

**The Economic Impacts of Selected DoD Contractors
and
Veteran's Affairs Spending in the Tri-Cities
Tennessee/Virginia Region**

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I. Introduction:

The Tri-Cities Consolidated Metropolitan Statistical Area (CMSA) of Northeast Tennessee and Southwest Virginia is heavily impacted by defense and veteran's affairs related spending. In fiscal year 2013 alone, Department of Defense (DoD) spending for contracts, grants, direct payments and other spending within the region was over \$125,000,000.¹ Federal and state funding in support of the region's veterans totaled more than \$157,727,000.² In addition to this spending, the Mountain Home Veterans Hospital located in Johnson City reported a budget that totaled almost \$400,000,000. Of this amount, over \$183,350,000 was payroll expense for the VA's approximate 2,000 employees.³

The CMSA is also home to several firms with significant Department of Defense contracts. Three of the largest are the BAE Systems' Holston Army Munitions Plant (BAE), Nuclear Fuel Services, Inc. (NFS), and Aerojet Ordnance Tennessee, Inc. (Aerojet). Together, these firms generate approximately one billion dollars in annual revenues and employ approximately 1,500 employees and have payrolls estimated to exceed \$108,000,000⁴. Clearly, this flow of funds into the region makes a significant contribution to the regional economy. In an effort to determine the overall effect of this federal and state spending, at the request of the Tri-Cities Military Affairs Council, East Tennessee State University's Bureau of Business and Economic Research has generated an estimate of the overall economic impact of this spending upon the CMSA economy.

II. Economic Impact Methodology:

Economic impact analysis examines the extent to which a business' operations stimulate additional economic activity within a region. This is accomplished through the use of *input-output models* to examine economic linkages within the affected economy in order to quantify *direct effects*, *indirect effects*, and *induced effects* arising out of business activity. These effects are typically reported in terms four different metrics: the activity or firm's *output*, the total

¹ <http://usaspending.gov/> Accessed July 24, 2014.

² Tennessee Department of Veterans Affairs Annual Report: 2012-2013.

<http://www.state.tn.us/veteran/AgendasReports/Annual%20Report%202012-2013%20FINAL.pdf>.

³ Mountain Home Public Affairs & Media Offices, Mountain Home VA Healthcare System 2011 & 2012 Annual Report.

⁴ First Tennessee Development District, "Directory of Manufacturers: 2013.

dollar volume of goods and services produced; the *employment impact*, the number of jobs supported by this output; and the project's *labor income impact*, the wages and benefits paid the firm's employees and self-employed suppliers; and the *value added*, the sum of labor income, other property type income and indirect business taxes. The firm's spending in each of these areas is referred to as its direct impact.

The purchases that firms make from their suppliers in order to support their output is the *indirect impact*. In order to estimate the indirect impact the input-output model traces the direct spending as it circulates through the regional economy and generates estimates of the economic activity that these suppliers generate in order to meet this demand and the additional economic activity generated by their suppliers down the supply chain.

Finally, the model traces the effect of the spending by the employees of all of the firms in the direct and indirect economic impact chain. The employees purchase food, clothing, shelter, consumer goods, and services such as utility services. This creates an additional impact, the project's *Induced Impact*. The sum of the direct, indirect and induced effects is the total impact.

The economic impacts of NFS, BAE, Aerojet, the Mountain Home Veteran's hospital and veteran's support payments were modeled using the IMPLAN modeling software. The IMPLAN modeling system has the ability to generate estimates of an industry's direct total revenues and labor costs based upon known employment levels. The software was originally developed by the U.S. Forest Service in cooperation with the Federal Emergency Management Agency and the U.S. Department of the Interior's Bureau of Land Management to assist in land and resource management planning. The software was refined by the University of Minnesota in order to enable its use in non-forestry related applications. Over the past fifteen years, it has become one of the most widely used economic impact analysis modeling packages. It is routinely employed by the U.S. Corps of Engineers, the U.S. Department of Agriculture, numerous state and local governments, and a wide variety of private consulting firms. Version 3.0, IMPLAN's newest version of the model, was used in this analysis.

III. The Economic Impact of these Department of Defense Related Expenditures:

As noted above, based upon the reported employment, it is estimated that Nuclear Fuel Services, BAE Services and Aerojet, generate combined revenues of approximately \$1,000,000,000 annually and that annual wage, salary and benefits for their workers total approximately \$108,000,000.

The Mountain Home facility provided detailed hiring and budget levels in their annual report. Mountain Home indicated that their total budget for 2012 was \$399,111,701. Of this amount, \$183,354,270 funded the wages and salaries of 1,989 employees. Using these figures and the Tennessee Department of Veteran's Affairs estimate of the \$157,727,000 distributed to the counties in the CMSA. The IMPLAN software system generated the estimate the regional impacts shown in the table below:

Total Defense/Veterans Related Impacts				
Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	3,482	\$293,857,870	\$393,793,163	\$1,468,529,285
Indirect Effect	2,629	\$111,437,484	\$181,841,524	\$376,307,087
Induced Effect	3,603	\$126,762,200	\$239,597,059	\$408,832,645
Total Effect	9,714	\$532,057,554	\$815,231,746	\$2,253,669,017

As the table indicates, the direct effects upon the region are impressive. The entities discussed above generate over \$1.4 billion in sales and operational revenue. Of this amount, almost \$294 million in labor income and benefits supports almost 3,500 jobs. The economic activity arising out of the local supply chain's business to business activities generate another \$376 million in indirect economic activity. This supports an additional 2,229 jobs and over \$111 million in labor income. The spending of these employees and the spending by the recipients of VA benefits generates an additional \$409 million in economic activity, almost \$127 million in labor income which supports 3,603 additional jobs. As the table shows, this amounts to a total economic impact of over \$2.25 billion in economic activity and over \$532 million in labor income supporting over 9,700 jobs.

It should be noted that this is not a complete summary of the economic impact of defense and veteran's affairs spending in the region. There is additional spending for products

and services provided by a number of smaller vendors which is not included in this analysis. Likewise, the spending that supports several military reserve and National Guard units is not included. Clearly, the defense and veteran's affairs sector is a tremendous asset for Tri-Cities region. Changes in the level of DoD and veteran's affairs expenditures will have a significant impact upon the region.