



## SCHOOL OF BUSINESS AND ECONOMICS

### KING INSTITUTE FOR REGIONAL ECONOMIC STUDIES (KIRES)

#### KIRES Report No. 15, February 2016

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### **Regional Economic Impacts of Social Security Benefits and Other Government Transfer Payment Programs.**

#### Introduction and Background

Over the past several decades there has been a pronounced shift in the composition of personal income in the United States and in the regional economy – Tri-Cities combined statistical area (Tri-Cities CSA) and the Southwest Virginia Coalfield region (SW VA). A half-century ago, *earned* income accounted for 75 – 80 percent of total personal income regionally and in the United States, with *investment* income and government *transfer payments* splitting the remaining 20 – 25 percent. In 2014, the last year for which annual data are available, the share of total personal income attributable to earned income had fallen to 57 percent in the Tri-Cities CSA, to 50 percent in SW VA and 64 percent in the United States. Accompanying this decline in earned income share was steady growth in the share of total personal income attributable to government transfer payments. Transfer payments to residents of SW VA accounted for 36 percent of their total personal income in 2014. The comparable figure for the Tri-Cities CSA was 28 percent. The share of U.S. personal income attributable to transfer payments was 17 percent in 2014, well below the share locally.

The economic impacts of government transfer payments in general, and Social Security benefits in particular, are the focus of this paper. Transfer payments constitute a basic industry, and like other basic industries, such as manufacturing, tourism and mining, transfer payment programs bring outside money into the regional economy. Transfer payments, therefore, have an impact on job creation and income growth in the region. Government transfer payments are, for the most part, impervious to the business cycle, so they have a stabilizing effect on the economy in times of recession, such as the recession of 2007 – 09.

#### Definitions

#### Regional Economy

The Tri-Cities region (combined statistical area or CSA) consists of the Kingsport, Bristol and Johnson City metro areas as defined by the US Census Bureau. The Tri-Cities CSA includes Carter, Hawkins, Sullivan, Unicoi and Washington counties in Tennessee; Virginia locations include Bristol city and Scott and Washington counties.

We define the Southwest Virginia Coalfield region as the counties of Buchanan, Dickenson, Lee, Russell, Tazewell, Wise and the city of Norton.

### Major Components of Personal Income

The major components of personal income are earned income, investment income and transfer payments. Earned income is defined by the U.S. Bureau of Economic Analysis (BEA), the source of our data, as wages and salaries and proprietors' income. Earned income is sometimes referred to as labor income, that is, payment for the production of goods and services. Consequently, earned income is sensitive to cyclical swings in the economy as production of goods and services rises and falls.

Investment income, often called property income, consists of dividends, interest and rent payments to individuals. In recent years low interest rates have stymied growth in this component of personal income.

Government transfer payments are payments made by governments to individuals for which no current production of goods or services is performed. Nationally and locally, the major components of government transfer payments are Social Security benefits and medical payments, primarily payments made through intermediaries/vendors for care provided to individuals under the Medicare and Medicaid programs. Transfer payments also include income maintenance programs, such as the Supplemental Nutrition Assistance Program (SNAP), the Earned Income Tax Credit (EITC) and Supplemental Security Income (SSI). Other important transfer programs are Unemployment Insurance Payments and Veterans Benefits. A detailed list of government transfer payments, including U.S. payment levels and explanatory notes, may be accessed electronically at

<https://united-states.reaproject.org/data-tables/transfer-payments-ca35/tools/0/>

### Research Findings

Personal income statistics for 2014 for the Tri-Cities CSA and SW VA are presented in Table 1. Residents of the Tri-Cities CSA received nearly \$ 5 billion in governments transfer payments, 28 percent of the region's total personal income of \$18 billion. Medical benefits and Social Security benefits combined accounted for 80 percent of transfer payments.

Residents of the SW VA Coalfield region received nearly \$ 2 billion in government transfer payments in 2014, 36 percent of the region's total personal income of \$ 5.5 billion. Medical benefits and Social Security benefits combined accounted for 78 percent of government transfer payments.

| <b>Table 1. Income Statistics, Tri-Cities CSA and SW VA Coalfield Region, 2014</b>  |                  |                 |
|---|------------------|-----------------|
| Statistic:  | Tri-Cities CSA   | SW VA           |
| Personal Income   | \$ 18.05 billion | \$ 5.49 billion |
| Population  | 509,170          | 178,806         |
| Per Capita Personal Income  | \$ 35,456        | \$ 30,734       |
| <b>Major Components of Personal Income:</b>   |                  |                 |
| Earned Income   | \$ 10.25 billion | \$ 2.73 billion |
| Investment Income   | \$ 2.83 billion  | \$ 0.80 billion |
| Transfer Payments   | \$ 4.98 billion  | \$ 1.96 billion |
| <b>Major Components of Transfer Payments:</b>   |                  |                 |
| Social Security   | \$ 1.95 billion  | \$ 0.76 billion |
| Medical   | \$ 2.02 billion  | \$ 0.77 billion |
| Income Maintenance  | \$ 0.46 billion  | \$ 0.21 billion |
| Other   | \$ 0.54 billion  | \$ 0.21 billion |
| Data Source: Bureau of Economic Analysis (BEA), U.S. Department of Commerce, <i>Local Area Personal Income &amp; Employment</i> , November 2015.<br><a href="http://www.bea.gov/regional/">http://www.bea.gov/regional/</a> |                  |                 |
| Numbers may not add due to rounding.  |                  |                 |

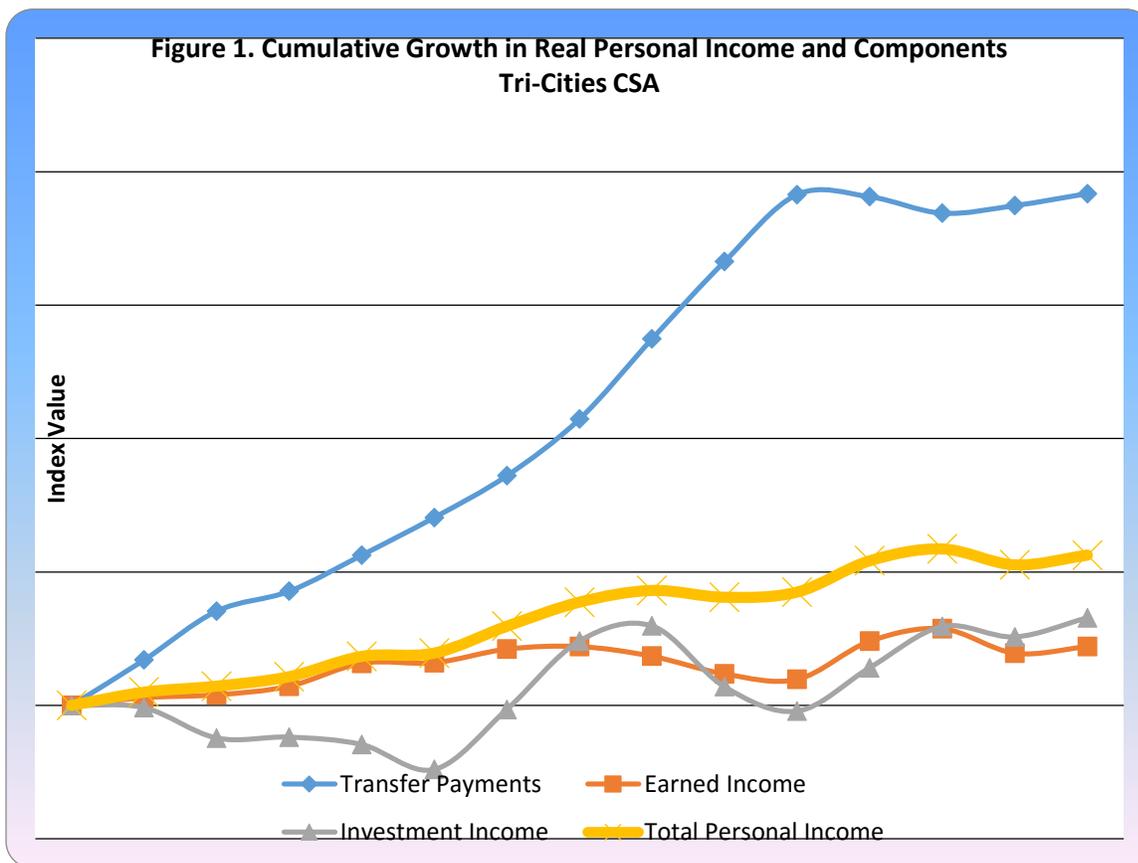
**Cumulative Growth in Personal Income and Major Components, 2000 – 2014**

Figure 1 (Tri-Cities CSA) and Figure 2 (SW VA Coalfield region) depict real (inflation-adjusted) cumulative growth in personal income and the major components of personal income over the 2000 – 2014 period. The cumulative growth index for each income measure has a value of 100 for year 2000, the base year. The values in subsequent years are a percent of the base year value. These indices allow a direct comparison of the differences in the cumulative percentage growth of personal income and each component of personal income within and across regions.

Total real personal income in the Tri-Cities CSA rose 23 percent over the 2000 – 2014 period. Growth in real income was boosted by a 77 percent gain in government transfer payments as earned income and investment income rose a modest 9 percent and 13 percent, respectively.

Rapidly increasing health care costs fueled an 88 percent increase in real medical transfer payments over the 2000 – 2014 period in the Tri-Cities CSA. Real Social Security benefits rose 66 percent over the same period; benefits are adjusted upward with inflation, and the number of recipients living in the region increased 35 percent.

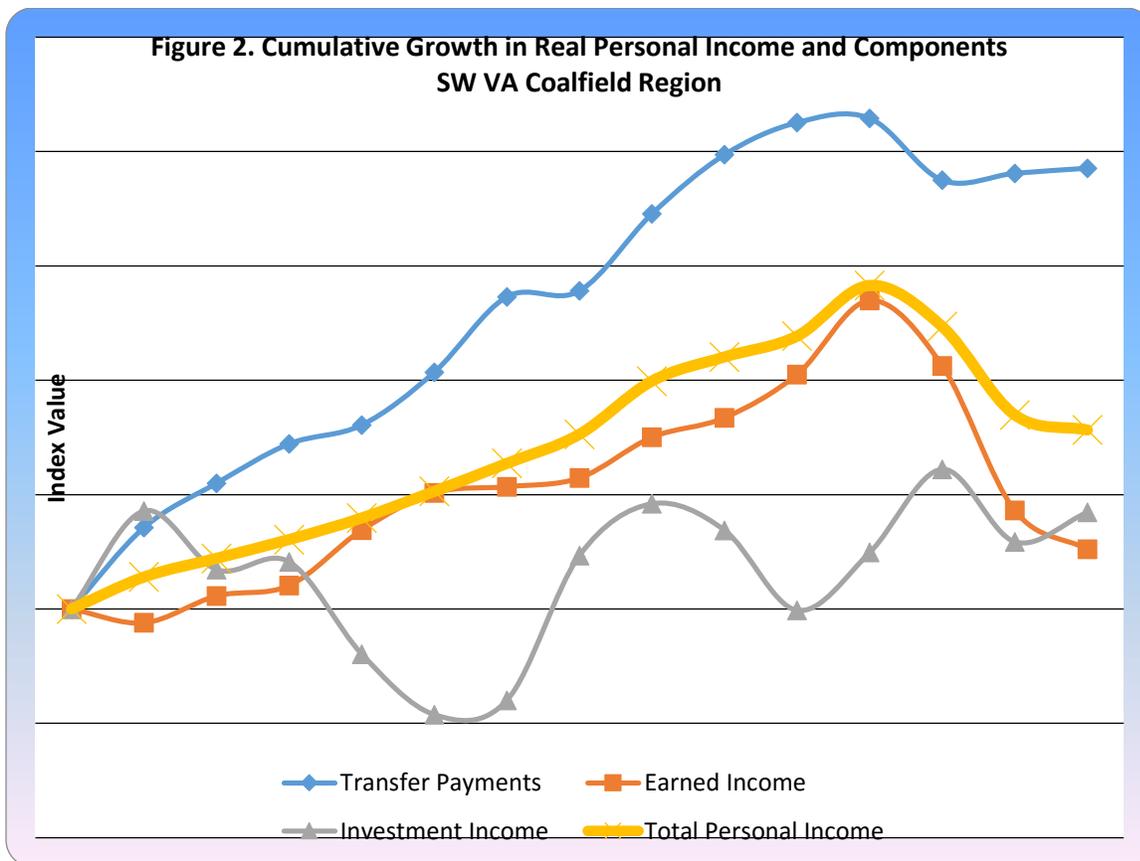
Transfer payments have leveled off in more recent years as the Tri- Cities economy has improved and, consequently, Unemployment Insurance payments have fallen from highs reached during the 2007 – 09 recession and its aftermath.



Total real personal income in the SW VA Coalfield region rose 16 percent over the 2000 – 2014 period. Growth in real income was led by a 39 percent gain in government transfer payments; earned income and investment income rose 5 percent and 9 percent, respectively. As was true for the Tri- Cities, the growth in real government transfer payments was marked by gains in medical payments and Social Security benefits – 60 percent and 37 percent, respectively. The cumulative growth in Social Security benefits was well under that for the Tri – Cities as the increase in the number of SW VA residents receiving these benefits rose by just 9 percent over the same period.

The most troubling aspect of the SW VA economy is the decline in earned income in recent years. Real earned income fell 17 percent from 2011 to 2014. This is a direct result of declining production and employment in the coal mining sector. Previous research by KIRES found that the loss of a coal mining job causes a \$ 154,000 reduction in the region’s earned income after the multiplier or ripple effects are accounted for. (See KIRES Report No. 12, “Replacing Coal Mining Jobs: Marginal Economic Impacts of Selected Industries in Southwest Virginia,” February, 2015).

Due to the sharp drop in earned income, residents in SW VA received 72 cents in government transfer payments for every dollar of earned income in 2014. Comparable values for the Tri-Cities CSA and the U.S. are 49 cents and 27 cents, respectively.(One reason that the ratios are larger for the local regions is that a greater proportion of local residents are age 65 and over than is true for the United States - U.S ,14.5%; Tri-Cities CSA, 19.4 %; SW VA Coalfield region, 18.2 % . These percentages are for 2014 and are calculated from data made available by the U. S. Census Bureau at <http://quickfacts.census.gov/qfd/states/51/51520.html>).



Economic Impact of Social Security Benefits

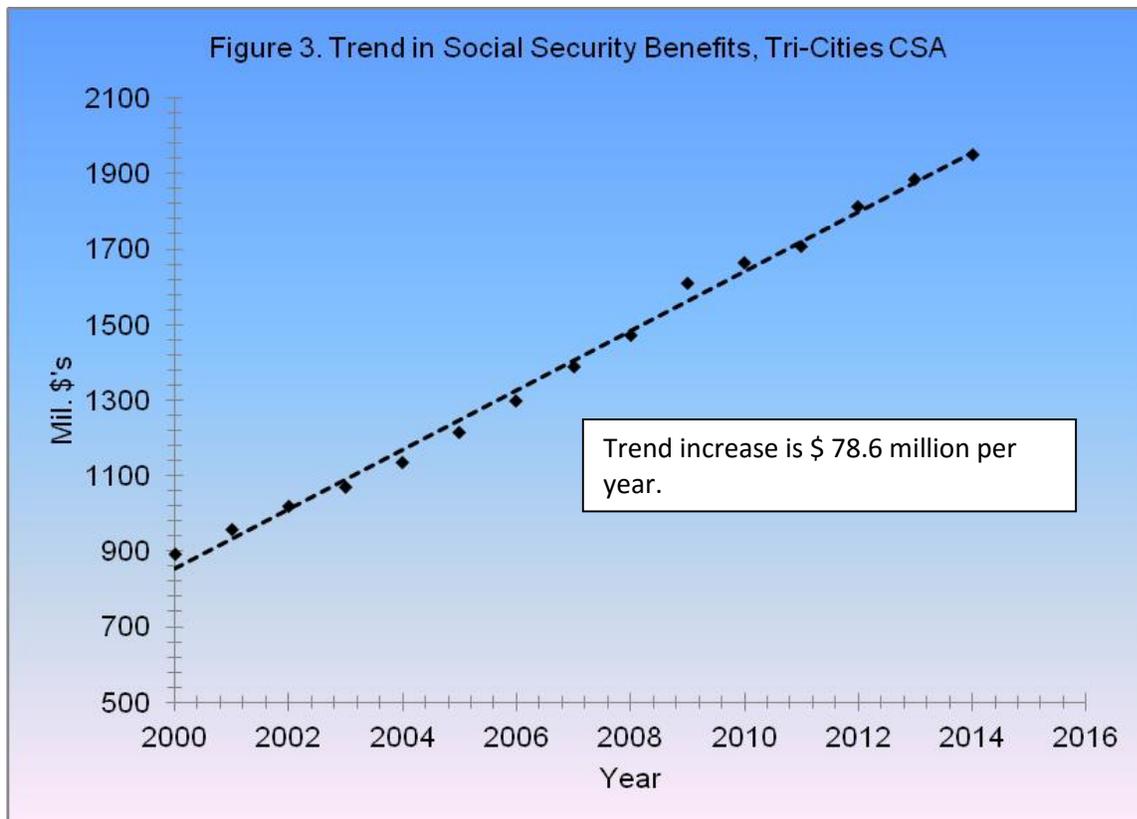
The number of Social Security beneficiaries in the Tri-Cities CSA as of December 2014 was 141,120. The number of retired workers receiving benefits was 83,715, 59 percent of total beneficiaries. Social Security benefits received by all recipients totaled \$ 1.95 billion in 2014.

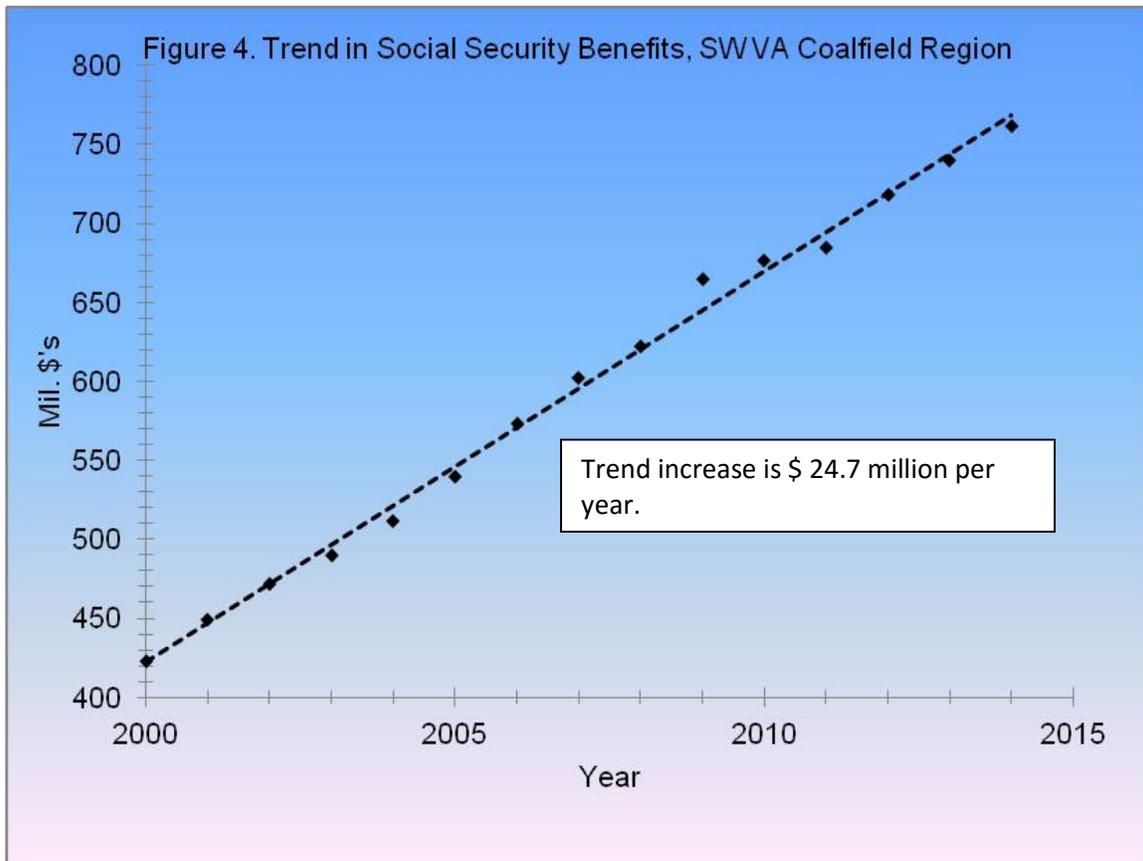
The number of beneficiaries in the SW VA Coalfield region was 56,740 as of December 2014. This total included 23,410 retired workers, 41 percent of total beneficiaries. Disabled workers receiving benefits totaled 17,250, 30 percent of total beneficiaries. Social Security benefits paid to all recipients totaled \$ 761 million in 2014.

The above information on the numbers of beneficiaries was compiled from data made available by the Social Security Administration at [https://www.ssa.gov/policy/docs/statcomps/oasdi\\_sc/2014/index.html](https://www.ssa.gov/policy/docs/statcomps/oasdi_sc/2014/index.html).

### Trend in Social Security Benefits

During 2000 – 2014, total Social Security benefits paid to recipients in the Tri-Cities CSA increased \$ 78.6 million per year; for SW VA , the annual increase in benefits was \$ 24.7 million (Figures 3 and 4). These annual increases in benefits are a dependable and predictable source of income for the local economy. Social Security benefits are not measurably affected by the business cycle, and because benefits are indexed to inflation, they have a stabilizing effect on income in inflationary periods.





### Economic Impact Multipliers

Because there is a *multiplier* or *ripple* effect as benefit dollars circulate throughout the region, the total economic impact of Social Security benefits is greater than the face value of the benefits. The multiplier or ripple effect begins when recipients spend their benefits on goods and services. The businesses that receive these dollars use them to pay their employees, their operating costs and their suppliers. Their suppliers in turn use the money they receive to pay their employees, their operating costs and their suppliers, and so on. This report using economic impact multipliers developed by the Bureau of Economic Analysis (BEA) estimates the total (direct plus multiplier) effect of Social Security benefits on job creation and earned income in both regions. The impact multipliers are presented in Table 2 along with explanatory notes.

The magnitude of the multipliers depend on the dollar amount of *leakage* from the spending stream as benefit dollars cycle and recycle throughout the local economies. Leakage occurs when recipients spend their dollars on goods and services produced outside the region and when recipients travel outside the region to purchase goods and services, for example, to

shopping centers and health care facilities. Income taxes paid by recipients and amounts saved from their benefits are also leakages.

The output multiplier is the basis for the earnings and employment multipliers; the larger the output multiplier, the larger the earnings and employment multipliers. The magnitude of the output multiplier, and thus, of the employment and earnings multipliers, is inversely related to leakage. The larger multipliers for the Tri-Cities CSA indicate less leakage from the spending stream than is the case for SW VA. This is not surprising given the large-scale development of health care facilities and shopping centers in the more urban Tri-Cities CSA.

| <b>Table 2. RIMS II Final Demand Multipliers (Type II) for the Household Sector</b>   |                     |                       |                         |
|---|---------------------|-----------------------|-------------------------|
| Region:   | Output <sup>1</sup> | Earnings <sup>2</sup> | Employment <sup>3</sup> |
| Tri-Cities CSA  | \$ 93.64            | \$ 27.45              | 7.3274                  |
| SW VA   | \$ 66.70            | \$ 17.91              | 4.9699                  |
| <sup>1</sup> The total dollar change in output that occurs in all industries for each additional \$ 100 of Social Security benefits (2014 dollars).                 |                     |                       |                         |
| <sup>2</sup> The total dollar change in earnings of households employed by all industries for each additional \$ 100 of Social Security benefits (2014 dollars).    |                     |                       |                         |
| <sup>3</sup> The total change in the number of jobs that occurs in all industries for each additional 1 million dollars of Social Security benefits (2010 dollars). |                     |                       |                         |
| Source: Based on multipliers developed by the Bureau of Economic Analysis (BEA), U. S. Department of Commerce.  |                     |                       |                         |

### Impact of Social Security Benefits on Income and Employment

The multipliers in Table 2 are adjusted by BEA for leakages from the income/spending stream within each region. Therefore, to estimate the economic impact of Social Security benefits, we can apply the multipliers to the dollar amount of benefits paid to recipients.

The earnings and employment multipliers presented in Table 2 indicate the following:

- An additional \$ 100 of Social Security benefits generates an additional \$ 27.45 in earnings (earned income) of households employed by all industries in the Tri-Cities CSA.
- An additional \$ 100 of Social Security benefits generates an additional \$ 17.91 in earnings of households employed in all industries in SW VA.
- An additional \$ 1 million in Social Security benefits generates 7.3274 full- and part-time jobs in the Tri-cities CSA.
- An additional \$ 1 million in Social Security benefits generates 4.9699 full- and part-time jobs in SW VA.

Applying the earnings and employment multipliers from Table 2 to the Social Security benefits received in 2014 - \$ 1.95 billion in the Tri-Cities CSA and \$ 761 million in SW VA – yields the economic impacts presented in Table 3:

- Social Security benefits support 14,288 full- and part-time jobs in the Tri-Cities CSA.
- Social Security benefits support 3,784 full- and part-time jobs in SW VA.
- Social Security benefits generate an additional \$ 535.3 million in earnings of households employed in all industries in the Tri-Cities CSA.
- Social Security benefits generate an additional \$ 136.5 million in earnings of households employed in all industries in SW VA.

| Region:        | Jobs   | Earned Income | Earnings per Job |
|----------------|--------|---------------|------------------|
| Tri-Cities CSA | 14,288 | \$ 535.3 mil. | \$ 37,465        |
| SW VA          | 3,784  | \$ 136.5 mil. | \$ 36,073        |
|                |        |               |                  |
| Regional Total | 18,072 | \$ 671.8 mil. | \$ 37,174        |

### Future Trends

The economic impact of Social Security benefits will become larger over time as the upward trend in annual benefits is likely to continue into future years. We cannot state with any certainty what the additional annual impacts will be as the multipliers themselves are likely to change over time. However, with this caveat in mind, applying the multipliers from Table 2 to the annual trend increases in benefits over the 2000 – 2014 period gives an idea of what to expect. This analysis suggests the creation of 576 additional jobs each year in the Tri-Cities CSA and an additional \$ 21.6 million in earned income. Comparable figures for SW VA are 123 jobs and \$ 4.4 million in earned income (Table 4).

| Region:  | Jobs | Earned Income |  |
|--|------|---------------|--|
| Tri-Cities CSA   | 576  | \$ 21.6 mil.  |  |
| SW VA  | 123  | \$ 4.4 mil.   |  |
|  |      |               |  |
| Regional Total   | 699  | \$ 26.0 mil.  |  |
| <sup>1</sup> Annual trend increase is \$ 78.6 million for the Tri-Cities CSA and \$ 24.7 million for the SW VA Coalfield Region. |      |               |  |

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