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

November 2013



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) 2013. The principle findings from that assessment are as follows:

- 1. In FY 2013, the seven localities that comprise the service area of the Northern Virginia Workforce System's service continued to slowly emerge from the recession of 2007, the longest and deepest recession the country has experienced since the Great Depression of the 1930s:**
 - Between the first quarter of 2012 and the first quarter of 2013, employment in Northern Virginia increased by 11,065 jobs (or 1.0 percent).

- 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 4.3 percent in August 2013.
 - Excluding core services, 1,424 individuals enrolled in WIA and related programs offered by the Northern Virginia Workforce System in FY 2013. This figure remains 214 percent up from FY 2008 when the recession began (453 enrollees).
 - Excluding core services, 484 individuals were transitioned into employment through programs offered by the Northern Virginia Workforce System in FY 2013. This figure remains 210 percent up from FY 2008 when the recession began (156 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 2013, the Northern Virginia Workforce System transitioned 458 previously unemployed individuals into employment through its Workforce Investment Act (WIA), 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 \$16.0 million.

- Our analysis indicates that the total regional economic impact associated with the household consumption expenditures attributable to this \$16.0 million increase in income included: a total of 543 full time equivalent jobs, \$20.5 million in additional regional labor income, \$12.1 million in additional regional economic output, and \$1.9 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 1,068 previously unemployed individuals into employment in FY 2013, and the increased household income associated with this employment was approximately \$31.7 million.
- Our analysis indicates that the total regional economic impact associated with the household consumption expenditures attributable to this \$31.7 million increase in income included: a total of 1,237 full time equivalent jobs, \$40.6 million in additional regional labor income, \$24.1 million in additional regional economic output, and \$3.7 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 2013, the cost associated with the WIA, BRAC, VASAVOR, PRC, and Core Services programs administered by the Northern Virginia Workforce System was approximately \$5.9 million.
- Comparing that cost to the \$20.5 million in additional regional labor income attributable to employment placements from the WIA, BRAC, VASAVOR, and PRC programs shows that the benefit/cost ratio is approximately 3.5, indicating that the benefits derived from the programs were three and a half 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 6.8, indicating that the benefits are almost seven times greater than the costs required to generate them.

5. In conclusion, in FY 2013 the Northern Virginia Workforce 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) 2013 career training and job placement services made to Northern Virginia.¹ 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 2013, and recent economic trends within the region. The *Economic Impact – FY 2013* 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 2013. Finally, the *Conclusion* section provides a brief summary. This report was prepared by Mangum Economic Consulting, LLC through a contract with 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 counties of Fairfax, Loudoun, and Prince William, 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 1.² In 2010, these localities had a combined population of almost 1.9 million, accounting for almost one out of every four people in the state of Virginia as a whole.³ Moreover, between 2000 and 2010 the population of these localities grew by 26 percent, twice the statewide population growth rate of 13 percent.⁴

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,

¹ July 1, 2012 through June 30, 2013.

² The addresses of these facilities are as follows: 1) Fairfax SkillSource Center Annandale, 7611 Little River Turnpike (West Wing), Suite 300W, Annandale; 2) Fairfax SkillSource Center Alexandria, 8350 Richmond Highway, Alexandria; 3) Fairfax SkillSource Center Reston, 11484 Washington Boulevard West, Reston; 4) Workforce Resource Center, 102 Heritage Way, Northeast, Leesburg; 5) Prince William Workforce Center, 13370 Minnieville Road, Woodbridge; and PR) Fairfax County Pre-Release Employment Center, 10520B Judicial Drive, Fairfax.

³ *Data Source:* U.S. Census Bureau.

⁴ *Data Source:* U.S. Census Bureau.

- providing the services and workforce information that enable businesses to connect with qualified job applicants,
- 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 2013

In FY 2013, the Northern Virginia Workforce System provided career training and job placement services through seven separate workforce programs:

- Workforce Investment Act (WIA Adult) 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).
- 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.
- WIA 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 2013 these programs were instrumental in transitioning 1,068 previously unemployed individuals into well-paying jobs (average annual salaries ranged from \$18,648 to \$56,146).⁵ Out of this number, 266 were placed through the Northern Virginia Workforce System's WIA programs (adult, dislocated worker, and youth), while 192 were placed through the System's other workforce programs (BRAC, VASAVOR, and PRC). In addition to these totals, 610 more individuals found employment as a result of the self-service job placement tools provided through the Northern Virginia Workforce System's WIA Core Services (the average annual salary for those self-referred placements was \$25,771).⁶

⁵ Data Source: the SkillSource Group, Inc.

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Table 1: Northern Virginia Workforce System Job Placements in FY 2013

Program	Job Placements	Average Annual Salary
WIA – Adult	76	\$18,697
WIA – Dislocated Worker	178	\$45,802
WIA – Youth*	12	\$20,384
WIA Subtotal	266	
BRAC	66	\$56,146
VASAVOR	28	\$21,424
PRC	98	\$18,648
Other Program Subtotal	192	
Core Services	610	\$25,771
TOTAL	1,068	

*Job or postsecondary school placement

Regional Economic Trends

Figure 2 depicts changes in total employment in the broader Northern Virginia region for the five-year period from the first quarter of 2008 through the first quarter of 2013 (the most recent quarter for which data are available).⁷ 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 1,176,696 jobs in the fourth quarter of 2012.

⁷ In this graph and those that follow in this section, Northern Virginia is defined to include the City of Alexandria and Arlington County, as well as the seven localities served by the Northern Virginia Workforce Investment Board (the counties of Fairfax, Loudoun, and Prince William, and the cities of Fairfax, Falls Church, Manassas, and Manassas Park).



Figure 2: Northern Virginia Total Employment, 2008:Q1 through 2013:Q1⁸

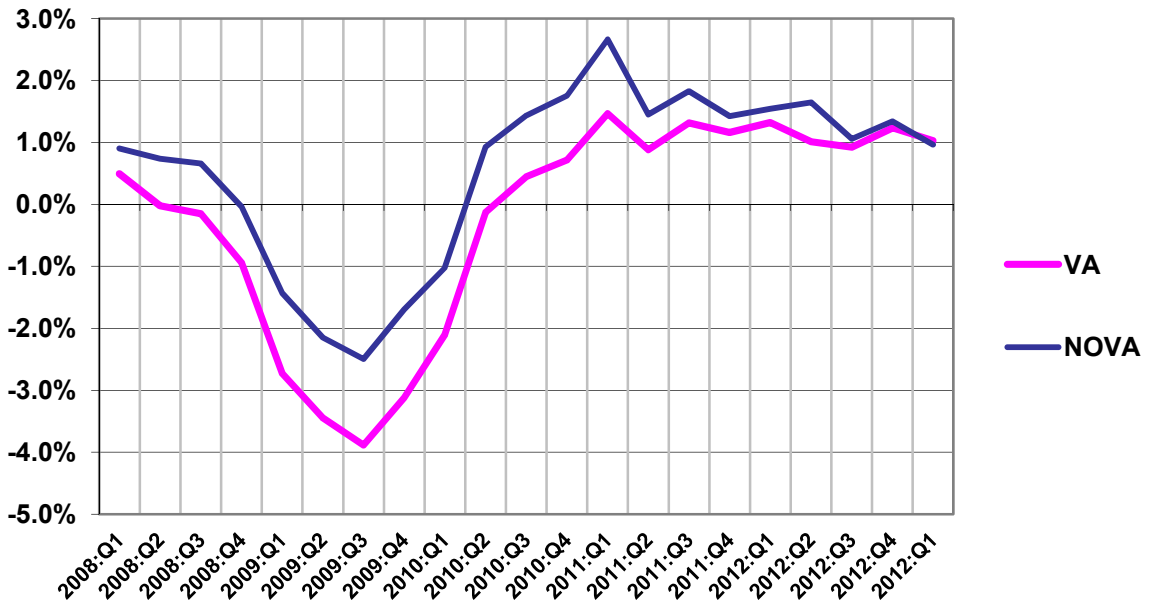


Figure 3: Year-Over-Year Change in Total Employment, 2008:Q1 through 2013:Q1⁹

⁸ Data Source: Virginia Employment Commission

⁹ 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. Any observation above the horizontal zero line in this graph reflects an increase in employment from the previous year, and any observation below the zero line reflects a decrease in employment from the previous year. As these data indicate, Northern Virginia entered the recession later and emerged from it sooner than Virginia as a whole. 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, employment fell by minus 3.9 percent at the statewide level relative to the year before, where in Northern Virginia the comparable figure was minus 2.5 percent. However, since 2011, the year-over-year increase in employment in Northern Virginia has been trending downward toward the statewide average.

Figures 4 and 5 provide a more detailed picture of employment in Northern Virginia in the first quarter of 2013 (the most recent quarter for which data are available). Figure 4 depicts employment by major industry category. As these data clearly indicate, *Professional, Scientific, and Technical Services* was by far the largest employment sector in Northern Virginia in the first quarter of 2013, accounting for 21.6 percent of total employment (or 249,418 jobs). *Retail Trade* ranks second with 9.9 percent of total employment (or 114,516 jobs), *Health Care and Social Services* third with 8.7 percent (or 100,010 jobs), *Educational Services* fourth with 8.6 percent (or 99,203 jobs), and *Public Administration* fifth with 8.4 percent (or 97,005 jobs).

Figure 5 provides similar information on average weekly wages by major industry category in the first quarter of 2013. As these data show, *Management of Companies and Enterprises* was the highest paying employment sector in Northern Virginia that quarter, with average weekly wages of \$3,718. *Information* ranks second with average weekly wages of \$2,522, *Finance and Insurance* third with average weekly wages of \$2,451, *Utilities* fourth with average weekly wages of \$2,426, and *Professional, Scientific, and Technical Services* fifth with average weekly wages of \$2,126. To put these numbers in perspective, average weekly wages across all industries in Northern Virginia were \$1,411 in the first quarter of 2013.

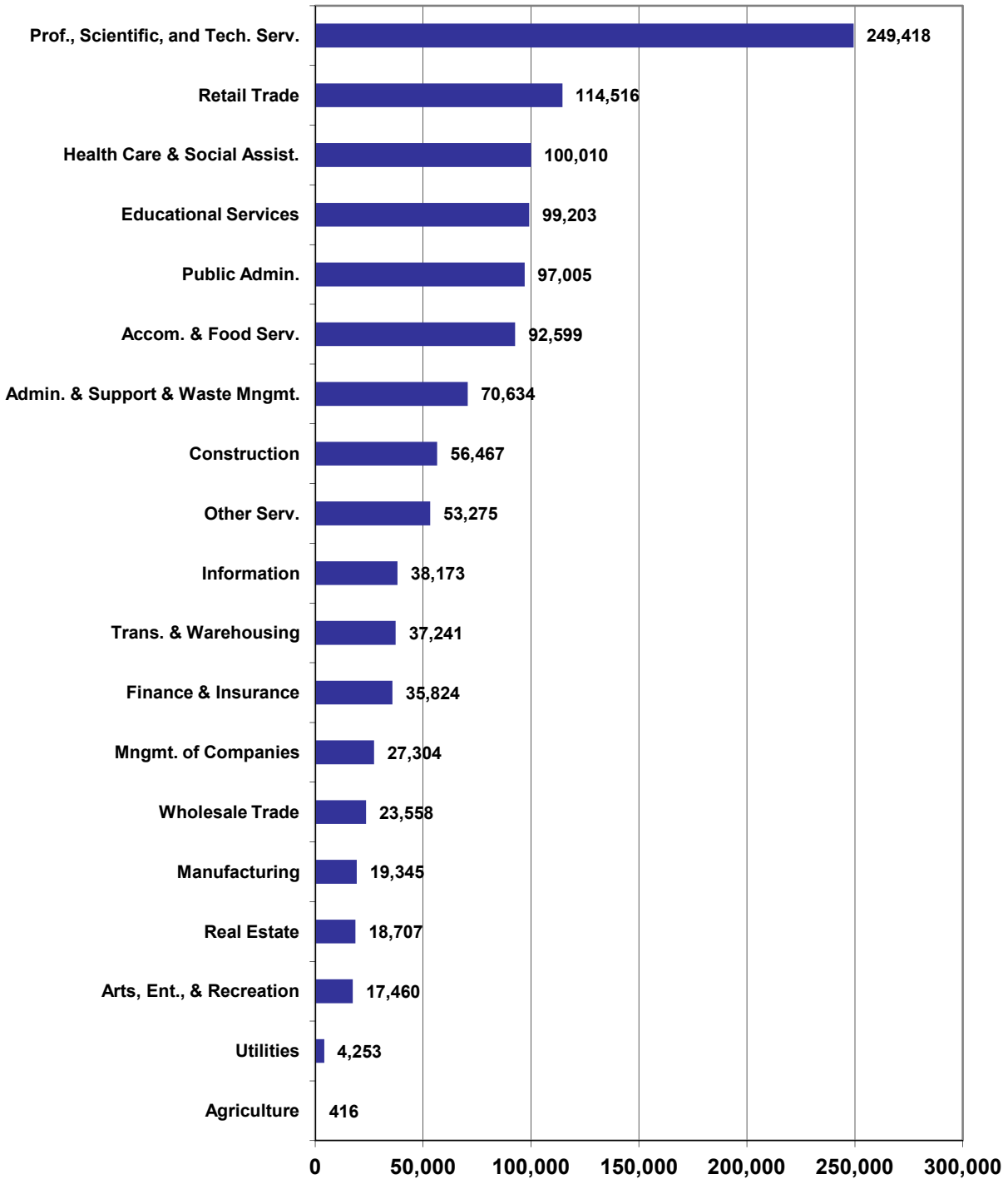


Figure 4: Northern Virginia Employment by Major Industry Category, 2013:Q1¹⁰

¹⁰ Data Source: Virginia Employment Commission

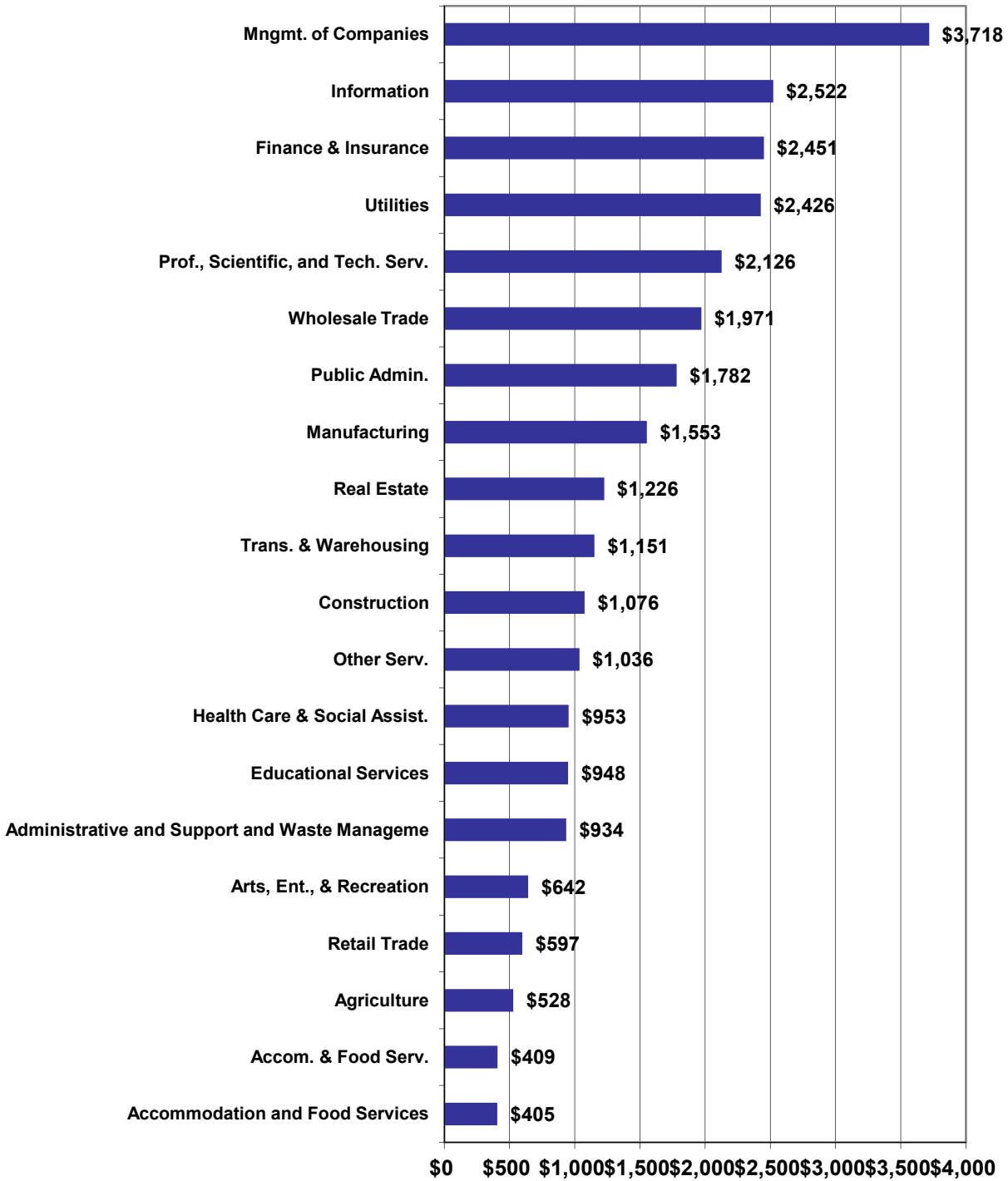


Figure 5: Northern Virginia Average Weekly Wages by Major Industry Category, 2013:Q1¹¹

¹¹ 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 August of 2008 through August of 2013 (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 5.9 percent in Northern Virginia, 8.0 percent statewide, and 10.6 percent nationally. It has since grudgingly declined and in August of 2013 stood at 4.3 percent in Northern Virginia, 5.6 percent statewide, and 7.3 percent nationally.

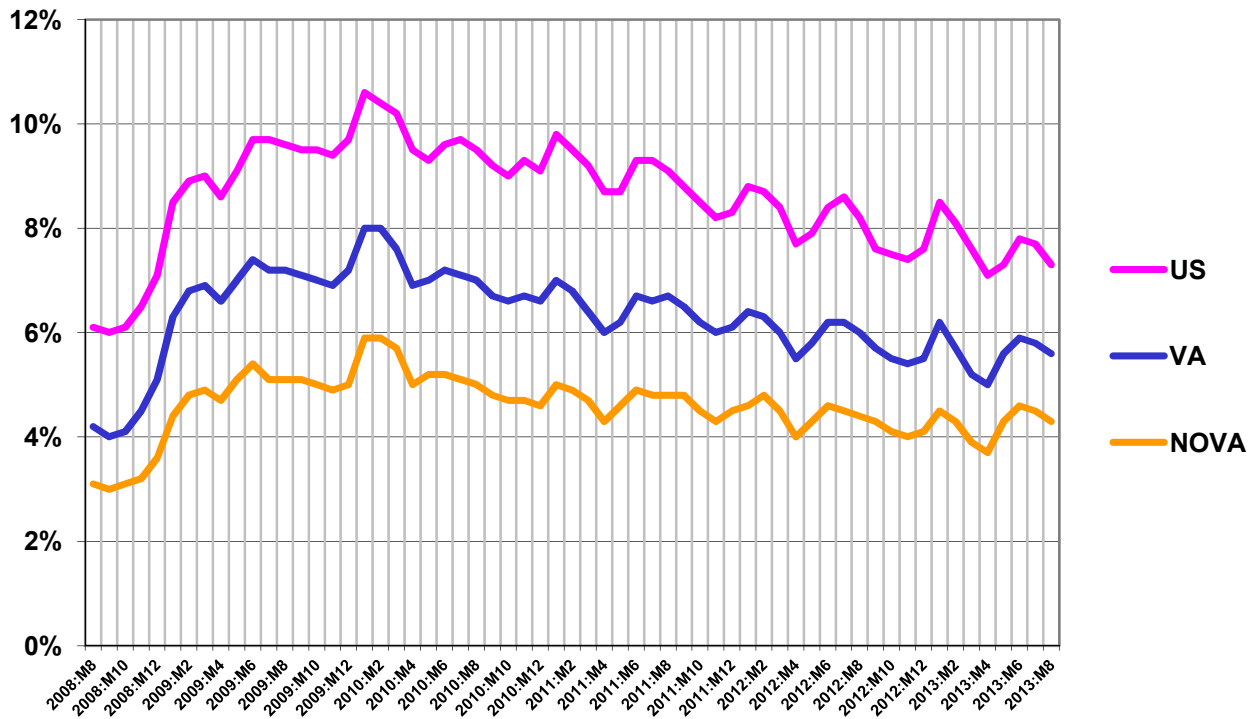


Figure 6: Unemployment Rate, August 2008 to August 2013¹²

¹² Data Source: Virginia Employment Commission

Economic Impact – FY 2013

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 2013 had on the economy of Northern Virginia. The primary nature of that impact had to do with the new income earned by the 1,068 previously unemployed individuals that the Northern Virginia Workforce System was instrumental in transitioning into meaningful employment.¹³ As shown in Table 2, the total additional household income generated through those placements is estimated to be \$31.7 million.

Table 2: Total Additional Household Income Attributable to FY 2013 Job Placements

Program	Job Placements	Average Annual Salary	Total Household Income
WIA Adult	76	\$18,697	\$1,420,972
WIA Dislocated Worker	178	\$45,802	\$8,152,756
WIA Youth	12	\$20,384	\$244,608
BRAC	66	\$56,146	\$3,705,636
VASAVOR	28	\$21,424	\$599,872
PRC	98	\$18,648	\$1,827,504
Subtotal	458	\$34,828	\$15,951,348
Core Services	610	\$25,771	\$15,720,310
TOTAL	1,068	\$29,655	\$31,671,658

To quantify the regional economic impact attributable to this increase in household income, we employ a commonly used impact simulation model called IMPLAN.¹⁴ The IMPLAN model uses regional and national data on production and trade flows to construct region-specific economic multipliers and uses these multipliers to quantify economic impact.

¹³ 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 2013, 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.

¹⁴ 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.

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, BRAC, VASAVOR, and PRC programs

We first look at the economic impact associated with the Northern Virginia Workforce System's WIA, 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 458 individuals exited from these programs and were placed into jobs in FY 2013.
- 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 2013.

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 458 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 85 full time equivalent jobs through second round effects, for a total regional employment impact of 543 full time equivalent jobs.
- Regional Labor Income: In addition to the \$16.0 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 \$4.5 million in additional regional labor income through second round effects, for a total regional labor income impact of \$20.5 million.
- Regional Economic Output: Second round effects from the \$16.0 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System's programs were also responsible for generating \$12.1 million in additional economic output in the region.
- Fiscal Impact: Second round effects from the \$16.0 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System's programs were responsible for generating \$0.8 million in additional state and local tax revenue, and \$1.1 million in additional federal tax revenue, for a total fiscal impact of \$1.9 million.

Table 3: Estimated Economic Impact of WIA, BRAC, VASA VOR, and PRC Programs

	Employment	Labor Income	Output
<i>First Round Direct Economic Activity</i>	458	\$15,951,348	
<i>Second Round Indirect and Induced Economic Activity</i>	85	\$4,539,818	\$12,095,063
<i>Total, Direct, Indirect, and Induced Economic Activity</i>	543	\$20,491,166	\$12,095,063
	State and Local	Federal	Total
<i>Fiscal Impact</i>	\$784,095	\$1,086,885	\$1,870,980

WIA, BRAC, VASA VOR, PRC, and Core Services programs

In this section, FY 2013 placements from Core Services are added to the placements attributable to the WIA, BRAC, VASA VOR, 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 1,068 individuals exited from these programs and found employment in FY 2013.
- 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 2013.

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 1,068 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 169 full time equivalent jobs through second round effects, for a total regional employment impact of 1,237 full time equivalent jobs.

- **Regional Labor Income:** In addition to the \$31.7 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 \$9.0 million in additional regional labor income through second round effects, for a total regional labor income impact of \$40.6 million.
- **Regional Economic Output:** Second round effects from the \$31.7 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System’s programs were also responsible for generating \$24.1 million in additional economic output in the region.
- **Fiscal Impact:** Second round effects from the \$31.7 million in labor income paid to individuals transitioned into employment through the Northern Virginia Workforce System’s programs were responsible for generating \$1.5 million in additional state and local tax revenue, and \$2.2 million in additional federal tax revenue, for a total fiscal impact of \$3.7 million.

Table 4: Estimated Economic Impact of WIA, BRAC, VASA VOR, PRC, and Core Services Programs

	Employment	Labor Income	Output
<i>First Round Direct Economic Activity</i>	1,068	\$31,671,658	
<i>Second Round Indirect and Induced Economic Activity</i>	169	\$8,975,434	\$24,064,468
<i>Total, Direct, Indirect, and Induced Economic Activity</i>	1,237	\$40,647,092	\$24,064,468
	State and Local	Federal	Total
<i>Fiscal Impact</i>	\$1,527,808	\$2,150,720	\$3,678,528

Benefit/Cost Ratio

In FY 2013, the cost associated with the WIA, BRAC, VASAVOR, PRC, and Core Services programs provided by the Northern Virginia Workforce System was approximately \$5.9 million.¹⁵ 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, BRAC, VASAVOR, and PRC programs that benefit/cost ratio is approximately 3.5, indicating that the benefits derived from the programs are three and a half times larger 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 6.8, indicating that the benefits are almost seven times larger 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 2013, Northern Virginia continued to slowly emerge 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 11,065 jobs between the first quarter of 2012 and the first quarter of 2013.

Unemployment remains stubbornly high relative to the historic regional norm, coming in at 4.3 percent in August of 2013, 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, 1,424 individuals enrolled in WIA and related programs offered by the Northern Virginia Workforce System in FY 2013. This figure remains 214 percent up from FY 2008 when the recession began (453 enrollees). Similarly, excluding core services, 484 individuals were transitioned into employment through programs offered by the Northern Virginia Workforce System in FY 2013. This figure remains 210 percent up from FY 2008 when the recession began (156 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 2013 has to do with the 1,068 previously unemployed individuals that the System was able to transition into well-paying jobs. Out of that total, 458 of the placements came through the WIA, BRAC, VASAVOR, and PRC programs (programs that directly provide career training and job placement services), and 610 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 \$18,648 to \$56,146. In combination, these

¹⁵ *Data Source:* The SkillSource Group, Inc.

1,068 placements generated approximately \$31.7 million in additional household income in the region.

In turn, second round effects from the additional local consumption expenditures that were facilitated by this increased household income also had a significant economic impact on the Northern Virginia economy. Focusing first on the 458 placements associated with the WIA, BRAC, VASAVOR, and PRC programs, that total first and second round impact from those placements is estimated to be 543 full time equivalent jobs, \$20.5 million in additional regional labor income, \$12.1 million in additional regional economic output, and \$1.9 million in state, local, and federal tax revenue. If we increase the scope of workforce services to include Core Services, the total first and second round economic impact associated with the resulting combined 1,068 placements is estimated to be 1,237 full time equivalent jobs, \$40.6 million in additional regional labor income, \$24.1 million in additional regional economic output, and \$3.7 million in state, local, and federal tax revenue.

Comparing these estimated benefits to the \$5.9 million in costs associated with the WIA, BRAC, VASAVOR, PRC, and Core Services programs allows us to calculate a benefit/cost ratio. If the analysis is restricted to the WIA, BRAC, VASAVOR, and PRC programs that benefit/cost ratio is approximately 3.5, indicating that the benefits derived from the programs are three and a half times larger 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 6.8, indicating that the benefits are almost seven times larger than the costs required to generate them.

In conclusion, in FY 2013 the Northern Virginia Workforce System made a significant contribution to the economy of Northern Virginia.