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**The Regional Economic Impact  
of the  
Northern Virginia  
Workforce System**

**November 2012**



## Executive Summary

**This report assesses the economic and fiscal impact attributable to the job placement and career training services provided by the Northern Virginia Workforce System in fiscal year (FY) 2012. The principle findings from that assessment are as follows:**

- 1. In FY 2012, the seven localities that comprise the service area of the Northern Virginia Workforce System's service area effectively emerged from the recession of 2007, the longest and deepest recession the country has experienced since the Great Depression of the 1930s:**
  - Between the second quarter of 2011 and the second quarter of 2012, employment in Northern Virginia increased by 19,076 jobs (or 1.7 percent).
  - The largest employment gains were in the *Professional and Technical Services* (up 3,256 jobs), *Accommodation and Food Services* (up 2,889 jobs), and *Educational Services* (up 2,825 jobs) sectors.
  
- 2. Stubbornly high unemployment continues to place large demands on the job placement and career training services provided by the Northern Virginia Workforce System:**
  - Unemployment remains persistently high relative to the historic regional norm, coming in at 3.9 percent in October 2012.
  - Excluding core services, 1,475 individuals enrolled in WIA and other programs offered by the Northern Virginia Workforce System in FY 2012. This figure remains 326 percent up from FY 2008 when the recession began (453 enrollees).
  - Excluding Core Services, 578 individuals were transitioned into employment through programs offered by the Northern Virginia Workforce System in FY 2012. This figure is remains 312 percent up from FY 2008 when the recession began (185 placements).

### **3. The job placement and career training services provided by the Northern Virginia Workforce System have a large economic impact on Northern Virginia:**

- In FY 2012, the Northern Virginia Workforce System transitioned 578 previously unemployed individuals into employment through its Workforce Investment Act (WIA), Rapid Response, On-the-Job Training National Emergency Grants (OJT NEG), Base Realignment and Closure (BRAC), Virginia Serious and Violent Offender Reentry Initiative (VASAVOR), and Pre-Release Employment Center (PRC) programs. The increased household income associated with this employment was approximately \$20.7 million.
- Our analysis indicates that the total regional economic impact associated with the household consumption expenditures attributable to this \$20.7 million increase in income included: a total of 695 full time equivalent jobs, \$26.7 million in additional regional labor income, \$16.0 million in additional regional economic output, and \$2.4 million in additional state, local, and federal tax revenue.
- If one broadens the scope of workforce services provided to include self-referred individuals who take advantage of the Northern Virginia Workforce System's Core Services, the System was instrumental in placing 1,271 previously unemployed individuals placed into employment in FY 2012, and the increased household income associated with this employment was approximately \$44.4 million.
- Our analysis indicates that the total regional economic impact associated with the household consumption expenditures attributable to this \$44.4 million increase in income included: a total of 1,519 full time equivalent jobs, \$57.0 million in additional regional labor income, \$34.2 million in additional regional economic output, and \$5.2 million in additional state, local, and federal tax revenue.

### **4. Comparing the costs attributable to these programs to their economic benefits shows that benefits far exceed costs.**

- In FY 2012, the cost associated with the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, PRC, and Core Services programs administered by the Northern Virginia Workforce System was approximately \$4.7 million.
- Comparing that cost to the \$26.7 million in additional regional labor income attributable to placements from the WIA, RAPID RESPONSE, OTJ

NEG, BRAC, VASAVOR, and PRC programs shows that the benefit/cost ratio is approximately 5.7, indicating that the benefits derived from the programs are nearly six times greater than the costs required to generate those benefits.

- If the analysis is expanded to encompass Core Services as well, the benefit/cost ratio rises to approximately 12.1, indicating that the benefits are more than 12 times greater than the costs required to generate them.

**5. In conclusion, in FY 2012 the Northern Virginia Workforce Services System made a significant contribution to the economy of Northern Virginia.**

*This report was commissioned by the SkillSource Group, the non-profit arm of the Northern Virginia Workforce Investment Board, and produced by Mangum Economic Consulting, LLC*

## Introduction

This report assesses the economic and fiscal contribution that the Northern Virginia Workforce System's fiscal year (FY) 2012 career training and job placement services made to Northern Virginia.<sup>1</sup> The remainder of the report is divided into three sections. The *Background* section provides details on the Northern Virginia Workforce System's service area, the services it provided in FY 2012, and recent economic trends within the region. The *Economic Impact – FY 2012* section provides an estimate of the economic impact that the job placement and training services provided by the Northern Virginia Workforce System had on the region in FY 2012. Finally, the *Conclusion* section provides a brief summary. This report was prepared by Mangum Economic Consulting, LLC at the request of the SkillSource Group, the non-profit arm of the Northern Virginia Workforce Investment Board.

## Background

### The Northern Virginia Workforce System

The Northern Virginia Workforce System serves the localities of Fairfax, Loudoun, and Prince William counties, and the cities of Fairfax, Falls Church, Manassas, and Manassas Park. A map depicting these localities along with the locations of the SkillSource Group's various service centers is provided in Figure 1.<sup>2</sup> In 2010, these seven localities had a combined population of nearly 1.9 million, a 25.7 percent increase over their population in 2000 (by way of comparison, the population of Virginia as a whole increased by 13.0 percent between 2000 and 2010).<sup>3</sup>

The mission of the Northern Virginia Workforce System is to foster a globally competitive business environment in Northern Virginia. It does that by:

- aiding in the creation of a well-trained workforce to keep regional businesses competitive,
- providing the services and workforce information that enable businesses to connect with qualified job applicants,

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<sup>1</sup> July 1, 2011 through June 30, 2012.

<sup>2</sup> The addresses of these facilities are as follows: 1) Falls Church SkillSource Center, 6245 Leesburg Pike, Falls Church, 2) South County SkillSource Center, 8350 Richmond Highway, Alexandria, 3) Lake Anne Employment Resource Center, 11484 Washington Boulevard West, Reston, 4) Loudoun Workforce Resource Center, 102 Heritage Way, Northeast, Leesburg, PR) Fairfax County Pre-Release Employment Center, 10520B Judicial Drive, Fairfax, E-Reston) SHARE Network Site at Reston Interfaith, 11150 Sunset Hills Road, Reston, E-Centreville) SHARE Network Site at Katherine Hanley Shelter, 13000 Lee Highway, Fairfax, and E-Gainesville) SHARE Network Site at Auspicious Cloud Monastery, 2101 James Madison Highway, Haymarket.

<sup>3</sup> *Data Source:* Weldon Cooper Center for Public Service.

- helping residents find their way to meaningful employment,
- facilitating the transition of ex-offenders and others with employment challenges into the community by providing them with the skills they need to become successfully employed, and
- preparing today's young adults for tomorrow's jobs.



**Figure 1:** SkillSource Group Service Area and Service Center Locations

## Services Provided in FY 2012

In FY 2012, the Northern Virginia Workforce System provided career training and job placement services through seven separate workforce programs:

- Workforce Investment Act (WIA) Program – provides employment and training services to assist eligible adults (individuals 18 years of age and older) in finding meaningful employment.
- WIA Dislocated Worker Program – provides employment and training services to dislocated workers (an individual who has been terminated or laid off, or has received notice that they will be terminated or laid off) in finding meaningful employment.
- WIA Youth Program – provides summer and year-round development programs to at risk youth (e.g., dropouts, foster children, juvenile offenders, children of incarcerated parents, and migrant children).
- Rapid Response – responds to workforce needs resulting from the federal Base Realignment and Closure process
- On-the-Job Training National Emergency Grants (OJT NEG) – part of a larger Department of Labor program that focused on assisting long-term unemployed adults.
- Base Realignment and Closure (BRAC) – responds to workforce needs resulting from the federal Base Realignment and Closure process.
- Virginia Serious and Violent Offender Re-entry Initiative (VASAVOR) – supports the transition of long-term incarcerated adults into the community.
- Fairfax Pre-Release Employment Center (PRC) – a one-stop employment center that provides pre-release employment and training services to selected Fairfax County jail inmates.
- Core Services (Core) – provides self-service tools that assist a job seeker in making an effective job search.

As shown in Table 1, in FY 2012 these programs were instrumental in transitioning 1,271 previously unemployed individuals into well-paying jobs (average annual salaries ranged from \$17,056 to \$50,149).<sup>4</sup> Out of this number, 288 were placed through the Northern Virginia Workforce System's WIA programs (adult, dislocated worker, and youth), while 578 were placed through the System's other workforce programs (Rapid Response, OJT NEG, BRAC, VASAVOR, and PRC). In addition to these totals, 693

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<sup>4</sup> Data Source: the SkillSource Group, Inc.

more individuals found employment as a result of the self-service job placement tools provided through the Northern Virginia Workforce System’s Core Services (the average annual salary for those self-referred placements was \$34,154).<sup>5</sup>

**Table 1: Northern Virginia Workforce System Job Placements in FY 2012**

Program	Job Placements	Average Annual Salary
WIA – Adult	72	\$31,720
WIA – Dislocated Worker	194	\$46,426
WIA – Youth*	22	\$17,056
<b>WIA Subtotal</b>	<b>288</b>	
Rapid Response	27	\$50,149
OJT NEG	22	\$34,278
BRAC/NEG	76	\$43,763
VASAVOR	58	\$27,976
PRC	107	\$18,658
<b>Other Program Subtotal</b>	<b>578</b>	
Core Services	693	\$34,154
<b>TOTAL</b>	<b>1,271</b>	

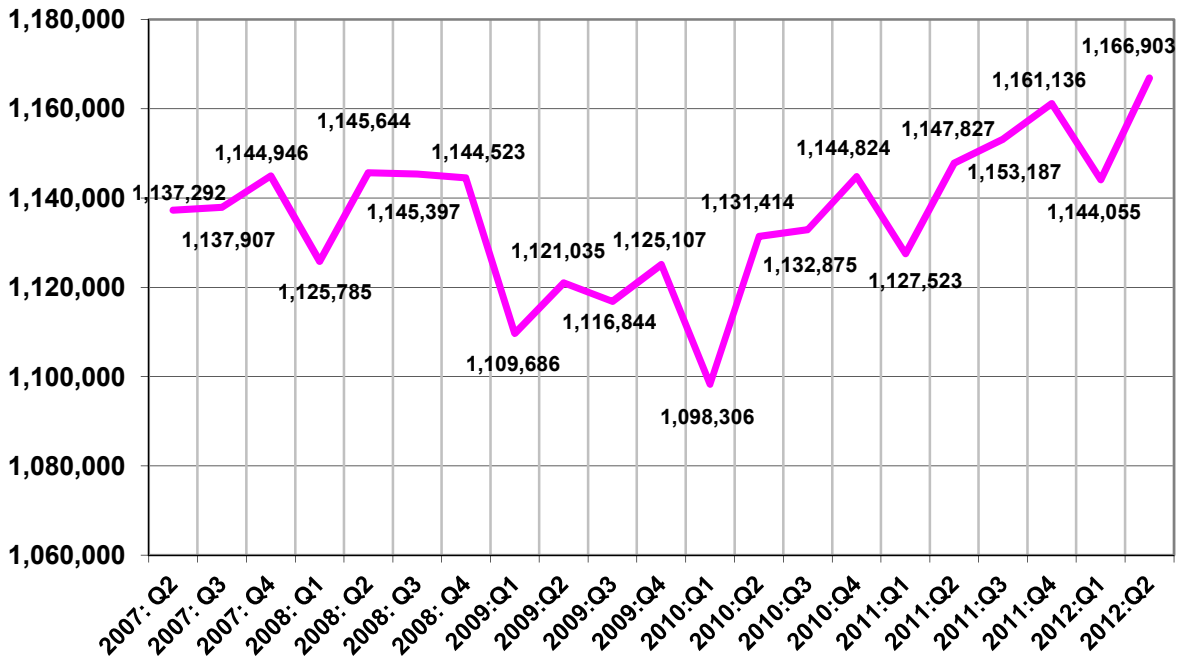
\*Job or postsecondary school placement

### Regional Economic Trends

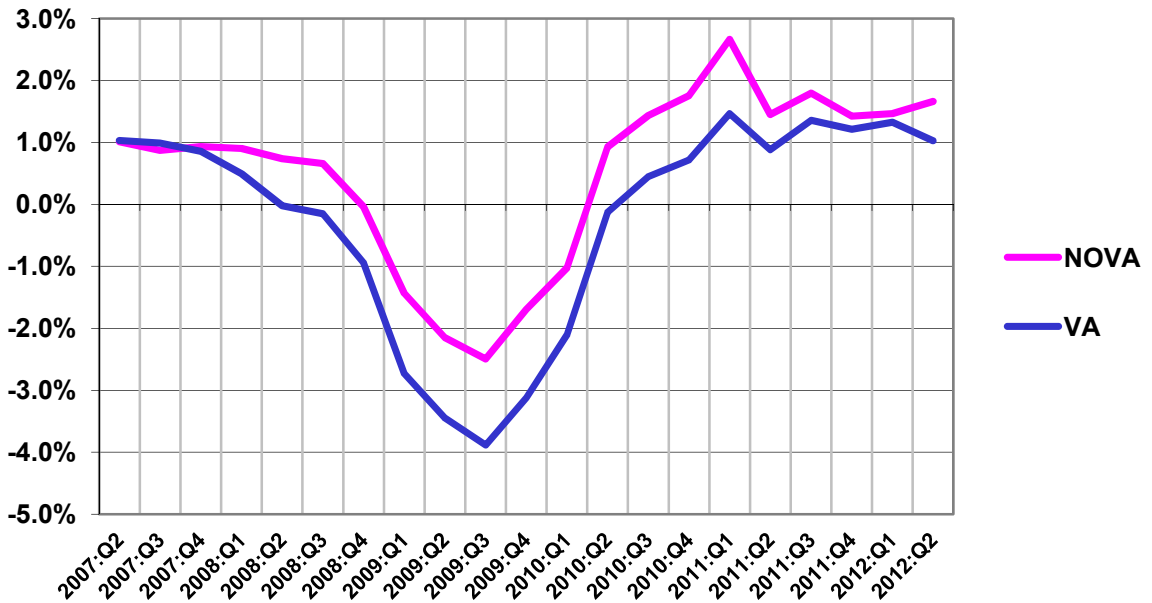
In FY 2012, Northern Virginia effectively emerged from the recession of 2007, the longest and deepest recession the country has experienced since the Great Depression of the 1930s. Figure 2 depicts changes in total employment in the seven localities served by the Northern Virginia Workforce System for the five-year period from the second quarter of 2007 through the second quarter of 2012 (the most recent quarter for which data are available). What these data show is that, employment in the region declined precipitously between the last quarter of 2008 and the first quarter of 2009, dropping by 34,837 jobs or 3.0 percent. After falling to a low of 1,098,306 in the first quarter of 2010, it had since trended upward, peaking at 1,166,903 jobs in the second quarter of 2012.

<sup>5</sup> Data Source: the SkillSource Group, Inc.





**Figure 2: Northern Virginia Total Employment, 2007:Q1 through 2012:Q1<sup>6</sup>**



**Figure 3: Year-Over-Year Change in Total Employment, 2007:Q2 through 2012:Q2<sup>7</sup>**

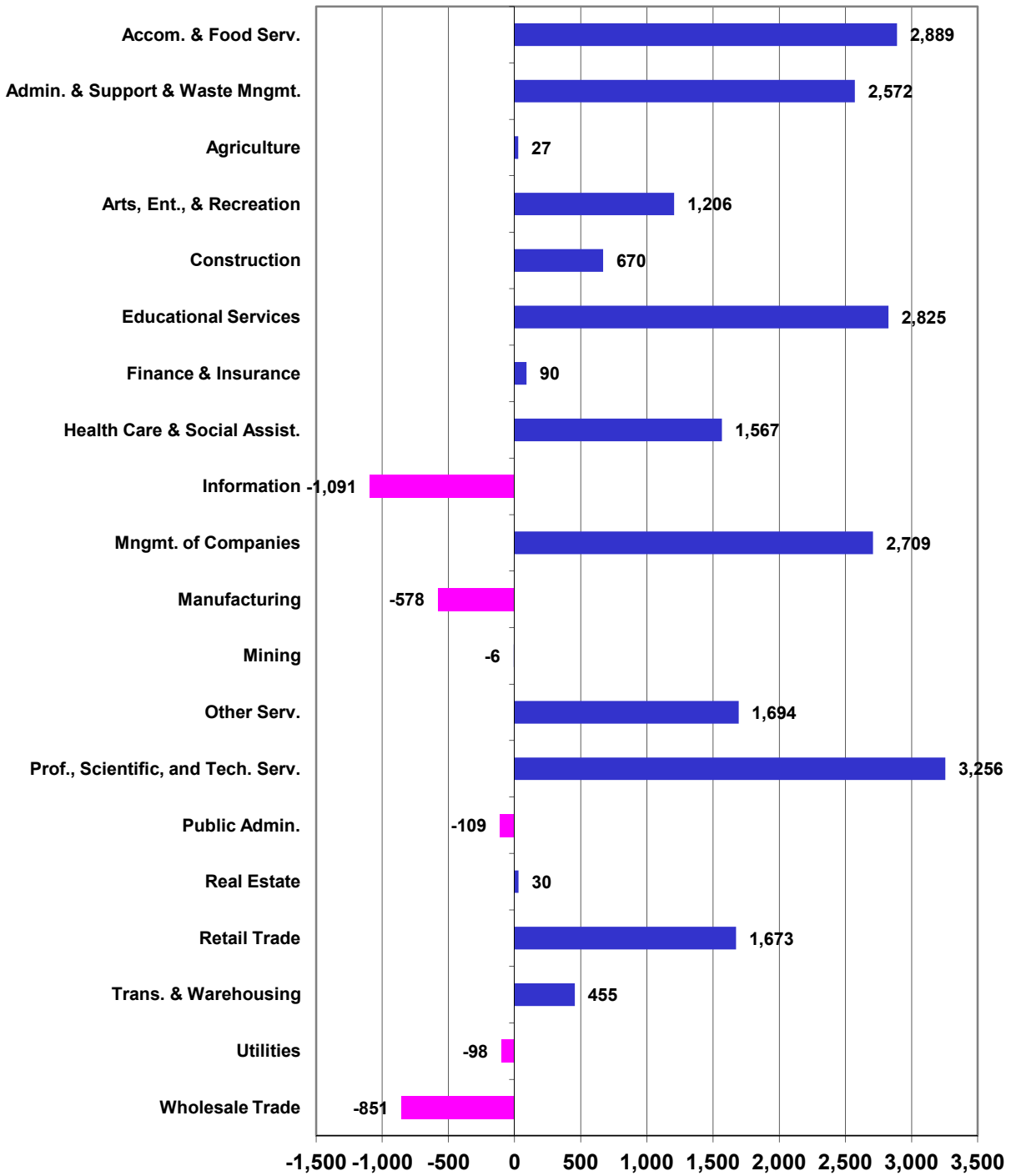
<sup>6</sup> Data Source: Virginia Employment Commission

<sup>7</sup> Data Source: Virginia Employment Commission

Figure 3 puts these numbers in perspective by comparing year-over-year changes in employment in Northern Virginia to that of the state as a whole (year-over-year changes are useful in controlling for seasonality in the data). As these data indicate, Northern Virginia entered the recession later and emerged from it sooner than Virginia as a whole. Where the statewide change in employment turned negative in the third quarter of 2008, in Northern Virginia that transition did not occur until the first quarter of 2009. Similarly, where statewide employment returned to positive growth in the third quarter of 2010, in Northern Virginia that transition occurred in the second quarter of 2010. In addition, employment declines tended to be less steep in Northern Virginia than in the rest of the state – at its nadir in the third quarter of 2009, statewide employment fell by 3.9 percent relative to the year before, where in Northern Virginia the comparable figure was minus 2.5 percent.

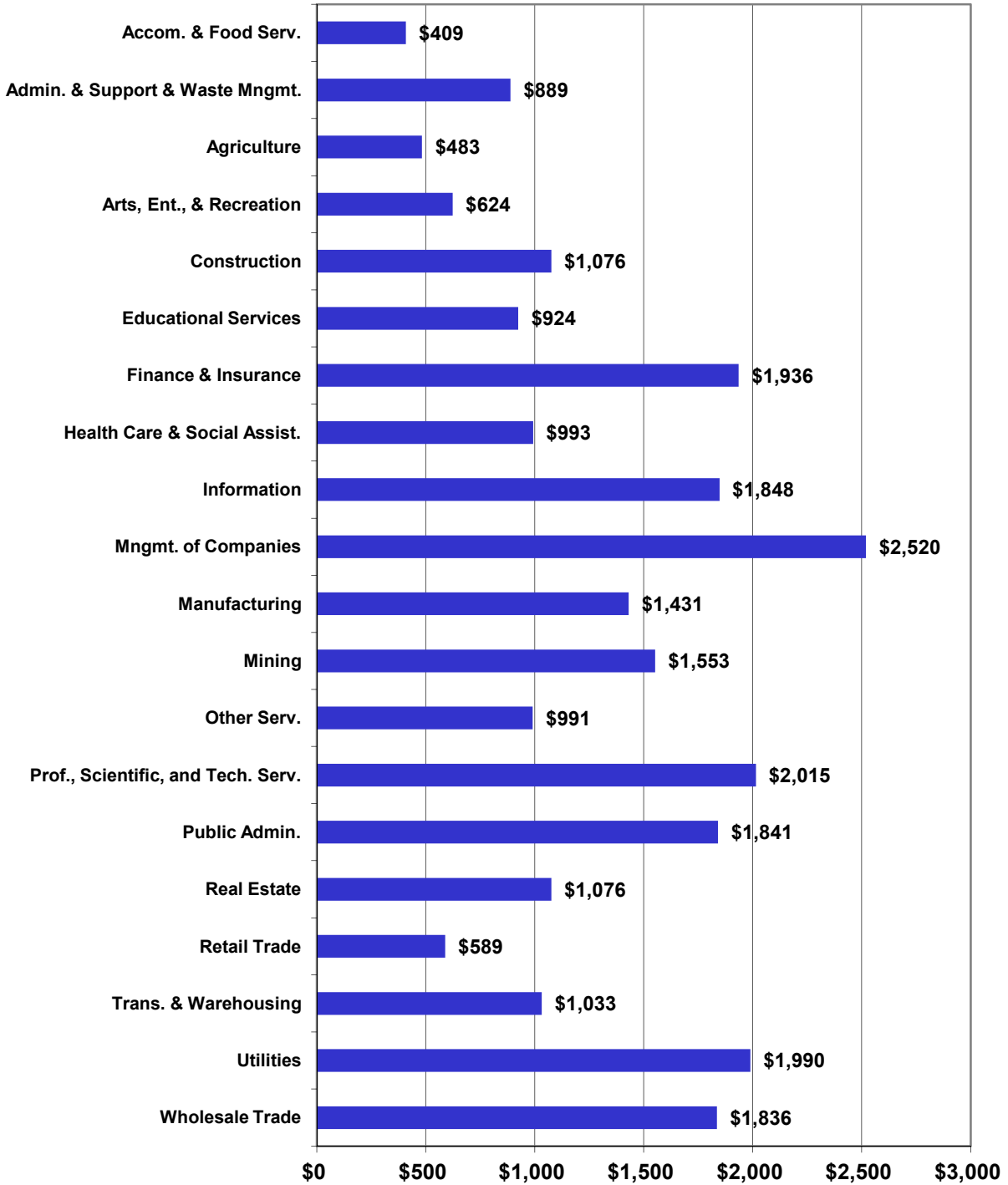
Figures 4 and 5 provide information on Northern Virginia’s most recent employment picture. Figure 4 depicts change in employment by major industry category between the second quarter of 2011 and the second quarter of 2012 (the most recent quarter for which data are available), while Figure 5 shows average weekly wages in each sector in the second quarter of 2012.

As the data shown in Figure 4 indicate, employment gains were widespread over this period. Overall, employment increased by 19,076 jobs, with the largest gains occurring in the *Professional and Technical Services* (up 3,256 jobs), *Accommodation and Food Services* (up 2,889 jobs), and *Educational Services* (up 2,825 jobs) sectors. This growth in the *Professional and Technical Services* sector is particularly noteworthy because, this sector is not only the largest employment sector in Northern Virginia, but also the second highest paying (see Figure 5). At the other end of the spectrum, the largest employment losses over the period occurred in the *Information* (down 1,091 jobs), *Wholesale Trade* (down 851 jobs), and *Manufacturing* (down 578 jobs).



**Figure 4: Northern Virginia Employment Change by Major Industry Category, 2011:Q2 to 2012:Q2<sup>8</sup>**

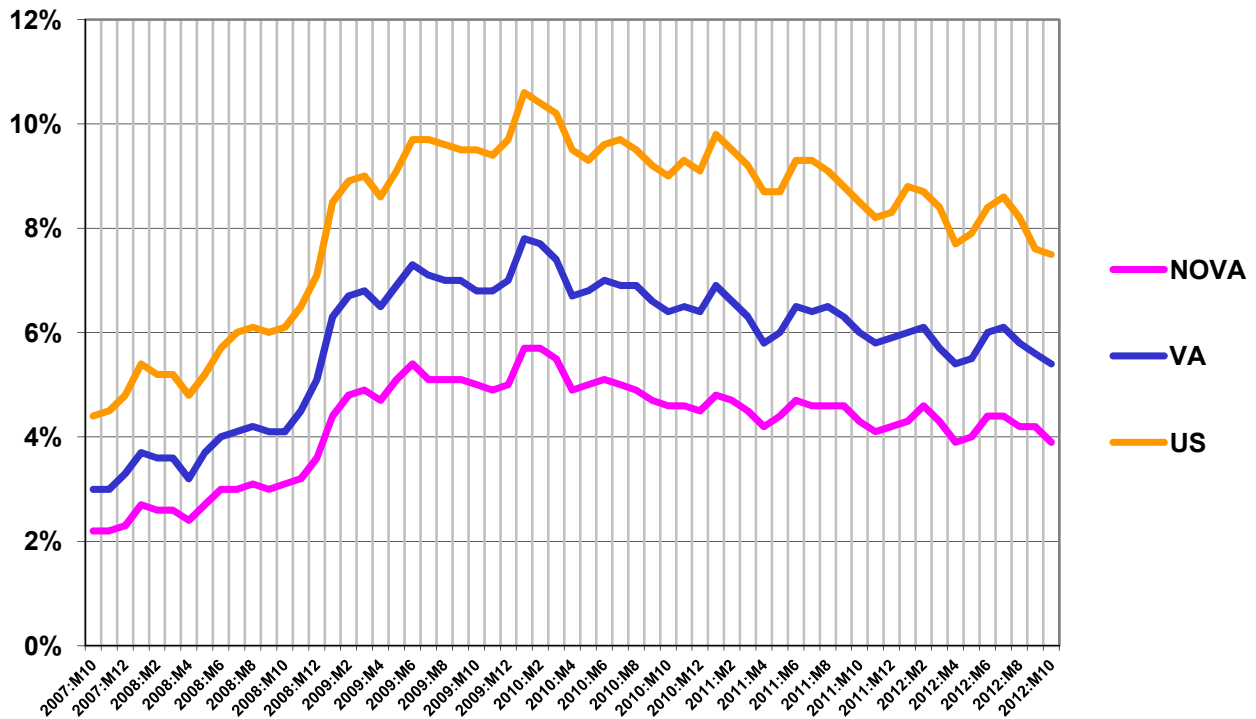
<sup>8</sup> Data Source: Virginia Employment Commission



**Figure 5: Northern Virginia Average Weekly Wages by Major Industry Category, 2012:Q1<sup>9</sup>**

<sup>9</sup> Data Source: Virginia Employment Commission

Figure 6 compares recent unemployment trends in Northern Virginia to those at the state and national level. These data are monthly and cover the five-year period from October of 2007 through October of 2012 (the most recent month for data are available). As with the total employment data shown in Figure 2, these data indicate that the employment situation in Northern Virginia deteriorated significantly between the last part of 2008 and the first part of 2009, with unemployment rates escalating sharply over this period. Unemployment peaked in January of 2010 at 5.7 percent in Northern Virginia, 7.8 percent statewide, and 10.6 percent nationally. It has since trended slowly downward. In October of 2012, unemployment stood at 3.9 percent in Northern Virginia, 5.4 percent statewide, and 7.5 percent nationally.



**Figure 6: Unemployment Rate, October 2007 to October 2012<sup>10</sup>**

<sup>10</sup> Data Source: Virginia Employment Commission

## Economic Impact – FY 2012

In this section, we assess the economic impact that the career training, job placement, and other workforce services provided by the Northern Virginia Workforce System in FY 2012 had on the economy of Northern Virginia. The primary nature of that impact had to do with the new income earned by the 1,271 previously unemployed individuals that the Northern Virginia Workforce System was instrumental in transitioning into meaningful employment.<sup>11</sup> As shown in Table 2, the total additional household income generated through those placements is estimated to be \$44.4 million.

**Table 2: Total Additional Household Income Attributable to FY 2012 Job Placements**

Program	Job Placements	Average Annual Salary	Total Household Income
WIA Adult	72	\$31,720	\$2,283,840
WIA Dislocated Worker	194	\$46,426	\$9,006,644
WIA Youth	22	\$17,056	\$375,232
Rapid Response	27	\$50,149	\$1,354,023
OJT NEG	22	\$34,278	\$754,116
BRAC	76	\$43,763	\$3,325,988
VASAVOR	58	\$27,976	\$1,622,608
PRC	107	\$18,658	\$1,996,406
<b>Subtotal</b>	<b>578</b>	<b>\$33,753</b>	<b>\$20,718,857</b>
Core Services	693	\$34,154	\$23,668,722
<b>TOTAL</b>	<b>1,271</b>	<b>\$33,798</b>	<b>\$44,387,579</b>

To quantify the regional economic impact attributable to this increase in household income, we employ a commonly used impact simulation model called IMPLAN.<sup>12</sup> The IMPLAN model uses regional and national data on production and trade flows to

<sup>11</sup> It is important to note that whereas the wages earned by these previously unemployed individuals constitute the primary economic impact of the career training, job placement, and other workforce services provided by the Northern Virginia Workforce System in FY 2012, they are by no means the only economic impact. Although it is beyond the scope of the analysis presented here, a more inclusive definition of economic impact would also include, among other things, the cost of any social assistance that these individuals were receiving while unemployed (e.g., unemployment assistance, food stamps) and that they no longer required after they were employed. For that reason, the more narrowly focused estimates of economic impact presented in this report should be assumed to be conservative in nature.

<sup>12</sup> IMPLAN v.3 is produced by Minnesota IMPLAN Group, Inc. The datasets used in the analysis presented in this report are for 2010, the most recent year for which data were available at the time this report was published.

construct region-specific economic multipliers and uses these multipliers to quantify economic impact.

Economic multipliers measure the second round effects, or ripple effects, that an expenditure has as it makes its way through the economy. For example, as when individuals that the Northern Virginia Workforce System transitioned into employment spend their newly acquired salaries and wages on housing, groceries, and transportation, thereby generating income for someone else, which is in turn spent, thereby becoming income for yet someone else, and so on, and so on. Through this process, one dollar in expenditures generates multiple dollars of income. The mathematical relationship between the initial expenditure and the total income generated is the economic multiplier. The cumulative result of these second round effects is called indirect impact when it refers to business to business transactions, and induced impact when, as in the current case, it refers to household (employee) to business transactions.

In the analysis that follows, we also provide estimates for three categories of economic impact. The first is employment, or the number of jobs that are created in the economy in addition to the jobs that are filled by individuals transitioned into employment through services provided by the Northern Virginia Workforce System. The second is labor income, or the salaries and wages that are created in the economy in addition to the salaries and wages paid to individuals transitioned into employment through services provided by the Northern Virginia Workforce System. The third is economic output, or the total amount of regional economic activity that is generated as a result of the increased household income earned by individuals transitioned into employment through services provided by the Northern Virginia Workforce System.

#### WIA, Rapid Response, OTJ NEG, BRAC, VASAVOR, and PRC programs

We first look at the economic impact associated with the Northern Virginia Workforce System's WIA, Rapid Response, OTJ NEG, BRAC, VASAVOR, and PRC programs – those programs where the Northern Virginia Workforce System directly provided career training and job placement services that enabled an individual to transition from unemployment into a well-paying job. In assessing the likely economic impact attributable to these programs, we employ the following assumptions:

- A total of 578 individuals exited from these programs and were placed into jobs in FY 2012.
- The average salary and total pre-tax income associated with these programs are as detailed in Table 2.
- All consumption expenditures were made within Northern Virginia.

- Economic impact is based on a “representative year” and no attempt is made to phase placements in based on actual job start data from FY 2012.

By feeding this assumption into the IMPLAN model, we obtain the estimates of annual regional economic impact shown in Table 3:

- Regional Employment: In addition to the 578 full time equivalent jobs filled by individuals transitioned into employment through the Northern Virginia Workforce System’s programs, the household expenditures made by these newly employed individuals also were responsible for supporting 117 full time equivalent jobs through second round effects, for a total regional employment impact of 695 full time equivalent jobs.
- Regional Labor Income: In addition to the \$20.7 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System’s programs, the household expenditures made by these newly employed individuals also were responsible for creating \$6.0 million in additional regional labor income through second round effects, for a total regional labor income impact of \$26.7 million.
- Regional Economic Output: Second round effects attributable to the \$20.7 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System’s programs were responsible for generating \$16.0 million in additional economic output in the region.
- Fiscal Impact: Regional economic activity associated with the \$20.7 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System’s programs were responsible for generating \$1.0 million in additional state and local tax revenue, and \$1.4 million in additional federal tax revenue, for a total fiscal impact of \$2.4 million.



**Table 3: Estimated Economic Impact of WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, and PRC Programs**

	Employment	Labor Income	Output
<i>First Round Direct Economic Activity</i>	578	\$20,718,857	
<i>Second Round Indirect and Induced Economic Activity</i>	117	\$5,962,992	\$15,985,640
<i>Total, Direct, Indirect, and Induced Economic Activity</i>	695	\$26,681,849	\$15,985,640
	State and Local	Federal	Total
<i>Fiscal Impact</i>	\$1,016,802	\$1,422,977	\$2,439,779

WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, PRC, and Core Services programs

In this section, we add FY 2012 placements from Core Services to the placements attributable to the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, and PRC programs. Core Services have an arguably less direct impact on job placement since these services primarily involve self-service tools that assist a job seeker in making an effective job search. In assessing the likely economic impact attributable to these programs, we employ the following assumptions:

- A total of 1,271 individuals exited from these programs and were placed into jobs in FY 2012.
- The average salary and total pre-tax income associated with these programs are as detailed in Table 2.
- All consumption expenditures were made within Northern Virginia.
- Economic impact is based on a “representative year” and no attempt is made to phase placements in based on actual job start data from FY 2012.

By feeding this assumption into the IMPLAN model, we obtain the estimates of annual regional economic impact shown in Table 4:

- **Regional Employment:** In addition to the 1,271 full time equivalent jobs filled by individuals transitioned into employment through services provided by the Northern Virginia Workforce System, the household expenditures made by these newly employed individuals also were responsible for supporting 248 full time equivalent jobs through second round effects, for a total regional employment impact of 1,519 full time equivalent jobs.
- **Regional Labor Income:** In addition to the \$44.4 million in labor income paid to individuals transitioned into employment through services provided by the Northern Virginia Workforce System, the household expenditures made by these newly employed individuals also were responsible for creating \$12.6 million in additional regional labor income through second round effects, for a total regional labor income impact of \$57.0 million.
- **Regional Economic Output:** Second round effects attributable to the \$44.4 million in labor income paid to individuals transitioned into employment through services provided by the Northern Virginia Workforce System were responsible for generating \$34.1 million in additional economic output in the region.
- **Fiscal Impact:** Regional economic activity associated with the \$44.4 million in labor income paid to individuals transitioned into employment through services provided by the Northern Virginia Workforce System were responsible for generating \$2.1 million in additional state and local tax revenue, and \$3.0 million in additional federal tax revenue, for a total fiscal impact of \$5.1 million.

**Table 4: Estimated Economic Impact of WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, PRC, and Core Services Programs**

	Employment	Labor Income	Output
<i>First Round Direct Economic Activity</i>	1,271	\$44,387,579	
<i>Second Round Indirect and Induced Economic Activity</i>	248	\$12,641,319	\$34,158,435
<i>Total, Direct, Indirect, and Induced Economic Activity</i>	1,519	\$57,028,898	\$34,158,435
	State and Local	Federal	Total
<i>Fiscal Impact</i>	\$2,136,547	\$3,024,704	\$5,161,251

## Benefit/Cost Ratio

In FY 2012, the cost associated with the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, PRC, and Core Services programs provided by the Northern Virginia Workforce System was approximately \$4.7 million.<sup>13</sup> Comparing this cost to the benefits derived from these programs, in terms of total household (or labor) income, allows us to calculate a benefit/cost ratio. If the analysis is restricted to the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, and PRC programs that benefit/cost ratio is approximately 5.7, indicating that the benefits derived from the programs are nearly six times greater than the costs required to generate those benefits. If the analysis is expanded to encompass Core Services as well, the benefit/cost ratio rises to approximately 12.1, indicating that the benefits are more than 12 times greater than the costs required to generate them.

## **Conclusion**

The Northern Virginia Workforce System provides workforce services to the localities of Fairfax, Loudoun, and Prince William counties, and the cities of Fairfax, Falls Church, Manassas, and Manassas Park. In FY 2012, Northern Virginia effectively emerged from the recession of 2007, the longest and deepest recession the country has experienced since the Great Depression of the 1930s. Overall, regional employment increased by 19,076 jobs between the second quarter of 2011 and the second quarter of 2012, with the largest gains occurring in the *Professional and Technical Services* (up 3,256 jobs), *Accommodation and Food Services* (up 2,889 jobs), and *Educational Services* (up 2,825 jobs) sectors. This growth in the *Professional and Technical Services* sector is particularly noteworthy because, this sector is not only the largest employment sector in Northern Virginia, but also the second highest paying.

Unemployment remains stubbornly high relative to the regional norm, coming in at 3.9 percent in October of 2012, and this has had a continuing impact on the demand for the Northern Virginia Workforce System's job placement and training services. Excluding core services, 1,475 individuals enrolled in WIA and other programs offered by the Northern Virginia Workforce System in FY 2012. This figure remains 326 percent up from FY 2008 when the recession began (453 enrollees). Similarly, excluding core services, 578 individuals were transitioned into employment through programs offered by the Northern Virginia Workforce System in FY 2012. This figure is remains 312 percent up from FY 2008 when the recession began (185 placements).

This report has shown that the most significant economic and fiscal contribution that the Northern Virginia Workforce System made to Northern Virginia in FY 2012 has to do

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<sup>13</sup> Data Source: The SkillSource Group, Inc.

with the 1,271 previously unemployed individuals that the System was able to transition into well-paying jobs. Out of that total, 578 of the placements came through the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, and PRC programs (programs that directly provide career training and job placement services), and 693 came through Core Services (self-service tools that assist a job seeker in making an effective job search). The average annual salaries associated with those placements ranged from \$17,056 to \$50,149. In combination, these 1,271 placements generated approximately \$44.4 million in additional household income in the region.

In turn, the second round effects attributable to the additional local consumption expenditures associated with that increased household income had a significant economic impact on the Northern Virginia economy. Focusing first on the 578 placements associated with the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, and PRC programs, that impact is estimated to be a total of 695 full time equivalent jobs, \$26.7 million in additional regional labor income, \$16.0 million in additional regional economic output, and \$2.4 million in state, local, and federal tax revenue. If we increase the scope of workforce services to include Core Services, the economic impact associated with the resulting combined 1,271 placements is estimated to be a total of 1,519 full time equivalent jobs, \$57.0 million in additional regional labor income, \$34.2 million in additional regional economic output, and \$5.2 million in state, local, and federal tax revenue.

Comparing these estimated benefits to the \$4.7 million in costs associated with the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, PRC, and Core Services programs allows us to calculate a benefit/cost ratio. If the analysis is restricted to the WIA, RAPID RESPONSE, OTJ NEG, BRAC, VASAVOR, and PRC programs that benefit/cost ratio is 5.7, indicating that the benefits derived from the programs are nearly six times greater than the costs required to generate those benefits. If the analysis is expanded to encompass Core Services as well, the benefit/cost ratio rises to approximately 12.1, indicating that the benefits are more than 12 times greater than the costs required to generate them.

In conclusion, in FY 2012 the Northern Virginia Workforce System made a significant contribution to the economy of Northern Virginia.