

AARP Public Policy Institute

Social Security's Impact on the National Economy

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Research Report

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AARP's Public Policy Institute informs and stimulates public debate on the issues we face as we age. Through research, analysis and dialogue with the nation's leading experts, PPI promotes development of sound, creative policies to address our common need for economic security, health care, and quality of life.

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Table of Contents

Acknowledgments	ii
Executive Summary	1
Introduction	3
Measuring Social Security Benefits' Impact on the Economy	5
Methodology.....	8
Interpreting the Results	9
Economic Impact of Social Security Benefits on the U.S. Economy.....	11
Employment Impact by Economic Sector	13
Modeling Social Security Benefits as Household Expenditures.....	14
Economic Impact of Social Security Benefits on State Economies	16
Conclusions	19
Appendix A: Background on IMPLAN Economic Model	20
Limitations of the Input-Output Model and Potential Sources of Error in the IMPLAN Model.....	20
Appendix B: Adjusting for Federal and State Income Taxes on Social Security Benefits	22

List of Tables

Table 1.	Summary of Economic Impact of Social Security Benefits in The United States, 2012.....	12
Table 2.	Tax Revenue Derived from Social Security Spending and Direct Taxation of Benefits, 2012 (\$ Millions).....	12
Table 3.	Summary of Economic Impact of a 25 Percent Reduction in Social Security Benefits, 2012	13
Table 4.	Household Expenditure Specification: Summary of Economic Impact of Social Security Benefits in The United States, 2012	14
Table 5.	Top Ten Sectors Affected by Social Security Spending in the United States, Ranked by Employment Impact, 2012	15
Table 6.	Economic Impact of Social Security Benefits in the States and the District of Columbia in 2012.....	17
Table B1.	Adjusted Social Security Benefits by Income Class	22
Table B2.	Total Gross and Adjusted Social Security Benefits after Accounting for Federal and State Income Taxes, by State, 2012.....	23

List of Figures

Figure 1.	Share of Household and Social Security Income by Income Class, 2011	6
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EXECUTIVE SUMMARY

Social Security is a critical federal program that promotes income stability among millions of households in the United States. It does so by providing a steady stream of income to replace wages lost due to retirement, disability, or death. About 1 out of 6 Americans—57 million people—receive Social Security benefits, including 9 out of 10 individuals aged 65 and older. For most of them, Social Security is the foundation of their economic security, and for 22 million people of all ages, it is the lifeline that keeps them out of poverty.

The significant role Social Security plays in the financial security of its beneficiaries is well known, as is the program's large fiscal footprint: In 2012, Social Security paid \$774.6 billion in benefits. Social Security benefits, however, play an even larger role in the U.S. economy than generally recognized.

Social Security's economic impact starts when its recipients spend their benefits on goods and services. The businesses that receive these dollars use them to pay their owners and employees, purchase additional items to sell, and pay rent, taxes, and the other normal costs of doing business. Their suppliers in turn use the revenue they receive to pay their employees, suppliers, and so forth.

This report, using a sophisticated economic model known as IMPLAN (IMpact analysis for PLANning), shows that Social Security benefit payments support more than 9 million jobs and add almost \$1.4 trillion in output to the overall American economy. Every dollar of Social Security benefits generates about \$2 of economic output.

Social Security benefit payments in 2012 supported:

- About \$1.4 trillion in economic output (goods and services)
- Just over 9.2 million jobs
- About \$774 billion in value added (gross domestic product)
- More than \$370 billion in salaries, wages, and other compensation
- Tax revenues for local, state, and federal governments exceeding \$222 billion, including \$78.9 billion in local and state taxes and \$143.3 billion in federal taxes

Every state—big and small—feels the effects of Social Security benefits being spent within its borders. Not surprisingly California, with the largest economy of the 50 states, showed the biggest impact. In California alone, Social Security benefits supported 888,000 jobs, \$147.4 billion in output, and \$8.7 billion in state and local tax revenues.

The results of this report are important to discussions on how to close Social Security's long-term financing gap. According to the Social Security Administration, without any changes to the program, Social Security benefits will have to be reduced across the board by about 25 percent beginning in 2033. Too often the choice for closing this funding gap is characterized as a choice between harming the vulnerable through benefit cuts or harming the economy through tax increases.

This report shows that reducing benefits would also have a serious impact on the economy by damaging employment and retail and other spending, and lowering tax revenues for both federal and state governments.

According to our analysis, reducing benefits by 25 percent across the board (about \$190 billion), which the Social Security actuaries project will occur around the year 2033, could cost the U.S. economy about 2.3 million jobs, \$349 billion in economic output, about \$194 billion in GDP, and about \$93 billion in employee compensation in 2012 terms.

INTRODUCTION

Social Security is a critical federal program that promotes income stability among households in the United States. It does so by providing a steady stream of income to replace wages lost due to retirement, disability, or death.¹ The benefits provided by Social Security keep 22 million Americans of all ages out of poverty and provide economic security for millions more.² As this report will show, these benefits also play a key role in the American economy, supporting 9.2 million jobs across the country and about \$1.4 trillion of economic output.

Social Security, officially known as the Old-Age, Survivors and Disability Insurance program (OASDI), is the single largest federal program, paying \$774.6 billion in total benefits to about 57 million people in 2012. Most people recognize Social Security as a retirement program for the aged and their spouses and children, but its Old-Age and Survivors Insurance (OASI) program also provides benefits to more than 6 million survivors of deceased workers, and its Disability Insurance (DI) program assists 11 million disabled workers and members of their families.³

Social Security's financing gap—the difference between current and future benefits required to be paid under law and the amount of assets that will be available to meet those promises—has generated much debate over the years.⁴ More recently, financial pressures intensified by the Great Recession of 2007–2009 and the pending retirement of many baby boomers have prompted analysts and legislators to propose changes in the program to ensure its long-term sustainability.

Some recently proposed reform plans offer a combination of reducing benefits and increasing revenue.⁵ Others recommend only benefit reductions to close the financing

¹ Social Security also provides younger workers who do not currently receive benefits with security in the form of insurance: 96 percent of people aged 20–49 who paid Social Security payroll taxes in 2012 have survivors' insurance protection for their young children and the surviving spouse caring for the children. Ninety percent of workers aged 21–64 and their families have protection in the event of a long-term disability. Social Security Administration, *Fact Sheet on the Old-Age, Survivors, and Disability Insurance Program* (Washington, DC: July 2013). Accessed at <http://www.ssa.gov/OACT/FACTS/>.

² Authors' calculation based on the U.S. Census Bureau's March 2013 Current Population Survey, Annual Social and Economic Supplement. The number is for 2012.

³ Social Security Administration, *Fact Sheet on the Old-Age, Survivors, and Disability Insurance Program* (Washington, DC: July 2013). Accessed at <http://www.ssa.gov/OACT/FACTS/>.

⁴ Social Security's financing gap is typically characterized in one of two ways: (1) as a percent of earnings subject to Social Security payroll taxes or (2) as the date when the Social Security trust funds will be depleted so that benefits can be paid only to the extent of revenue received (payroll taxes and income tax on a portion of Social Security benefits). The Social Security Administration estimates the shortfall over the 75-year measurement period as 2.72 percent of taxable payroll and they project the trust funds will be depleted in 2033. After that, Social Security will be able to pay only about 75 percent of promised benefits. Social Security Administration, *The 2013 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds* (Washington, DC: May 2013). Accessed at <http://www.ssa.gov/oact/tr/2013/tr2013.pdf>.

⁵ Two recent examples are the President's National Commission on Fiscal Responsibility and Reform (<http://www.fiscalcommission.gov/news/moment-truth-report-national-commission-fiscal-responsibility-and-reform>) and the Bipartisan Policy Center (<http://bipartisanpolicy.org/projects/domenici-rivlin-debt-reduction-task-force>).

gap,⁶ often arguing that raising payroll taxes or other forms of additional revenue would harm the economy. One view implicit in this argument is that reducing Social Security benefits would have little or no impact on the economy.

Social Security benefits, however, support the economy of both the country as a whole and the individual states where they are spent. When recipients buy goods and services with their Social Security benefits they increase business sales, which help not only those companies but also the firms that supply them. This, in turn, results in more jobs and income to businesses and workers throughout the country.

Given the magnitude of Social Security's economic footprint, this study seeks to answer two critical questions:

- What is the gross economic impact of Social Security benefits on the U.S. economy?
- What is the gross economic impact of Social Security benefits on individual state economies?

⁶ For an example, see http://www.ssa.gov/oact/solvency/JChaffetz_20111109.pdf.

MEASURING SOCIAL SECURITY BENEFITS' IMPACT ON THE ECONOMY

Social Security has a much greater impact on the economy than just the dollar amount of its benefit payments. When Social Security beneficiaries spend their monthly benefit checks, the effects ripple through the economy. When economists study this outcome, they use an economic model to calculate a “multiplier,” which represents the cumulative effect of these payments as they move through the economy. To understand how this multiplier effect works, it is important to first understand the role Social Security benefits play in the income of beneficiaries and thus, how Social Security supports personal consumption.

Social Security benefits play a large role in family income. The economic effect of Social Security benefits on the U.S. economy and individual state economies begins with the payments themselves. In 2012, Social Security paid out \$761.8 billion⁷ in benefits to individuals in the United States.

For most retirees and their families, Social Security is a very important source of retirement income and the only inflation-protected, guaranteed income they have. Among beneficiaries aged 65 and older, 23 percent of married couples and 46 percent of unmarried people rely on Social Security for 90 percent or more of their income. And 53 percent of married couples and 74 percent of unmarried people in this age group receive 50 percent or more of their income from Social Security.⁸

Social Security is also a significant source of income for disabled workers and their families. About 37 percent of people receiving disability benefits rely on the benefits for nearly all their family income.⁹

As shown in Figure 1, Social Security benefits are primarily received by low- and moderate-income households, reflecting the fact that most beneficiaries are people who are no longer working because of retirement or a disability. This distribution stands in sharp contrast to total household income, which is heavily skewed toward those with higher income. Households with incomes of less than \$50,000 receive about 58 percent of the total Social Security benefits, but account for only 18 percent of total household income.

Social Security benefits are paid regardless of the state of the overall economy and may even rise during recessions.¹⁰ This can be critical not only for beneficiaries, but also as a stabilizing influence during an economic downturn or slow recovery, much like we are experiencing today from the Great Recession, because these payments help support consumption.

⁷ This is the sum of benefits paid to residents of U.S. states and the District of Columbia (<http://www.ssa.gov/policy/docs/statcomps/supplement/2013/5j.html#table5.j1>). The figure of \$761.8 billion excludes benefit payments made to residents in U.S. territories and foreign countries.

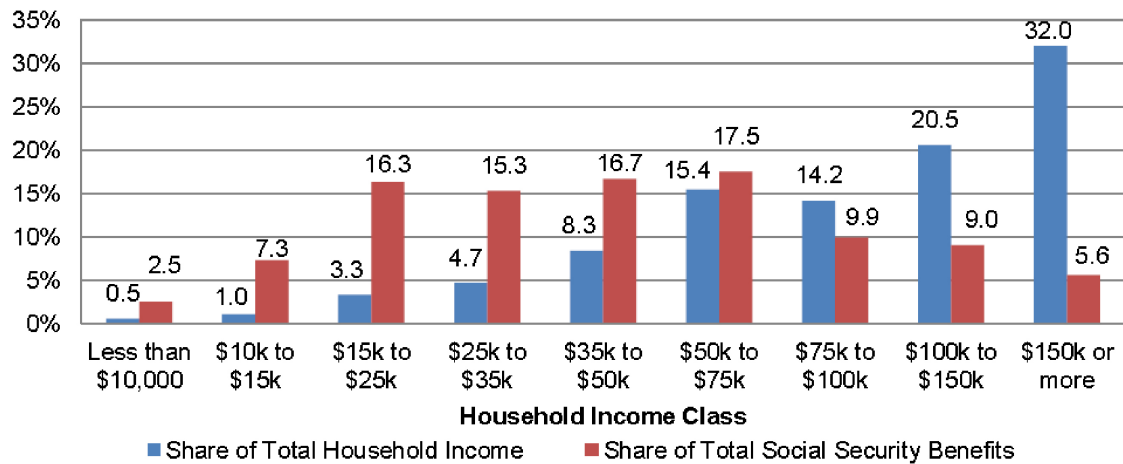
⁸ Social Security Administration, *Social Security Basic Facts* (July 26, 2013). Accessed at <http://www.ssa.gov/pressoffice/basicfact.htm>.

⁹ Authors' calculation based on the U.S. Census Bureau's March 2013 Current Population Survey, Annual Social and Economic Supplement.

¹⁰ During a recession, disability benefits typically rise because some previously employed workers with a disability lose their jobs and must rely on Social Security. In addition, some older individuals are unable to find employment and must apply for early retirement benefits.

Figure 1
Share of Household and Social Security Income by Income Class, 2011

Percentages



Source: Authors' tabulation of the 2012 Current Population Survey, March Supplement, U.S. Census Bureau.

Social Security beneficiaries spend most of their benefits. Social Security recipients spend their benefits on a variety of goods and services, such as food, furniture, and medical care. Many beneficiaries spend most of their Social Security payments, with the remainder going to savings and paying taxes. The tendency to spend from a source of income is known as the *marginal propensity to consume* (MPC) out of income. The higher the average MPC out of Social Security income, the bigger the economic impact will be because more benefit dollars circulate in the economy.

Generally, lower-income households tend to spend more of their income than higher-income households. Because Social Security beneficiaries tend to have lower incomes, and their benefits account for a significant part of those incomes, we expect them to have a higher than average marginal propensity to consume. Lower-income households also spend a higher proportion of their income on necessities, such as food and shelter, which will cause different economic impacts on different sectors than if the same benefit dollars were spent on travel or luxury items.

In addition to income, age is a factor that could affect a person's marginal propensity to consume. Because older people tend to have reached a stage of life where they are spending down their assets and less likely to save, it is often assumed that they have higher marginal propensities to consume than the general population.¹¹ Adjusting MPCs for the age of beneficiaries, as well as income, would increase the economic effect of Social Security benefits on the rest of the economy.

¹¹ Economists refer to this spending and saving pattern as the life-cycle hypothesis. The life-cycle hypothesis is based on the premise that people want to smooth consumption over their lifetime for a given amount of lifetime income. In its simplest interpretation, a person will borrow when young against future earnings, followed by a period of accumulating assets and savings, and then a period of spending down assets during retirement to support consumption, including health care needs. In reality, some older Americans may want to save to protect against health shocks or finance long-term care needs.

In addition to the amount and proportion of Social Security benefits spent, other factors can affect the program's economic impact in the United States. When Social Security beneficiaries spend part or all of their benefits, not all of this money will stay in the region where it was spent. Some of the spending will flow to producers and workers located outside of the United States (or outside of a state in the case of the state analysis).¹²

Consider this example: If a Social Security recipient spends his benefits at a store by buying a television produced in South Korea, and the parts for that television were also produced in South Korea, much of the positive effects of that spending occur outside of the United States, and thus do not benefit any state's economy. As discussed in greater detail below, the model used for this study makes some adjustments to try to capture the share of spending that remains in the local economy.

The multiplier process begins when beneficiaries spend their Social Security benefits. In the initial round of spending, the beneficiary uses part or all of the benefits to buy goods and services.¹³ For example, a retiree may spend a substantial part of his or her Social Security income at local merchants—such as the grocery store, the pharmacy, the gas station, or the hardware store. These local merchants use this revenue to pay their employees and to buy more goods from their suppliers to sell to future customers. The stores' employees and their suppliers spend some of their paychecks in the local economy. Some of this additional income that companies receive may be used to hire additional employees, who may also spend part of their paychecks in the local economy.

Together, these successive rounds of spending make up the *total impact* of Social Security on the economy. The *multiplier* is the ratio of the total impact on the economy to the amount of the original Social Security benefit payments. For example, if the original amount of benefits paid by a program was \$1 billion, and the total amount of the spending caused by those payments was \$2 billion, then the *output multiplier* for that program would be 2 because each dollar of benefits paid resulted in \$2 of output.

¹² Input-output models like the one used in this report refer to the proportion of money spent locally by businesses and people (as defined by the analysis) as the regional purchase coefficient.

¹³ Economists refer to these successive rounds of spending within input-output analysis as the direct, indirect, and induced impacts that occur when Social Security beneficiaries spend their benefits. In an input-output economic model, these definitional categories may change slightly depending on whether initial spending is modeled as a change in household income, a change in household expenditures, or a change in institutional (government) spending. The general concepts remain much the same, however.

METHODOLOGY

We model Social Security's impact on the U.S. and individual state economies using the input-output (I-O) model IMPLAN (IMPact analysis for PLANning).¹⁴ IMPLAN, like other I-O economic models, maps the flow of final demand¹⁵ for a good within a geographic region using detailed industry-level data and information on the relationship between economic sectors¹⁶ in that region. Linkages¹⁷ among the industries in a region producing the good and the inputs used in its production create a ripple effect. Stronger linkages can lead to healthier economies, as capital (money) flows through the area's economy rather than out of it.

The model is based on the idea that an initial change in economic activity (such as by paying Social Security benefits) results in diminishing rounds of new spending. Each successive round of spending is assumed to be somewhat smaller than the previous amount because some of each round is either saved or spent by individuals or businesses outside of the local economy. The economic impact on the region being studied is bigger when there are fewer leakages.

We model the impact of Social Security benefits using IMPLAN's household income change specification.¹⁸ This specification allows us to divide total Social Security benefits among nine income classes. By doing so, we can capture differences in household spending patterns by income, including different marginal propensities to consume. The nine income classes range from annual incomes of less than \$10,000 to those greater than \$150,000.¹⁹

The main findings of this study rely on IMPLAN's income-based estimations of spending patterns, including marginal propensities to consume. IMPLAN does not explicitly allow adjustments for the possibility that older Americans spend a higher proportion of their income, and therefore the results may underestimate the economic

¹⁴ Researchers in industry and government use IMPLAN to estimate the economic impact of a variety of economic activities. Recently, researchers have used IMPLAN to estimate the impacts of traditional pension income (I. Boivie, "Pensionomics 2012: Measuring the Economic Impact of DB Pension Expenditures" [Washington, DC: National Institute on Retirement Security, March 2012]. Accessed at http://www.nirsonline.org/storage/nirs/documents/2012_pensionomics_report.pdf) and the consequences of cutting the Supplemental Nutrition Assistance Program (J. Thompson and H. Garrett-Peltier, "The Economic Consequences of Cutting the Supplemental Nutrition Assistance Program" [Washington, DC: Center for American Progress, March 2012]. Accessed at <http://www.americanprogress.org/issues/poverty/report/2012/03/19/11314/the-economic-consequences-of-cutting-the-supplemental-nutrition-assistance-program/>). For a full discussion of IMPLAN, including its limitations, see Appendix A.

¹⁵ Final demand is the total amount spent for goods and services in their finished state as opposed to the demand for parts or ingredients that might be used to create another product.

¹⁶ An economic sector is the division of a local or national economy by how its people are employed. This could include agriculture, manufacturing, retailing, etc.

¹⁷ A linkage is a relationship between different sectors. For instance, an agricultural product grown locally that is consumed in a local restaurant would be a linkage between the local area's agricultural sector and its services sector.

¹⁸ The IMPLAN database used to populate the model is from 2011 and adjusted to 2012 values using IMPLAN.

¹⁹ The income groupings are identical to the income categories in Figure 1.

impacts of Social Security benefits. We can and do, however, model Social Security benefits as a household expenditure. Under this alternative specification, the model assumes that all Social Security benefits will be spent. That is, this assumes an MPC equal to one across all income classes.

Assuming that Social Security recipients spend all of their benefits may be too strong, but modeling benefits as a household expenditure allows us to examine the sensitivity of our results to IMPLAN's assumptions regarding the proportion of benefits consumed.²⁰

We begin with Social Security benefits paid in 2012 to residents in each state as reported by the Social Security Administration (SSA).²¹ Excluding payments made to recipients living outside of the United States, SSA paid a total of \$761.8 billion in benefits.

To operationalize the model for estimating the impact on the U.S. economy, we make the following adjustments:

1. We distribute the \$761.8 billion in payments across the nine income classes using the percentages shown in Figure 1.
2. We then adjust amounts in each income class for federal and state income taxes paid on Social Security benefits (according to SSA, \$45.9 billion in federal income taxes were collected and we estimate another \$1 billion was paid in state income taxes). After adjusting for taxes, beneficiaries received \$714.9 billion ("adjusted Social Security benefits").

Under both the household-income and household-expenditure specifications, we use adjusted Social Security benefits after reducing them for the amount of state and federal income taxes paid. For more detail on how we adjust benefits for taxes, see Appendix B.

Interpreting the Results

This study looks at the "gross" impact of Social Security benefits as they ripple through today's economy. This study does not consider other potential impacts of the Social Security program. In particular, this analysis takes the payroll taxes, which are the primary funding source for Social Security benefits, as given, and therefore does not consider them or their effects.

Social Security is primarily a "pay-as-you-go" program, meaning that payroll taxes paid by current workers are used to pay benefits to current retirees and other beneficiaries.²² These payroll taxes reduce take-home income and, thus, the economic

²⁰ A recent study found that Social Security recipients spent virtually all of the increase in their benefits measured during the period 1952 to 1991 (C. D. Romer and D. H. Romer, *Transfer Payments and the Macroeconomy: The Effects of Social Security Benefit Changes, 1952–1991* [September 2013]. Accessed at <http://emlab.berkeley.edu/~webfac/cromer/Romer.pdf>).

²¹ State-level Social Security benefits paid come from the Social Security Administration (<http://www.ssa.gov/policy/docs/statcomps/supplement/2013/5j.html#table5.j1>).

²² About 158 million workers and their employers pay payroll taxes on earnings. The Social Security Administration expects \$752 billion in payroll taxes to be paid in 2013. <http://www.ssa.gov/oact/TR/2013/lr6f7.html>

(marginal) benefit for working. High levels of payroll taxes could lead to lower consumption because individuals would have less to spend and could lower work effort as some people decide to work fewer hours. Past research has examined the impact of Social Security payroll taxes on individual behavior, and the implications of the Social Security program overall on savings, but very little research has been done on the role of benefits themselves.²³ This report attempts to fill that void.

Because this study provides a gross—not a net²⁴—analysis of Social Security's economic impact, the study cannot be used to address speculation such as what if the Social Security program were eliminated? A net analysis would likely show some or even most of the positive effects of Social Security benefits described in this paper as being offset by the program's payroll taxes.

We proceeded with a gross analysis for several reasons. It is unrealistic to think that Social Security would be entirely eliminated. Moreover, any “net” analysis would be greatly complicated by the fact that behavioral responses of individuals to the elimination of the Social Security program would be extremely difficult to predict. Finally, we want to highlight the broader economic role played by the benefit payments themselves, which is often ignored.

Because of differences in modeling and the data used, our study may not be directly comparable to other analyses that used IMPLAN or similar models.

²³ Hungerford provides a good discussion of the literature on payroll taxes and behavior (T. L. Hungerford, *Increasing the Social Security Payroll Tax Base: Options and Effects on Tax Burdens* [Washington, DC: Congressional Research Service, February 2013] report RL33943).

²⁴ A net analysis would subtract the economic effects of payroll taxes from those of the benefit payments.

ECONOMIC IMPACT OF SOCIAL SECURITY BENEFITS ON THE U.S. ECONOMY

The impact of Social Security benefits on the U.S. economy is significant. The \$714.9 billion in adjusted Social Security payments to individual recipients stimulates economic activity in many areas, including businesses, labor income, employment, and tax revenue. Social Security benefits also have a significant effect in every state—big and small, rural and non-rural. We report the impact on five of the most important economic variables—output, employment, employee compensation, value added, and tax revenues.

The measures of economic activity that we analyze with the IMPLAN model are defined as follows.

- **Output.** Total output includes the dollar value of all goods and services produced in the economy. This includes goods and services consumed or used in the production of other goods and services. In IMPLAN, output represents the estimated increase in total production for all industries in the region.
- **Employment.** This is the number of jobs supported by Social Security benefits. This includes full-time, part-time, and temporary jobs.
- **Employee Compensation.** This includes wages, salaries, and other forms of compensation paid to employees. It is a subset of value added or gross domestic product (GDP).²⁵
- **Value Added.** Value added is the best measure of new value or productivity created in the economy. It is equal to the difference between the industry or sector's total gross output (that is, sales, receipts or other operating income plus inventory change) and the cost of intermediate inputs purchased from other industries. Value added includes such items as employee wage and salary compensation and profits, but it generally does not include net taxes or subsidies. Generally, GDP is equivalent to gross value added.
- **Tax Revenues.** When Social Security beneficiaries receive and spend their benefits, some of the money goes to pay various taxes to the federal, state, and local governments. This could take the form of income taxes, sales taxes, property taxes, and so forth. Further, the economic activity supported by Social Security benefits results in higher income, and thus higher personal and corporate tax revenues.

Table 1 shows Social Security benefits total impact on the United States, including: total output, value added, employee compensation, and employment (jobs). The output, employee compensation, and value added impacts are described in terms of dollar impacts, with associated multipliers related to the dollar value of Social Security benefits. For employment, the impact is measured in terms of the number of jobs supported by Social Security.

Adjusted benefit payments of \$714.9 billion support total output of about \$1.4 trillion. As shown in the bottom row of Table 1, this amount is equal to about 3 percent of total economic output in the United States. A total of 9.2 million workers

²⁵ GDP is the monetary value of all goods and services produced within a country's borders within a specific period of time. It includes all of private and public consumption, government outlays, investments, and exports less imports that occur within the country's borders.

Table 1
Summary of Economic Impact of Social Security Benefits in the United States, 2012

	Output (\$ millions)	Value Added or GDP (\$ millions)	Employee Compensation (\$ millions)	Employment (actual)	Output Multiplier
Social Security Benefits Impact	\$1,396,882	\$774,459	\$371,970	9,203,069	1.95
As a Percent of U.S Economy	2.9%	5.1%	4.5%	5.3%	N/A

Note: Percentages are calculated using U.S. totals reported by IMPLAN for 2011 (the most recent year available).
The output multiplier is calculated as output divided by adjusted Social Security benefits.

keep or find their jobs as a result of Social Security, and compensation to these workers totaled about \$371.9 billion.

Social Security benefits account for 1 job out of every 20 in the economy. Similarly, benefits support about \$1 out of every \$20 of the total value of the U.S. economy (value added or GDP). Because of the multiplier effect, every dollar of Social Security paid out translates to almost two dollars in spending in the United States.

Table 2 shows the tax revenues generated when Social Security beneficiaries spend their benefits. Spending from Social Security benefits stimulates economic activity, and the businesses and workers who benefit from this spending pay federal, state, and local taxes on their receipts and earnings. These taxes range from state and federal income taxes on individual and business income to sales taxes and property taxes. They also include social insurance payroll taxes for Social Security and Medicare.

Federal, local, and state taxes generated by Social Security spending totaled \$175.3 billion in 2012. The direct taxation of Social Security benefits generates an additional \$46.8 billion in federal and state revenue, bringing total tax revenues supported by Social Security to about \$222 billion during this period.

Comparing the results in Table 2 to the \$774.6 billion in total Social Security benefits (to residents inside and outside the United States) paid in 2012 suggests that for every \$100 of Social Security benefits paid out, about \$29 comes back in the form of federal or state and local tax revenue. The federal government receives about \$19 and state and local governments receive about \$10.

Table 2
Tax Revenue Derived from Social Security Spending and Direct Taxation of Benefits, 2012 (\$ Millions)

	Tax Revenues Derived from Spending Benefits	Revenue from Taxing Social Security Benefits	Total Impact on Revenue
Local and State	\$77,917	\$948	\$78,865
Federal	\$97,421	\$45,900	\$143,321
Total Tax Revenues	\$175,338	\$46,848	\$222,186

Note: Values may not sum to total due to rounding.

Our results in Table 1 show the impact of Social Security benefits on the U.S. economy. According to the Social Security Administration, if no other changes are made to Social Security, the trust funds reserves will become depleted in about 2033. At that point, payroll taxes (and, to a much lesser degree, income taxes on benefits) will be enough to cover only about 75 percent of benefits scheduled under the current law. Based on our previous results, Table 3 shows what the impact could be if Social Security benefits were reduced by 25 percent across-the-board (about \$190 billion).²⁶

Table 3
Summary of Economic Impact of a 25 percent Reduction in Social Security Benefits, 2012

	Output (\$ millions)	Value Added or GDP (\$ millions)	Employee Compensation (\$ millions)	Employment (actual)
Loss in Economic Value	-\$349,221	-\$193,615	-\$92,993	-2,300,767

Note: These results are derived by multiplying the results in Table 1 by 25 percent.

Employment Impact by Economic Sector

Social Security enabled 9.2 million Americans to keep or find their jobs in 2012. Table 5 shows the top 10 sectors affected by the spending of Social Security benefits, ranked by the program's impact on employment. About 3.7 million, or 40 percent of the jobs supported by Social Security benefits were in 10 sectors of the economy, including food services and drinking places, wholesale and retail trade, and various sectors of the health care industry such as private hospitals, doctors' and dentists' offices, and nursing and residential care facilities.

The relative rankings in Table 5 are the result of household spending patterns and the decision to rank sectors by employment impact. IMPLAN is designed to capture how household spending patterns vary across the nine household income categories used for this study. As described in Figure 1, Social Security benefits flow disproportionately to lower-income households. These beneficiaries tend to spend more of their income on necessities like food, health care, and housing—as opposed to investment services—than upper-income households. This is captured in the IMPLAN modeling.

In addition, ranking Social Security's impact by employment produces a different order than if sector impacts were ranked by another measure, such as output. Some sectors have a high dollar value of output but employ relatively fewer workers. In a ranking of sectors by labor impact, the highest-ranking sectors may simply be large sectors with a correspondingly large number of employees, or they will tend to be more labor-intensive.

²⁶ These results are static in that they do not account for any behavioral change. A large cut in Social Security benefits of this magnitude could lead to significant response by individuals and government. In addition, more people would be automatically covered or receive higher benefits under other government safety net programs, such as Supplemental Security Income.

Modeling Social Security Benefits as Household Expenditures

The main findings of this study rely on IMPLAN's income-based estimations of spending patterns, including marginal propensities to consume. As mentioned previously, our base results may underestimate the economic impact of Social Security benefits because IMPLAN does not explicitly allow us to adjust MPCs for the possibility that older Americans spend a higher proportion of their income. To test the sensitivity of our results to IMPLAN's assumptions regarding the proportion of Social Security benefits consumed, we model benefits using IMPLAN's household expenditure option. Under this alternative specification, we assume that every dollar of adjusted Social Security benefits (after adjusting for taxes) received is spent (i.e., MPC is equal to 1 across all income classes). The results are shown in Table 4.

Under the alternative specification, we find that the economic impact of Social Security benefits across all impact variables increases by about 10 percent compared to our base specification. Output increases by \$143 billion, value added by about \$81 billion, employment by 944,145, and the multiplier rises from 1.95 to 2.15.

These differences are not trivial. Although these impacts can be interpreted as an upper bound, the results do suggest that the impact of Social Security benefits on the U.S. economy may be up to 10 percent larger than that estimated when we modeled them as changes in household income.

Table 4
Household Expenditure Specification: Summary of Economic Impact of Social Security Benefits in the United States, 2012

	Output (\$ millions)	Value Added or GDP (\$ millions)	Employee Compensation (\$ millions)	Employment (Actual)	Output Multiplier
Social Security Benefits Impact	\$1,540,255	\$855,321	\$410,180	10,147,214	2.15

Note: The output multiplier is calculated as output divided by adjusted Social Security benefits.

Table 5
Top Ten Sectors Affected by Social Security Spending in the United States,
Ranked by Employment Impact, 2012²⁷

Sector	Employment	Total Value Added (\$ millions)	Total Output (\$ millions)
Food services and drinking places	820,252	26,126	47,734
Real estate establishments	529,382	61,620	82,783
Private hospitals	430,159	32,775	59,192
Offices of physicians, dentists, and other health practitioners	415,207	34,021	52,050
Nursing and residential care facilities	292,513	11,569	17,669
Wholesale trade businesses	277,742	37,976	51,076
Retail stores—general merchandise	241,585	10,949	14,211
Retail stores—food and beverage	233,988	9,390	13,500
Securities, commodity contracts, investments, and related activities	215,574	14,840	37,926
Employment services	205,360	7,048	8,614
TOTAL	3,661,761	246,313	384,753

Note: Industry and sector categories used here follow IMPLAN classifications.

²⁷ Table 5 follows IMPLAN categories for reporting impacts in each sector of the economy. These IMPLAN categories do not align exactly with the Bureau of Labor Statistics' North American Industry Classification System (NAICS) categories. A crosswalk between IMPLAN and NAICS industry and sector classifications is available as an Excel file from IMPLAN at <http://implan.com/V4/Index.php>. The category "food services and drinking places" includes establishments such as restaurants, taverns, caterers, and carry-outs that prepare meals. By contrast, the category "retail stores—food and beverage" includes grocery stores; specialty food stores; and beer, wine, and liquor stores. The category for "real estate establishments" includes rental and leasing companies, property management companies, real estate agents, and real estate investment trusts (REITs). The category "employment services" includes temporary help agencies, employment placement services, and professional employer organizations.

ECONOMIC IMPACT OF SOCIAL SECURITY BENEFITS ON STATE ECONOMIES

We model the economic effects of Social Security benefit payments on individual states in IMPLAN using the same assumptions and modeling specifications that were used for the U.S. estimates.

Because IMPLAN is a nationally based program, the impacts in each individual state do not capture leakages between states caused by household spending on out-of-state or imported goods and services, goods and services being sourced to out-of-state or foreign vendors, payment by state residents of nonlocal taxes, nonlocal investments, and other reasons. One state's leakage often becomes another state's inflow. Because IMPLAN does not capture these inflows, there may be discrepancies between the national result and the sum of results from the states and District of Columbia.

To address these discrepancies, we follow the approach suggested by Thompson and Garrett-Peltier²⁸ and allocate the gap between the national result and the sum of all state and District of Columbia results to each state based on the state's percentage share of Social Security benefits.

The impact of Social Security benefits, as shown in Table 6, is significant in every state—whether big or small, rural, or nonrural. Not surprisingly, California—with the largest economy of the 50 states—showed the biggest employment, output, and tax revenue impacts, with 888,000 jobs, \$147.4 billion in output, and \$8.7 billion in state and local tax revenues from spending these benefits in the state. In Florida, the state showing the second largest impact, Social Security benefit payments supported 739,000 jobs and accounted for \$107.8 billion in output and \$5.6 billion in state and local tax revenues.

The output multipliers vary from a low of 1.55 for Wyoming to a high of 2.21 for California. States with more diverse economies will have higher multipliers than those that are smaller and more homogenous. As discussed previously, stronger linkages among industries in a state can lead to healthier economies, as money flows through the area's economy rather than out of it.

The 2012 distribution of tax revenues was heavily skewed toward larger states, specifically California, New York, Florida, Texas, and Pennsylvania. Examining the distribution of tax revenues revealed that these five states received almost \$29.0 billion (37 percent) of the \$77.9 billion in state and local tax revenues generated by Social Security during this time.²⁹

²⁸ J. Thompson and H. Garrett-Peltier, "The Economic Consequences of Cutting the Supplemental Nutrition Assistance Program" (Washington, DC: Center for American Progress, March 2012).

²⁹ The tax revenues shown in Table 6 do not include revenues from the direct taxation of Social Security benefits. In 2012, only 14 states taxed a portion of Social Security benefits. See Table B2 in Appendix B for more detail.

Table 6
Economic Impact of Social Security Benefits in the States and
the District of Columbia in 2012

State	Total Social Security Benefits (\$ millions)	Employment Impact (actual)	Output Impact (\$ millions)	Employee Compensation (\$ millions)	Local and State Tax Revenues (\$ millions)	Impact Multiplier: Output
Alabama	14,051	159,888	23,192	5,885	1,244	1.73
Alaska	1,096	10,671	1,743	442	107	1.72
Arizona	15,900	202,163	29,888	8,032	1,673	2.00
Arkansas	8,450	95,644	13,738	3,497	749	1.70
California	71,487	887,771	147,354	39,083	8,666	2.21
Colorado	10,180	126,854	19,485	5,103	1,068	2.06
Connecticut	9,651	102,921	16,319	4,581	987	1.83
Delaware	2,665	30,525	4,483	1,247	259	1.81
District of Columbia	965	8,105	1,425	422	98	1.58
Florida	54,711	738,861	107,801	29,313	5,550	2.10
Georgia	21,198	265,964	39,777	10,554	2,100	1.98
Hawaii	3,276	37,031	5,661	1,473	312	1.87
Idaho	3,827	46,768	6,475	1,601	348	1.79
Illinois	29,862	375,702	58,534	16,177	3,284	2.09
Indiana	17,789	213,753	30,633	8,024	1,681	1.82
Iowa	8,300	95,585	13,524	3,469	736	1.74
Kansas	7,128	82,414	12,033	3,053	658	1.82
Kentucky	12,084	142,125	20,341	5,261	1,093	1.76
Louisiana	10,582	125,137	18,248	4,688	983	1.81
Maine	3,990	49,188	6,917	1,838	393	1.82
Maryland	12,755	143,636	22,212	6,116	1,329	1.88
Massachusetts	16,426	190,399	30,417	8,705	1,807	1.98
Michigan	30,128	381,192	54,963	14,624	3,002	1.93
Minnesota	12,998	163,114	24,690	6,604	1,375	2.08
Mississippi	7,898	88,734	12,686	3,145	685	1.68
Missouri	16,379	206,949	30,075	8,003	1,627	1.94
Montana	2,659	32,104	4,502	1,105	245	1.83
Nebraska	4,336	51,047	7,162	1,902	379	1.80
Nevada	6,075	65,906	9,981	2,617	556	1.75
New Hampshire	3,829	44,653	6,597	1,797	376	1.84
New Jersey	23,227	256,491	41,350	11,375	2,441	1.93
New Mexico	4,860	52,891	7,659	1,940	423	1.71
New York	48,536	525,913	87,174	24,865	5,784	1.93
North Carolina	25,246	309,406	45,181	11,846	2,478	1.89

Table 6 continued

State	Total Social Security Benefits (\$ millions)	Employment Impact (actual)	Output Impact (\$ millions)	Employee Compensation (\$ millions)	Local and State Tax Revenues (\$ millions)	Impact Multiplier: Output
North Dakota	1,603	16,790	2,473	630	149	1.67
Ohio	30,317	349,014	51,777	13,596	2,864	1.80
Oklahoma	9,691	113,950	16,857	4,218	895	1.84
Oregon	10,468	131,326	18,970	5,031	1,078	1.93
Pennsylvania	37,793	470,442	70,866	19,263	3,990	1.99
Rhode Island	2,909	33,750	4,982	1,372	281	1.86
South Carolina	13,429	155,662	22,312	5,734	1,147	1.76
South Dakota	2,062	24,319	3,412	862	177	1.78
Tennessee	17,702	222,798	32,953	8,526	1,694	1.96
Texas	48,334	619,344	96,704	24,444	4,974	2.12
Utah	4,736	61,720	8,981	2,235	474	2.07
Vermont	1,831	21,049	2,983	782	166	1.77
Virginia	18,682	206,759	31,463	8,496	1,781	1.81
Washington	16,516	192,811	30,439	7,992	1,573	1.98
West Virginia	6,185	65,800	9,455	2,423	532	1.61
Wisconsin	15,640	195,690	28,117	7,519	1,545	1.91
Wyoming	1,332	12,388	1,917	458	102	1.55

CONCLUSIONS

Social Security is arguably the most successful federal program. It keeps 22 million people out of poverty—the most of any public program—and serves as the foundation of retirement security for millions more.

The significant role Social Security plays in the financial security of its beneficiaries is well known, as is the program's footprint in the federal budget. In 2012, Social Security paid \$774.6 billion in benefits, representing about 22 percent of total federal expenditures and about 5 percent of the nation's GDP.

Social Security benefits, however, play an even larger role in the U.S. economy than most people understand. As shown above, Social Security benefit payments in 2012 supported:

- About \$1.4 trillion in economic output (goods and services)
- Just over 9.2 million jobs
- About \$774 billion in value added (gross domestic product)
- More than \$370 billion in salaries, wages, and other compensation
- Tax revenues for local, state, and federal governments exceeding \$222 billion, including \$78.9 billion in local and state taxes and \$143.3 billion in federal taxes.

Social Security's role in the American economy goes well beyond just benefit payments. Millions of Americans are employed because of Social Security benefit spending and thousands of small, medium, and large businesses exist in whole or in part because of the effect of Social Security on our economy. Every state and every community feels these benefits.

The results of this report are important to discussions on how to close Social Security's long-term financing gap. Too often the options for closing the funding gap are characterized as either harming the vulnerable through benefit cuts or harming the economy through tax increases. This report shows that this dichotomy is too simple and ignores the reality of what benefit cuts would mean to millions of Americans who do not receive Social Security benefits.

According to our analysis, reducing benefits by 25 percent across the board in 2012 (about \$190 billion), which the Social Security actuaries project will occur around the year 2033, could cost the U.S. economy about 2.3 million jobs, \$349 billion in economic output, about \$194 billion in GDP, and about \$93 billion in employee compensation.

Reducing benefits, like raising additional revenue, has a negative consequence for the U.S. economy and every state's economy. These facts need to be carefully considered during any discussion about Social Security's future.

APPENDIX A: BACKGROUND ON IMPLAN ECONOMIC MODEL

We evaluated the economic impact of Social Security benefits on the U.S. economy using an input-output model called IMPLAN (IMPact analysis for PLANning).³⁰ IMPLAN is one of the most widely used software tools by government agencies to make regional economic forecasts.³¹

IMPLAN measures the economic impact of any change in final demand (Y) by tracing all the demand ripples (i.e., the multiplier effects) through the multiplier and calculating changes to total output (X). The advantage of an input-output model is that it provides impact estimates in a general equilibrium framework instead of single-market analysis (referred to as “partial equilibrium”). The input-output model captures not only the direct impact of Social Security expenditures but also the indirect and induced impacts that occur when recipient dollars work their way through the economy.

The IMPLAN model combines national average data and location-specific data. In the U.S. model, final-demand data and value-added data (such as employee compensation, proprietary income, property income, and indirect business taxes) are collected specifically for the United States. Production functions for the 440 sectors in the model are derived from national averages.

Potential sources of error in the IMPLAN model, based on national averages, include production functions (what industries purchase to produce their output), byproducts (the mix of products that industries actually produce), and regional purchase coefficients, or RPCs (the percentage of a commodity that is purchased from local suppliers). The greatest source of error in the base model data is the RPCs.

Limitations of the Input-Output Model and Potential Sources of Error in the IMPLAN Model

Input-output models incorporate several important assumptions that place limitations on their interpretation.³² One of the primary drawbacks of I-O analysis is that it is a static measurement, which captures the impact of an activity or event at a single point in time. Other reasons include:

- The I-O model assumes a linear production function, which means constant returns to scale and constant production functions for each firm within an industry. For example, the model assumes that a small sawmill would use the same inputs, in the same proportion, as a large sawmill. Furthermore, the model assumes that the percentage of those inputs that are purchased locally is constant from one firm to the next.

³⁰ Minnesota IMPLAN Group, Inc., *IMPLAN Version 3.0 User's Guide* (Stillwater, MN: Minnesota IMPLAN Group, Inc., 2011). Accessed at <http://implan.com/V4/Index.php>.

³¹ For a mathematical explanation of the I-O methodology, see W. Koller, “Measuring the Economic Importance of an Industry: An Application to the Austrian Agricultural Sector” (Institute for Industrial Research, Vienna University of Economics and Business Administration, 2007).

³² R. E. Miller and P. D. Blair, *Input-Output Analysis: Foundations and Extensions* (California: Prentice-Hall, 1985).

- Output is also assumed to be homogenous. In other words, the assumption is that two firms would produce the same percentage of products and other outputs.
- It assumes that there are no constraints on the supply of any commodity.
- It assumes that increases or decreases in employment cause in- or out-migration from the state modeled, so that “full employment” is maintained.

APPENDIX B: ADJUSTING FOR FEDERAL AND STATE INCOME TAXES ON SOCIAL SECURITY BENEFITS

We use adjusted Social Security benefits—the amount of income after all federal and state income taxes have been paid on benefits—in all of our calculations. According to the Social Security Administration (SSA), a total of \$45.9 billion in federal income taxes were collected on income from Social Security benefits in 2012. We estimate, as described below, that Social Security recipients paid another \$948 million in state income taxes in the 14 states that taxed benefits in 2012. After adjusting for income taxes, Social Security recipients received a total of \$714.9 billion in benefit payments.

To operationalize the model, we allocate the adjusted benefits across the nine income classes and the 50 states plus the District of Columbia. The last column of Table B1 and Table B2 show adjusted Social Security benefits by the nine income classes and states, respectively.

While the federal tax treatment of Social Security benefits is uniform across all the states, the state tax treatment varied in each of the 14 states that tax Social Security benefits. Further, the amount of state tax collected in each of those states from taxing benefits is not readily accessible.

To distribute federal income taxes across the income classes, we calculated tax paid on benefits by income class using data from a publicly available sample of taxpayers in 2006 that was purchased from the Internal Revenue Service (IRS). The sample was stripped of all identifiers by the IRS and is made available to researchers. For example, based on the 2006 sample, we calculate that taxpayers in the highest income class (income greater than \$150,000) paid about 22 percent of the total federal income taxes paid on Social Security benefits in 2006. We apply this percentage to total federal income

Table B1
Adjusted Social Security Benefits by Income Class

IMPLAN Household Classes	Share of Social Security Benefits	Social Security Benefits (\$ millions)	Federal Income Tax on Benefits (\$ millions)	State Income Tax on Benefits (\$ millions)	Adjusted Social Security Benefits (\$ millions)
Less than \$10,000	2.51%	19,132	6	0	19,126
\$10,000–\$14,999	7.27%	55,359	15	0	55,344
\$15,000–\$24,999	16.30%	124,141	277	6	123,859
\$25,000–\$34,999	15.28%	116,389	1,405	29	114,955
\$35,000–\$49,999	16.69%	127,132	4,559	94	122,479
\$50,000–\$75,499	17.48%	133,183	11,513	238	121,432
\$75,000–\$99,999	9.87%	75,187	9,182	190	65,816
\$100,000–\$149,999	9.02%	68,718	8,978	185	59,555
\$150,000 and above	5.58%	42,534	9,967	206	32,361
Total	100%	761,774	45,900	948	714,926

Source: Total Social Security benefits and total federal taxes are from the Social Security Administration. Distribution of benefits, federal and state taxes, and adjusted Social Security benefits are based on authors' calculation.

tax to get the \$9,967 million paid by the top income class in 2012. Similar calculations were made for the other eight income classes.

To get state income tax, we queried the 14 states that tax Social Security benefits. Three states provided us data for 2012, five provided data for 2011, and six did not respond. We adjusted the 2011 information for the five states that provided it to 2012 values by applying the ratio of state taxes received to total Social Security benefits paid in the state in 2011 to the benefits paid there in 2012. For the six states that did not respond, we applied the ratio described above from a state that provided data and had similar tax treatment to the missing state's 2012 Social Security payments. We then distributed the estimated \$948 million in state income tax across the nine income classes in the same proportion as the federal income taxes.

We calculated adjusted Social Security benefits for each state to do our state analysis. We assumed that the \$45.9 billion in federal income taxes on Social Security benefits would be distributed across states in the same percentage as total *taxable* Social Security benefits. For example, in 2011 (the most recent year that federal tax data are available at the state level³³), we calculated that taxable Social Security benefits in Alabama accounted for about 1.4 percent of total taxable benefits in the United States. We apply this percentage to the total federal income taxes on Social Security benefits (\$45.9 billion) to get \$646 million in federal income tax paid on Social Security benefits by residents in Alabama.

The amount of state income tax on Social Security benefits was determined as described above. The results are shown in Table B2.

Table B2
Total Gross and Adjusted Social Security Benefits after Accounting for
Federal and State Income Taxes, by State, 2012

State	Total Social Security Benefits (\$ millions)	Federal Income Tax on Benefits (\$ millions)	State Income Tax on Benefits (\$ millions)	Adjusted Social Security Benefits (\$ millions)
Alabama	14,051	646	0	13,405
Alaska	1,096	85	0	1,011
Arizona	15,900	980	0	14,920
Arkansas	8,450	386	0	8,064
California	71,487	4,770	0	66,717
Colorado	10,180	675	55*	9,450
Connecticut	9,651	703	42*	8,905
Delaware	2,665	187	0	2,478
District of Columbia	965	65	0	900
Florida	54,711	3,474	0	51,237
Georgia	21,198	1,144	0	20,054
Hawaii	3,276	247	0	3,029
Idaho	3,827	203	0	3,624
Illinois	29,862	1,844	0	28,018

³³ <http://www.irs.gov/uac/SOI-Tax-Stats---Historic-Table-2>.

Table B2 continued

State	Total Social Security Benefits (\$ millions)	Federal Income Tax on Benefits (\$ millions)	State Income Tax on Benefits (\$ millions)	Adjusted Social Security Benefits (\$ millions)
Indiana	17,789	933	0	16,856
Iowa	8,300	523	23	7,754
Kansas	7,128	457	74*	6,596
Kentucky	12,084	518	0	11,566
Louisiana	10,582	479	0	10,103
Maine	3,990	189	0	3,801
Maryland	12,755	948	0	11,807
Massachusetts	16,426	1,053	0	15,373
Michigan	30,128	1,704	0	28,424
Minnesota	12,998	884	245**	11,869
Mississippi	7,898	344	0	7,554
Missouri	16,379	860	45**	15,474
Montana	2,659	154	43*	2,461
Nebraska	4,336	280	82	3,974
Nevada	6,075	384	0	5,691
New Hampshire	3,829	244	0	3,585
New Jersey	23,227	1,755	0	21,472
New Mexico	4,860	277	92**	4,492
New York	48,536	3,372	0	45,164
North Carolina	25,246	1,375	0	23,871
North Dakota	1,603	113	12*	1,478
Ohio	30,317	1,521	0	28,796
Oklahoma	9,691	510	0	9,181
Oregon	10,468	640	0	9,828
Pennsylvania	37,793	2,180	0	35,613
Rhode Island	2,909	173	55**	2,681
South Carolina	13,429	730	0	12,699
South Dakota	2,062	140	0	1,922
Tennessee	17,702	854	0	16,848
Texas	48,334	2,757	0	45,577
Utah	4,736	307	89**	4,340
Vermont	1,831	108	35**	1,688
Virginia	18,682	1,278	0	17,404
Washington	16,516	1,163	0	15,353
West Virginia	6,185	250	55	5,880
Wisconsin	15,640	937	0	14,703
Wyoming	1,332	98	0	1,234

Source: Social Security Administration and authors' estimates.

Note: * indicates value was estimated for 2012 using 2011 data; ** indicates value was estimated by comparing states with similar tax treatment. All values are in millions of dollars.