Electric, gas and sanitary services	0.0314	73.0	2.29
27 Wholesale trade	0.1525	73.0	11.13
28 Retail trade	0.6463	73.0	47.18
29 Depository and nondepository institutions; security, commodity brokers	0.1831	73.0	13.37
30 Insurance	0.0575	73.0	4.20
31 Real estate	0.1530	73.0	11.17
32 Hotels, amusement and recreation services and motion pictures	0.1238	73.0	9.04
33 Personal services	0.1525	73.0	11.13
34 Business services	12.3017	73.0	898.02
35 Eating and drinking places	0.5322	73.0	38.85
36 Health services	0.4255	73.0	31.06
37 Miscellaneous services	0.5217	73.0	38.08
38 Households	0.1015	73.0	7.41
<b>Total</b>			<b>1175.95</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D2**

**Office of Student Financial Assistance**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier	
1	Farm Products and Agricultural , Forestry, and Fishing Services	0.0750	40.1	0.00
2	Forestry and Fishing Products	0.0001	40.1	0.00
3	Coal Mining	0.0000	40.1	0.00
4	Oil and Gas Extraction	0.0012	40.1	0.05
5	Metal mining and nonmetallic minerals, except fuels	0.0003	40.1	0.01
6	Construction	0.0822	40.1	3.30
7	Food and Kindered Products and tobacco products	0.0208	40.1	0.83
8	Textile mill products	0.0011	40.1	0.04
9	Apparel and other textile products	0.0058	40.1	0.23
10	Paper and allied products	0.0114	40.1	0.46
11	Printing and publishing	0.1210	40.1	4.85
12	Chemicals and allied products and petroleum and coal products	0.0120	40.1	0.48
13	Rubber and miscellaneous plastic products and leather products	0.0219	40.1	0.88
14	Lumber and wood products and furniture and fixtures	0.0110	40.1	0.44
15	Stone, Clay and glass products	0.0019	40.1	0.08
16	Primary metal industries	0.0016	40.1	0.06
17	Fabricated metal products	0.0112	40.1	0.45
18	Industrial Machinery and Equipment	0.0093	40.1	0.37
19	Electronic and other electric equipment	0.0064	40.1	0.26
20	Motor vehicles and Equipment	0.0014	40.1	0.06
21	Other transportation equipment	0.0001	40.1	0.00
22	Instruments and related products	0.0039	40.1	0.16
23	Miscellaneous manufacturing industries	0.0123	40.1	0.49
24	Transportation	0.2641	40.1	10.59
25	Communications	0.0487	40.1	1.95
26	Electric, gas and sanitary services	0.0300	40.1	1.20
27	Wholesale trade	0.1386	40.1	5.56
28	Retail trade	0.8587	40.1	34.43
29	Depository and nondepository institutions; security, commodity brokers	19.7736	40.1	792.92
30	Insurance	0.0814	40.1	3.26
31	Real estate	0.1739	40.1	6.97
32	Hotels, amusement and recreation services and motion pictures	0.1565	40.1	6.28
33	Personal services	0.1966	40.1	7.88
34	Business services	1.1412	40.1	45.76
35	Eating and drinking places	0.6502	40.1	26.07
36	Health services	0.5799	40.1	23.25
37	Miscellaneous services	0.6828	40.1	27.38
38	Households	0.1387	40.1	5.56
	<b>Total</b>			<b>1012.60</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D3**

**Patent and Trademark Office**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.0543	884.5	48.03
2	0.0001	884.5	0.09
3	0.0000	884.5	0.00
4	0.0010	884.5	0.88
5	0.0002	884.5	0.18
6	0.0678	884.5	59.97
7	0.0145	884.5	12.83
8	0.0007	884.5	0.62
9	0.0040	884.5	3.54
10	0.0102	884.5	9.02
11	0.0597	884.5	52.80
12	0.0090	884.5	7.96
13	0.0225	884.5	19.90
14	0.0087	884.5	7.70
15	0.0017	884.5	1.50
16	0.0014	884.5	1.24
17	0.0103	884.5	9.11
18	0.0116	884.5	10.26
19	0.0058	884.5	5.13
20	0.0012	884.5	1.06
21	0.0001	884.5	0.09
22	0.0043	884.5	3.80
23	0.0065	884.5	5.75
24	0.2199	884.5	194.50
25	0.0386	884.5	34.14
26	0.0312	884.5	27.60
27	0.1094	884.5	96.76
28	0.5955	884.5	526.72
29	0.1694	884.5	149.83
30	0.0536	884.5	47.41
31	0.1667	884.5	147.45
32	0.1152	884.5	101.89
33	0.1375	884.5	121.62
34	10.1023	884.5	8935.48
35	0.4741	884.5	419.34
36	0.4005	884.5	354.24
37	0.5358	884.5	473.92
38	0.0954	884.5	84.38
<b>Total</b>			<b>11976.75</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

## Decentralizing Federal Employment: Feasibility and Impact on Ohio Cities

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**Table D4**

**State Justice Institute**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.2085	0.351	0.07
2	0.0001	0.307	0.00
3	0.0000	0.307	0.00
4	0.0000	0.307	0.00
5	0.0012	0.307	0.00
6	0.1841	0.307	0.06
7	0.1063	0.307	0.03
8	0.0011	0.307	0.00
9	0.0199	0.307	0.01
10	0.0397	0.307	0.01
11	0.2398	0.307	0.07
12	0.0442	0.307	0.01
13	0.0435	0.307	0.01
14	0.0132	0.307	0.00
15	0.0110	0.307	0.00
16	0.0077	0.307	0.00
17	0.0328	0.307	0.01
18	0.0278	0.307	0.01
19	0.0146	0.307	0.00
20	0.0210	0.307	0.01
21	0.0028	0.307	0.00
22	0.0080	0.307	0.00
23	0.0322	0.307	0.01
24	0.5205	0.307	0.16
25	0.1664	0.307	0.05
26	0.0694	0.307	0.02
27	0.3946	0.307	0.12
28	1.6564	0.307	0.51
29	0.7060	0.307	0.22
30	0.2816	0.307	0.09
31	0.5640	0.307	0.17
32	0.4582	0.307	0.14
33	0.3326	0.307	0.10
34	27.1891	0.307	8.35
35	1.0726	0.307	0.33
36	1.1490	0.307	0.35
37	1.1091	0.307	0.34
38	0.1793	0.307	0.06
<b>Total</b>			<b>11.30</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D5**

**Bureau of Economic Analysis**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1 Farm Products and Agricultural , Forestry, and Fishing Services	0.1152	58.6	6.75
2 Forestry and Fishing Products	0.0001	58.6	0.01
3 Coal Mining	0.0000	58.6	0.00
4 Oil and Gas Extraction	0.0000	58.6	0.00
5 Metal mining and nonmetallic minerals, except fuels	0.0009	58.6	0.05
6 Construction	0.1456	58.6	8.53
7 Food and Kindered Products and tobacco products	0.0788	58.6	4.62
8 Textile mill products	0.0009	58.6	0.05
9 Apparel and other textile products	0.0147	58.6	0.86
10 Paper and allied products	0.0319	58.6	1.87
11 Printing and publishing	0.1786	58.6	10.46
12 Chemicals and allied products and petroleum and coal products	0.0501	58.6	2.93
13 Rubber and miscellaneous plastic products and leather products	0.0374	58.6	2.19
14 Lumber and wood products and furniture and fixtures	0.0096	58.6	0.56
15 Stone, Clay and glass products	0.0060	58.6	0.35
16 Primary metal industries	0.0068	58.6	0.40
17 Fabricated metal products	0.0277	58.6	1.62
18 Industrial Machinery and Equipment	0.0217	58.6	1.27
19 Electronic and other electric equipment	0.0468	58.6	2.74
20 Motor vehicles and Equipment	0.0160	58.6	0.94
21 Other transportation equipment	0.0027	58.6	0.16
22 Instruments and related products	0.0065	58.6	0.38
23 Miscellaneous manufacturing industries	0.0254	58.6	1.49
24 Transportation	0.5204	58.6	30.49
25 Communications	0.1405	58.6	8.23
26 Electric, gas and sanitary services	0.0536	58.6	3.14
27 Wholesale trade	0.2960	58.6	17.34
28 Retail trade	1.1975	58.6	70.15
29 Depository and nondepository institutions; security, commodity brokers	0.5425	58.6	31.78
30 Insurance	0.2041	58.6	11.96
31 Real estate	0.3517	58.6	20.60
32 Hotels, amusement and recreation services and motion pictures	0.4545	58.6	26.62
33 Personal services	0.2291	58.6	13.42
34 Business services	12.2575	58.6	718.04
35 Eating and drinking places	0.9558	58.6	55.99
36 Health services	0.8659	58.6	50.72
37 Miscellaneous services	0.7309	58.6	42.82
38 Households	0.1262	58.6	7.39

**Total**

**1156.93**

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D6**

**The National Endowment for the Arts**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier	
1	Farm Products and Agricultural , Forestry, and Fishing Services	0.1745	16.4	2.86
2	Forestry and Fishing Products	0.0000	16.4	0.00
3	Coal Mining	0.0000	16.4	0.00
4	Oil and Gas Extraction	0.0004	16.4	0.01
5	Metal mining and nonmetallic minerals, except fuels	0.0014	16.4	0.02
6	Construction	0.3514	16.4	5.76
7	Food and Kindered Products and tobacco products	0.0303	16.4	0.50
8	Textile mill products	0.0006	16.4	0.01
9	Apparel and other textile products	0.0075	16.4	0.12
10	Paper and allied products	0.0778	16.4	1.28
11	Printing and publishing	1.3036	16.4	21.38
12	Chemicals and allied products and petroleum and coal products	0.0735	16.4	1.21
13	Rubber and miscellaneous plastic products and leather products	0.0492	16.4	0.81
14	Lumber and wood products and furniture and fixtures	0.0123	16.4	0.20
15	Stone, Clay and glass products	0.0095	16.4	0.16
16	Primary metal industries	0.0163	16.4	0.27
17	Fabricated metal products	0.0385	16.4	0.63
18	Industrial Machinery and Equipment	0.0428	16.4	0.70
19	Electronic and other electric equipment	0.0214	16.4	0.35
20	Motor vehicles and Equipment	0.0266	16.4	0.44
21	Other transportation equipment	0.0034	16.4	0.06
22	Instruments and related products	0.0109	16.4	0.18
23	Miscellaneous manufacturing industries	0.0565	16.4	0.93
24	Transportation	0.5775	16.4	9.47
25	Communications	0.1417	16.4	2.32
26	Electric, gas and sanitary services	0.0727	16.4	1.19
27	Wholesale trade	0.4235	16.4	6.95
28	Retail trade	1.0245	16.4	16.80
29	Depository and nondepository institutions; security, commodity brokers	0.7821	16.4	12.83
30	Insurance	0.2681	16.4	4.40
31	Real estate	0.8635	16.4	14.16
32	Hotels, amusement and recreation services and motion pictures	0.3215	16.4	5.27
33	Personal services	0.2373	16.4	3.89
34	Business services	3.9362	16.4	64.55
35	Eating and drinking places	0.7540	16.4	12.37
36	Health services	0.8418	16.4	13.81
37	Miscellaneous services	10.4279	16.4	171.02
38	Households	0.1229	16.4	2.02
<b>Total</b>				<b>378.90</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D7**

**Overseas Private Investment Corporation**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1 Farm Products and Agricultural , Forestry, and Fishing Services	0.1051	29.1	3.06
2 Forestry and Fishing Products	0.0000	29.1	0.00
3 Coal Mining	0.0000	29.1	0.00
4 Oil and Gas Extraction	0.0003	29.1	0.01
5 Metal mining and nonmetallic minerals, except fuels	0.0008	29.1	0.02
6 Construction	0.1905	29.1	5.54
7 Food and Kindered Products and tobacco products	0.0350	29.1	1.02
8 Textile mill products	0.0005	29.1	0.01
9 Apparel and other textile products	0.0086	29.1	0.25
10 Paper and allied products	0.0312	29.1	0.91
11 Printing and publishing	0.2209	29.1	6.43
12 Chemicals and allied products and petroleum and coal products	0.0406	29.1	1.18
13 Rubber and miscellaneous plastic products and leather products	0.0335	29.1	0.97
14 Lumber and wood products and furniture and fixtures	0.0104	29.1	0.30
15 Stone, Clay and glass products	0.0059	29.1	0.17
16 Primary metal industries	0.0128	29.1	0.37
17 Fabricated metal products	0.0314	29.1	0.91
18 Industrial Machinery and Equipment	0.0243	29.1	0.71
19 Electronic and other electric equipment	0.0162	29.1	0.47
20 Motor vehicles and Equipment	0.0279	29.1	0.81
21 Other transportation equipment	0.0036	29.1	0.10
22 Instruments and related products	0.0118	29.1	0.34
23 Miscellaneous manufacturing industries	0.0257	29.1	0.75
24 Transportation	0.4429	29.1	12.89
25 Communications	0.1096	29.1	3.19
26 Electric, gas and sanitary services	0.0444	29.1	1.29
27 Wholesale trade	0.2947	29.1	8.58
28 Retail trade	1.2112	29.1	35.25
29 Depository and nondepository institutions; security, commodity brokers	0.9947	29.1	28.95
30 Insurance	11.0365	29.1	321.16
31 Real estate	0.5740	29.1	16.70
32 Hotels, amusement and recreation services and motion pictures	0.3142	29.1	9.14
33 Personal services	0.2668	29.1	7.76
34 Business services	2.0205	29.1	58.80
35 Eating and drinking places	0.8477	29.1	24.67
36 Health services	1.0189	29.1	29.65
37 Miscellaneous services	0.9064	29.1	26.38
38 Households	0.1532	29.1	4.46
<b>Total</b>			<b>613.22</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D8**

**National Institutes of Health: Heart, Lung, & Blood Institute**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.2487	163.7	40.71
2	0.0000	163.7	0.00
3	0.0000	163.7	0.00
4	0.0004	163.7	0.07
5	0.0033	163.7	0.54
6	0.2871	163.7	47.00
7	0.0443	163.7	7.25
8	0.0007	163.7	0.11
9	0.0101	163.7	1.65
10	0.0562	163.7	9.20
11	0.1827	163.7	29.91
12	0.1349	163.7	22.08
13	0.1206	163.7	19.74
14	0.0124	163.7	2.03
15	0.0116	163.7	1.90
16	0.0193	163.7	3.16
17	0.0465	163.7	7.61
18	0.0410	163.7	6.71
9	0.0250	163.7	4.09
20	0.0291	163.7	4.76
21	0.0038	163.7	0.62
22	0.0779	163.7	12.75
23	0.0238	163.7	3.90
24	0.5184	163.7	84.86
25	0.0786	163.7	12.87
26	0.0945	163.7	15.47
27	0.4878	163.7	79.85
28	1.1239	163.7	183.98
29	0.4320	163.7	70.72
30	0.2775	163.7	45.43
31	0.8908	163.7	145.82
32	0.3082	163.7	50.45
33	0.3025	163.7	49.52
34	2.7164	163.7	444.67
35	0.9533	163.7	156.06
36	10.1167	163.7	1656.10
37	0.8381	163.7	137.20
38	0.1336	163.7	21.87
<b>Total</b>			<b>3380.68</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D9**

**Consumer Product Safety Commission**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.0980	24.0	2.35
2	0.0000	24.0	0.00
3	0.0000	24.0	0.00
4	0.0002	24.0	0.00
5	0.0007	24.0	0.02
6	0.1553	24.0	3.73
7	0.0341	24.0	0.82
8	0.0005	24.0	0.01
9	0.0120	24.0	0.29
10	0.0351	24.0	0.84
11	0.3750	24.0	9.00
12	0.0424	24.0	1.02
13	0.0373	24.0	0.90
14	0.0099	24.0	0.24
15	0.0054	24.0	0.13
16	0.0128	24.0	0.31
17	0.0282	24.0	0.68
18	0.0279	24.0	0.67
19	0.0159	24.0	0.38
20	0.0292	24.0	0.70
21	0.0033	24.0	0.08
22	0.0105	24.0	0.25
23	0.0232	24.0	0.56
24	0.3633	24.0	8.72
25	0.1144	24.0	2.75
26	0.0438	24.0	1.05
27	0.3228	24.0	7.75
28	1.2231	24.0	29.35
29	0.5227	24.0	12.54
30	0.2639	24.0	6.33
31	0.3485	24.0	8.36
32	0.3937	24.0	9.45
33	0.2745	24.0	6.59
34	13.5320	24.0	324.77
35	0.7853	24.0	18.85
36	0.9994	24.0	23.99
37	0.8840	24.0	21.22
38	0.1503	24.0	3.61
<b>Total</b>			<b>508.29</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D10**

**Bureau of Labor Statistics**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier	
1	Farm Products and Agricultural , Forestry, and Fishing Services	0.0617	188.9	11.66
2	Forestry and Fishing Products	0.0000	188.9	0.00
3	Coal Mining	0.0000	188.9	0.00
4	Oil and Gas Extraction	0.0000	188.9	0.00
5	Metal mining and nonmetallic minerals, except fuels	0.0003	188.9	0.06
6	Construction	0.1148	188.9	21.69
7	Food and Kindered Products and tobacco products	0.0302	188.9	5.70
8	Textile mill products	0.0009	188.9	0.17
9	Apparel and other textile products	0.0099	188.9	1.87
10	Paper and allied products	0.0189	188.9	3.57
11	Printing and publishing	0.1304	188.9	24.63
12	Chemicals and allied products and petroleum and coal products	0.0125	188.9	2.36
13	Rubber and miscellaneous plastic products and leather products	0.0326	188.9	6.16
14	Lumber and wood products and furniture and fixtures	0.0057	188.9	1.08
15	Stone, Clay and glass products	0.0045	188.9	0.85
16	Primary metal industries	0.0047	188.9	0.89
17	Fabricated metal products	0.0197	188.9	3.72
18	Industrial Machinery and Equipment	0.0239	188.9	4.51
19	Electronic and other electric equipment	0.0219	188.9	4.14
20	Motor vehicles and Equipment	0.0210	188.9	3.97
21	Other transportation equipment	0.0027	188.9	0.51
22	Instruments and related products	0.0062	188.9	1.17
23	Miscellaneous manufacturing industries	0.0118	188.9	2.23
24	Transportation	0.4406	188.9	83.23
25	Communications	0.0392	188.9	7.40
26	Electric, gas and sanitary services	0.0364	188.9	6.88
27	Wholesale trade	0.1826	188.9	34.49
28	Retail trade	0.9872	188.9	186.48
29	Depository and nondepository institutions; security, commodity brokers	0.2329	188.9	43.99
30	Insurance	0.0705	188.9	13.32
31	Real estate	0.2624	188.9	49.57
32	Hotels, amusement and recreation services and motion pictures	0.2626	188.9	49.61
33	Personal services	0.2103	188.9	39.73
34	Business services	10.6397	188.9	2009.84
35	Eating and drinking places	0.9151	188.9	172.86
36	Health services	0.8161	188.9	154.16
37	Miscellaneous services	0.7125	188.9	134.59
38	Households	0.1158	188.9	21.87
<b>Total</b>				<b>3108.95</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D11**

**Office of Justice Programs**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.0817	103.0	8.41
2	0.0000	103.0	0.00
3	0.0000	103.0	0.00
4	0.0000	103.0	0.00
5	0.0004	103.0	0.04
6	0.1336	103.0	13.76
7	0.0391	103.0	4.03
8	0.0011	103.0	0.11
9	0.0123	103.0	1.27
10	0.0202	103.0	2.08
11	0.1282	103.0	13.20
12	0.0106	103.0	1.09
13	0.0334	103.0	3.44
14	0.0072	103.0	0.74
15	0.0055	103.0	0.57
16	0.0048	103.0	0.49
17	0.0227	103.0	2.34
18	0.0255	103.0	2.63
19	0.0064	103.0	0.66
20	0.0271	103.0	2.79
21	0.0024	103.0	0.25
22	0.0077	103.0	0.79
23	0.0131	103.0	1.35
24	0.4092	103.0	42.14
25	0.0448	103.0	4.61
26	0.0427	103.0	4.40
27	0.1987	103.0	20.46
28	1.3043	103.0	134.33
29	0.2493	103.0	25.68
30	0.0938	103.0	9.66
31	0.3921	103.0	40.38
32	0.2643	103.0	27.22
33	0.2787	103.0	28.70
34	10.9067	103.0	1123.27
35	0.9389	103.0	96.70
36	1.1180	103.0	115.14
37	0.9245	103.0	95.21
38	0.1587	103.0	16.34
<b>Total</b>			<b>1844.30</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

## Decentralizing Federal Employment: Feasibility and Impact on Ohio Cities

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**Table D12**

### U.S. Geological Survey

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.0699	88.7	6.20
2	0.0001	88.7	0.01
3	0.0000	88.7	0.00
4	0.0000	88.7	0.00
5	0.0004	88.7	0.04
6	0.1356	88.7	12.03
7	0.0289	88.7	2.56
8	0.0001	88.7	0.01
9	0.0035	88.7	0.31
10	0.0171	88.7	1.52
11	0.0923	88.7	8.19
12	0.0201	88.7	1.78
13	0.0328	88.7	2.91
14	0.0108	88.7	0.96
15	0.0080	88.7	0.71
16	0.0065	88.7	0.58
17	0.0236	88.7	2.09
18	0.0178	88.7	1.58
19	0.0046	88.7	0.41
20	0.0221	88.7	1.96
21	0.0006	88.7	0.05
22	0.0044	88.7	0.39
23	0.0122	88.7	1.08
24	0.3470	88.7	30.78
25	0.0357	88.7	3.17
26	0.0421	88.7	3.73
27	0.2260	88.7	20.05
28	1.1568	88.7	102.61
29	0.1635	88.7	14.50
30	0.1165	88.7	10.33
31	0.2268	88.7	20.12
32	0.2087	88.7	18.51
33	0.2324	88.7	20.61
34	13.5103	88.7	1198.36
35	0.8045	88.7	71.36
36	0.9708	88.7	86.11
37	0.8632	88.7	76.57
38	0.1399	88.7	12.41
<b>Total</b>			<b>1734.58</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

**Table D13**

**National Highway Traffic Safety Administration**

	Increased Money Inflow (\$ millions)	New Jobs Created	Sector Multiplier
1	0.0880	38.6	3.40
2	0.0001	38.6	0.00
3	0.0000	38.6	0.00
4	0.0000	38.6	0.00
5	0.0005	38.6	0.02
6	0.1807	38.6	6.98
7	0.0320	38.6	1.24
8	0.0001	38.6	0.00
9	0.0037	38.6	0.14
10	0.0195	38.6	0.75
11	0.1493	38.6	5.76
12	0.0460	38.6	1.78
13	0.0350	38.6	1.35
14	0.0123	38.6	0.47
15	0.0385	38.6	1.49
16	0.0089	38.6	0.34
17	0.0271	38.6	1.05
18	0.0594	38.6	2.29
19	0.0243	38.6	0.94
20	0.0253	38.6	0.98
21	0.0007	38.6	0.03
22	0.0046	38.6	0.18
23	0.0154	38.6	0.59
24	0.3675	38.6	14.19
25	0.0395	38.6	1.52
26	0.0446	38.6	1.72
27	0.3017	38.6	11.65
28	1.2505	38.6	48.27
29	0.1774	38.6	6.85
30	0.1251	38.6	4.83
31	0.2121	38.6	8.19
32	0.2254	38.6	8.70
33	0.2584	38.6	9.97
34	16.3768	38.6	632.14
35	0.8917	38.6	34.42
36	1.0301	38.6	39.76
37	0.8502	38.6	32.82
38	0.1488	38.6	5.74
<b>Total</b>			<b>890.55</b>

Source: 1999 Regional Data and 1997 National Data, BEA.

## About the Authors

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