

2009-2011 Economic Impacts of RSA on Alabama



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THE UNIVERSITY OF ALABAMA

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Executive Summary

- This report presents the economic and fiscal impacts of The Retirement Systems of Alabama (RSA) in-state investments and benefit payments on the State of Alabama for 2009, 2010, and 2011. The study is an update of previous RSA impact studies that we have conducted. Investments and pension benefits are made by RSA and healthcare benefits are provided through the Public Education Employees' Health Insurance Plan (PEEHIP) and the State Employees' Insurance Board (SEIB). Impacts are also presented separately for RSA investment construction activities, RSA investment operation activities, RSA pension benefits, PEEHIP healthcare benefits, and SEIB healthcare benefits.
- The economic impacts focus on output, value-added, earnings (wages and salaries), and employment. Output refers to total or gross sales and contains value-added, which is the contribution to gross domestic product (GDP) or the value of goods and services produced in Alabama on a value-added basis. Earnings impacts are part of value-added impacts and are the wages and salaries of the workers acknowledged by the employment impact. Fiscal impacts are based on the earnings impacts, but are conservative because at the local (county and municipality) level only sales taxes are considered; other local taxes (e.g., local property taxes) are not.
- RSA investment spending in 2009 for both construction and operations had statewide impacts of \$2.4 billion in output, \$1.1 billion in value-added, \$392.6 million in earnings, and 10,796 direct and indirect jobs. The earnings impact generated \$37.8 million in taxes of which \$29.9 million is state taxes and \$7.9 million is local sales tax. For 2010 the impacts are \$2.4 billion in output, \$1.1 billion value-added, \$407.6 million in earnings, 11,292 jobs, and \$39 million in taxes (\$30.8 million state and \$8.2 million local sales taxes). The 2011 RSA Alabama investments impacts are \$2.2 billion in output, \$1.0 billion value-added, \$335.6 million in worker earnings, 9,103 jobs, and \$32.2 million in taxes (\$25.5 million state and \$6.8 million local sales taxes).
- Economic and fiscal impacts of pension and healthcare benefit payments in 2009 are \$6.9 billion in output, \$4.1 billion value-added, \$2.3 billion in wages and salaries, 71,125 jobs, and \$217.1 million in taxes (\$171.7 million state and \$45.4 million local sales tax). The 2010 impacts are \$7.1 billion in output, \$4.3 billion value-added, \$2.3 billion in earnings, 73,591 jobs, and \$222.8 million in taxes (\$176 million state and \$46.9 million local sales taxes). For 2011 the impacts are \$7.2 billion in output, \$4.3 billion value-added, \$2.4 billion in worker earnings, 74,965 jobs, and \$226.4 million in taxes of which \$178.9 million is state taxes and \$47.5 million is local sales taxes.
- The combined RSA investments and benefit payments economic and fiscal impacts in 2009 are \$9.3 billion in output, \$5.2 billion value-added, \$2.6 billion in worker earnings, 81,921 direct and indirect jobs, and \$254.9 million in taxes of which \$201.6 million is state taxes and \$53.3 million is local sales taxes. The 2010 impacts are \$9.5 billion in output, \$5.4 billion value-added, \$2.7 billion in wages and salaries, 84,883 jobs, and \$261.9 million in taxes (\$206.8 million state and \$55.1 million local sales taxes). For 2011 the combined impacts are \$9.5 billion in output, \$5.3 billion value-added, \$2.7 billion in earnings, 84,068 jobs, and \$258.6 million in taxes (\$204.3 million state and \$54.3 million local sales taxes).

- In each of the three years, the value-added impacts represent a 3.1 percent contribution to Alabama GDP and the jobs impacts are about 3.3 percent of total employment in the state; output impacts are roughly 5.5 percent of GDP.
- RSA contributes significantly to Alabama’s economic development through its (i) primary role of asset management and benefits provision, (ii) use of direct investments to facilitate industry recruitment and expansion, and (iii) promotion of tourism. Development of the Robert Trent Jones Golf Trail and resort and hotel properties are major RSA contributions to promoting tourism in the state. In addition, RSA provides annual contributions of at least \$30 million in TV ads, \$24 million in print ads, and some billboard ads to promote Alabama tourism.



Cambrian Ridge

Photo courtesy of The Retirement Systems of Alabama, licensed to The Robert Trent Jones Golf Trail and RSA.
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2009-2011 Economic Impacts of RSA on Alabama

Introduction

This report presents economic and fiscal impacts of The Retirement Systems of Alabama (RSA) in-state investments (both construction and operation) and benefit payments on the State of Alabama for 2009, 2010, and 2011. It updates previous RSA impact studies that we have conducted. RSA administers and invests assets in several funds to provide pension and healthcare benefits to its members and beneficiaries, both active and retired. Contributions from the state and other employers and members are invested in various fund assets in order to provide benefits. To achieve its goals, RSA invests directly in the state economy as well as elsewhere but also uses the return on assets to provide benefits regardless of where investments are made. The economic impacts focus on output, value-added, earnings, and employment. Output refers to gross sales and contains value-added, which is the contribution to gross domestic product (GDP) or the value of goods and services produced on a value-added basis. Earnings impacts are part of value-added impacts and are the wages and salaries of the workers acknowledged by the employment impact. Fiscal impacts are tax receipts derived from earnings impacts, but are conservative because at the local (county and municipality) level only sales taxes are considered; other local taxes (e.g., local property) are not.



Photo courtesy of The Retirement Systems of Alabama.

RSA manages several funds and provides pension benefits to retirees principally through three major trust/investment funds: Employees' Retirement System (ERS); Judicial Retirement Fund (JRF); and Teachers' Retirement System (TRS). RSA also provides healthcare benefits for public education employees and retirees through the Public Education Employees' Health Insurance Plan (PEEHIP). The State Employees' Insurance Board (SEIB) provides healthcare benefits to state and local government employees and retirees. Most healthcare benefit payments are made by PEEHIP and SEIB to providers and facilities.

Investment and spending by and on behalf of RSA and SEIB members inject large amounts of money into the state economy which in turn stimulates business activity and job creation in various

sectors of the Alabama economy. This spending has significant impacts on gross business sales, GDP, workers' earnings, and employment in Alabama and also generates taxes for the state and its local taxing jurisdictions. RSA investment in the state has advanced the state's economic development through activities (including loans) that help to attract or expand various industries and businesses, promotion of tourism, and major construction projects. Development of the Robert Trent Jones Golf Trail and resort and hotel properties are major RSA contributions to promoting tourism in the state. In addition, RSA provides annual contributions of at least \$30 million in TV ads, \$24 million in print ads, and some billboard ads to promote Alabama tourism. Table 1 shows a list of RSA investments in Alabama since the 1970s.



Highland Oaks

Photo courtesy of The Retirement Systems of Alabama, licensed to The Robert Trent Jones Golf Trail and RSA. ©2009 Michael Clemmer

Table 1. RSA Alabama Investments

- ACON Alabama Energy Partners
- ADEM Laboratory
- Alabama Cruise Terminal
- Alabama Office Buildings/Decks
 - Alabama Center for Commerce
 - Alabama Center for Postsecondary Education
 - Mobile Parking Garage
 - RSA BankTrust Building
 - RSA Battle House Tower
 - RSA Criminal Justice Center
 - RSA Dexter Avenue
 - RSA Headquarters
 - RSA Plaza
 - RSA Tower Complex
 - RSA Union
- Alabama Resort Properties
 - Marriot Shoals Hotel & Spa
 - Renaissance Birmingham Ross Bridge Golf Resort & Spa
 - Auburn Marriot Opelika Hotel & Conference Center at Grand National
 - Montgomery Marriot Prattville Hotel & Conference at Capitol Hill

Table 1. RSA Alabama Investments (continued)

Renaissance Montgomery Hotel & Spa at the Conference Center
Renaissance Mobile Riverview Plaza Hotel
The Battle House Renaissance Mobile Hotel & Spa
Grand Hotel Marriot Resort, Golf Club & Spa

Alabama River Chip Mill
Alabama River Group
Alabama River Recycling
Alabama State Bar
Bell Microproducts
CIBA-Geigy Chemical Company
Circle S Industries
Community Newspaper Holdings, Inc.
Danberry at Inverness
Daniel Senior Living
IDB Birmingham Delmonte
Dominion Senior Living – West Mobile
Drummond Company
Dynamite Nobel Chemical Company
Embassy Suites
The Explore Center, Inc.
Fairway Outdoor Advertising
FHAs/Military Housing
First Alabama Bancshares
Gordon Person State Office Building
GKN Aerospace
IPSCO Saskatchewan, Inc.
Kay Fries, Inc.
Kvaerner Oilfields Products
Merchants National Bank
Mercedes Benz U.S. International
National Alabama Corporation
National Village
Navistar Diesel of Alabama
Navistar Big Bore Diesels
Perdido Beach Hilton
PPG Industries, Inc.
Pt. Clear Partners, LLC
Raycom Media, Inc.
Robert Trent Jones Golf Trail
 Hampton Cove
 The Shoals
 Oxmoor Valley
 Ross Bridge
 Silver Lakes
 Capitol Hill



Ross Bridge



Oxmoor Valley

Photos courtesy of The Retirement Systems of Alabama, licensed to The Robert Trent Jones Golf Trail and RSA. ©2009 Michael Clemmer

Table 1. RSA Alabama Investments (continued)

Grand National
Highland Oaks
Cambrian Ridge
Magnolia Grove
Rohr
The Shoppes of Grand River
Signal International
IDB Southwire Medium Volt Cable Company
Springhill Medical Center
Sunbelt Golf Corporation
United Space Boosters IDB
US Steel
Walmart Distribution Center
Williamson Commerce Center
Wise Metals

Source: The Retirement Systems of Alabama.

Clearly, RSA investments in the Alabama economy have been through many different goods-producing and service-providing industries. Active RSA investments for the 2009-2011 period, both construction projects and operating concerns, are shown in Table 2 together with pertinent spending and operating data. The seven operating concerns employed more than 4,000 workers and spent more than \$1 billion in each year. The payroll data indicate that average annual per worker income exceeded \$35,000.



Photo by Samuel Addy, Center for Business and Economic Research, The University of Alabama.

Table 2. RSA Investments in Alabama 2009-2011

Construction Projects			
Danberry @ Inverness			
The Shoppes of Grand River			
RSA Dexter Avenue			
RSA BankTrust Building			
Alabama Center for Postsecondary Education			
	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total Construction Spending (Millions)	\$111.3	\$123.8	\$18.9
Operations			
PCH Hotels & Resorts			
Sunbelt Golf Corporation			
Wise Metals			
Magic Media			
GKN Aerospace Services Alabama			
Community Newspaper Holdings, Inc.			
Raycom Media			
	<u>2009</u>	<u>2010</u>	<u>2011</u>
Employment	4,161	4,268	4,332
Payroll (Millions)	\$147.7	\$150.9	\$153.3
Nonpayroll Expenses (Millions)	\$896.5	\$888.1	\$898.4
Total Expenses (Millions)	\$1,044.2	\$1,039.1	\$1,051.7

Note: Rounding effects may be present.

Source: The Retirement Systems of Alabama; Dun & Bradstreet; and Center for Business and Economic Research, The University of Alabama.

Table 3 shows that assets under management by RSA exceeded \$27 billion in the three years. TRS and ERS assets make up the largest part of total assets, about 87 percent in 2009 and 2010 and 85 percent in 2011. Both employees and employers contribute to the funds holding these assets. High returns on the assets enable employer contributions to be low and vice versa. Proceeds from managing these assets go to the provision of pension and healthcare benefits. Table 4 shows benefit payments for the three years and the portions spent in the state. The amounts spent in Alabama are based on historical shares of total benefit payments; 94.2 percent for pensions, 99.4 percent for SEIB, and 90.7 percent for PEEHIP. Only the amounts spent in Alabama are used to determine the economic impacts. Pension benefits by fund are also shown. The pension and healthcare benefits spending dwarf the investment spending shown in Table 2. Pension benefits go to retirees, but PEEHIP and SEIB payments go to facilities and providers. Demographic trends indicate that pension and healthcare benefits are likely to grow over the next two decades and so will their associated economic impacts on the state. This means that RSA activities will also become increasingly more valuable to the state.

Table 3. Assets Under Management by RSA

<u>(Millions)</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
TRS	\$15,982	\$16,724	\$16,014
ERS	\$7,612	\$8,028	\$7,793
Other	\$3,565	\$3,802	\$4,062
Total	\$27,159	\$28,555	\$27,870

Note: Assets are as of September 30th of each year and rounding effects may be present.

Source: The Retirement Systems of Alabama.

Table 4. RSA Benefit Payments

Benefits Payments			
<u>(Millions)</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>
RSA Pension	\$2,232.0	\$2,318.0	\$2,483.0
SEIB	\$455.4	\$442.0	\$430.1
PEEHIP	\$1,130.8	\$1,193.4	\$1,123.2
Total	\$3,818.2	\$3,953.4	\$4,036.2
Spent in Alabama			
RSA Pension	\$2,103.1	\$2,184.1	\$2,339.6
SEIB	\$452.5	\$439.2	\$427.3
PEEHIP	\$1,025.4	\$1,082.2	\$1,018.5
Total in Alabama	\$3,581.0	\$3,705.5	\$3,785.4
Pension Benefits Breakdown			
TRS	\$1,512.3	\$1,567.8	\$1,673.9
JRF	\$23.8	\$24.5	\$26.4
ERS	\$695.4	\$725.7	\$783.0
Total	\$2,231.5	\$2,318.0	\$2,483.3

Note: Rounding effects may be present.

Source: The Retirement Systems of Alabama; State Employees' Insurance Board; and Center for Business and Economic Research, The University of Alabama.

RSA investments and payments for pension and healthcare benefits provide jobs and stimulate business activity in various sectors of the Alabama economy. The large sums injected into the state economy have significant economic impacts that also generate taxes for the state and local (county and city) taxing jurisdictions. Studies on similar impacts in other states (e.g., California, Texas, Illinois, and Minnesota) indicate that activities related to retirement systems are important to the economic vitality of those states. RSA contributes significantly to Alabama's economic development through its (i) primary role of asset management and benefits provision, (ii) facilitation of industry recruitment and expansion with direct investments, and (iii) promotion of tourism.

Economic and Fiscal Impacts

To determine the economic and fiscal impacts presented in this report, we use an industry-based approach for two main reasons. The first reason is to ensure comprehensive coverage of impacts. Secondly, our approach focuses on spending by and related to retirees and members and on investment activities for methodological consistency since impact methods are expenditure-based. A model that uses multipliers from the Regional Input-Output Modeling Software (RIMS II), developed by the U.S. Department of Commerce's Bureau of Economic Analysis, is used to estimate the impacts. Only in-state spending and RIMS II multipliers for the appropriate industries were used to determine impacts. The input-output methodology used in the estimation of these impacts is detailed in the Appendix.



As mentioned previously, the economic impacts focus on output, value-added, earnings, and employment. The earnings impact generates significant tax revenues for both state and local governments and so the fiscal impacts are derived from the earnings impacts. Not all of the earnings impact is taxable, spending on sales taxable items constitute 42.4 percent of total household earnings, and state taxable income (net income) is about 66 percent of earnings. The state income tax rate is 5.0 percent on net income.¹ Sales tax rates used are 4.0 percent for the state and 5.0 percent for local (i.e., combined county and city) jurisdictions statewide. Combined county and city sales tax rates vary from 3.0 to 7.0 percent among Alabama counties, but are most frequently at 5.0 percent. For state taxes, the income and sales tax share of total receipts is used to estimate other state taxes. These shares were 64.3 percent, 64.8 percent, and 64.6 percent for 2009, 2010, and 2011, respectively. It is important to note that the fiscal impacts are conservative because at the local level only sales taxes are considered; other local taxes (e.g., local property taxes) are not.

Construction Activity Impacts

The construction projects identified in Table 2 involved spending of \$111.3 million in 2009, \$123.8 million in 2010, and \$18.9 million in 2011. Final demand RIMS II construction sector multipliers

¹ The first \$500 and the next \$2,500 of taxable income are taxed at 2 percent and 4 percent, respectively, for single persons, head of family, and married persons filing separately. For married persons filing joint returns the first \$1,000 and the next \$5,000 are taxed at 2 percent and 4 percent, respectively. Excess net income is taxed at the 5 percent rate. There is a sliding scale for the standard deduction that is based on filing status and adjusted gross income.

were applied to these amounts to determine the economic and fiscal impacts presented in Table 5. The \$111.3 million in RSA-related construction spending in 2009 had a statewide impact of \$253 million in economic activity or output, which is akin to gross sales across all industries. This output impact includes a value-added impact or contribution to state GDP of \$133.8 million and accounts for 2,422 direct and indirect jobs with aggregate earnings to Alabama households of \$80.9 million. The earnings impact generated \$6.2 million in state taxes (\$2.7 million income, \$1.3 million sales, and \$2.2 million other) and \$1.6 million in local (county and municipality) sales tax for a total of \$7.8 million in state taxes and local sales taxes.

Table 5. Economic and Fiscal Impacts of RSA-related Construction

Construction Spending	<u>2009</u>	<u>2010</u>	<u>2011</u>
Total Construction Spending (Millions)	\$111.3	\$123.8	\$18.9
Economic Impacts on Alabama			
(Millions, unless otherwise stated)	<u>2009</u>	<u>2010</u>	<u>2011</u>
Gross Business Sales or Output Impact	\$253.0	\$281.4	\$43.0
Value-added or GDP Impact	\$133.8	\$148.8	\$22.7
Earnings Impact	\$80.9	\$90.0	\$13.7
Direct Earnings (Wages and Salaries)	\$41.7	\$46.4	\$7.1
Indirect Earnings (Wages and Salaries)	\$39.2	\$43.7	\$6.7
Employment Impact (Jobs)	2,422	2,694	411
Direct Employment (Jobs)	1,244	1,384	211
Indirect Employment (Jobs)	1,178	1,311	200
Fiscal Impacts			
State Income Tax	\$2.7	\$3.0	\$0.5
State Sales Tax	\$1.3	\$1.5	\$0.2
State Other Taxes	\$2.2	\$2.4	\$0.4
State Tax Total	\$6.2	\$6.8	\$1.0
Local (County and City) Sales Tax	\$1.6	\$1.8	\$0.3
Total State Tax and Local Sales Tax Receipts	\$7.8	\$8.6	\$1.3

Note: Rounding effects may be present.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; RSA; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

The 2010 RSA-related construction activity economic and fiscal impacts are \$281.4 million in output, \$148.8 million value-added, \$90 million in worker earnings, and 2,694 direct and indirect jobs. The \$90 million earnings impact generated \$8.6 million in taxes (\$6.8 million state and \$1.8 million local sales taxes). For 2011 the impacts are \$43 million in output, \$22.7 million value-added, \$13.7 million in worker earnings, 411 jobs, and \$1.3 million in taxes (\$1.0 million state and \$0.3 million local sales taxes).

Alabama Investment Operations Impacts

The RSA investment operations identified in Table 2 were in different industries; accommodation (hotels and resorts), recreational sports, manufacturing (aircraft parts and primary/fabricated metals production), advertising, newspaper publishing, and radio and TV broadcasting. These industries' final demand output and value-added multipliers and direct effect earnings and employment multipliers were applied to determine the impacts shown in Table 6.

Table 6. Economic and Fiscal Impacts of RSA Alabama Investment Operations

Input Parameters	<u>2009</u>	<u>2010</u>	<u>2011</u>
Employment Total	4,161	4,268	4,332
Payroll (Millions)	\$147.7	\$150.9	\$153.3
Nonpayroll Expenses (Millions)	\$896.5	\$888.1	\$898.4
Total Expenses (Millions)	\$1,044.2	\$1,039.1	\$1,051.7
Economic Impacts on Alabama			
(Millions, unless otherwise stated)	<u>2009</u>	<u>2010</u>	<u>2011</u>
Gross Business Sales or Output Impact	\$2,176.3	\$2,164.5	\$2,187.4
Value-added or GDP Impact	\$970.3	\$966.9	\$981.0
Earnings Impact	\$311.6	\$317.6	\$321.9
Direct Earnings (Wages and Salaries)	\$147.7	\$150.9	\$153.3
Indirect Earnings (Wages and Salaries)	\$163.9	\$166.7	\$168.6
Employment Impact (Jobs)	8,374	8,598	8,691
Direct employment (Jobs)	4,161	4,268	4,332
Indirect employment (Jobs)	4,213	4,330	4,359
Fiscal Impacts			
State Income Tax	\$10.2	\$10.4	\$10.6
State Sales Tax	\$5.0	\$5.1	\$5.2
State Other Taxes	\$8.5	\$8.5	\$8.6
State Tax Total	\$23.8	\$24.0	\$24.4
Local (County and City) Sales Tax	\$6.3	\$6.4	\$6.5
Total State Tax and Local Sales Tax Receipts	\$30.0	\$30.4	\$30.9

Note: Rounding effects may be present.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; RSA; Dun & Bradstreet; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

The RSA Alabama investment operations economic and fiscal impacts in 2009 are \$2.2 billion in output, \$970.3 million value-added, \$311.6 million in worker earnings, 8,374 jobs, and \$30 million in taxes (\$23.8 million state and \$6.3 million local sales taxes). For 2010 the impacts are \$2.2 billion in output, \$966.9 million value-added, \$317.6 million in worker earnings, 8,598 jobs, and \$30.4 million in taxes (\$24 million state and \$6.4 million local sales taxes). The 2011 Alabama investment

operations impacts are \$2.2 billion in output, \$981 million value-added, \$321.9 million in worker earnings, 8,691 jobs, and \$30.9 million in taxes of which \$24.4 million is state taxes and \$6.5 million is local sales taxes. The similarity in the three years' impacts may be reflecting a combination of the economic recession and slow recovery and the use of different sources of data for the input parameters.

Impacts of Benefit Payments

The benefit payment amounts in Table 4 that were spent in Alabama were allocated as spending in appropriate industries to determine the economic and fiscal impacts of benefit payments (Table 7). Pension benefit payments were distributed by industry using the Consumer Expenditures Survey (CES) produced by the United States Bureau of Labor Statistics. Specifically, CES average annual expenditure distribution for persons of age 65 and over and residing in the South region for 2009-2010 was used; this is the most recently available consumption expenditure data. Healthcare benefits payments from both PEEHIP and SEIB to Alabama providers and facilities were also allocated to industries using shares from a previous study of RSA, PEEHIP, and SEIB benefit payments. In that study amounts for pharmacy and drugs were allocated to retail trade, insurance carriers and related activities got HMO funds, hospitals and facility spending went to the hospitals and nursing and residential care industry, and all remaining funds were given to the professional, business, and technical services industry because physicians, dentists, laboratory technicians, and other health professionals belong to this industry.



The separate industry distribution and allocation of pension and healthcare benefits is necessary because economic and fiscal impacts are affected by differences in spending behavior of retirees and providers and facilities. Industry specific multipliers were used to estimate the economic impacts on output, value-added, earnings, employment, and the earnings-based associated fiscal impacts. The economic and fiscal impacts are presented in Table 8 by benefit type and the combined pension and healthcare benefit payments impacts are shown in Table 9. Although the amounts in Table 7 are by industry, the impacts in Tables 8 and 9 include indirect effects across all sectors of the Alabama economy.

Table 7. 2009-2011 Benefits Expenditure Distribution

Pension Benefits (Millions)	2009	2010	2011
Retail trade	\$842.7	\$874.8	\$937.1
Insurance carriers and related activities	\$315.0	\$327.0	\$350.3
Other services	\$212.7	\$220.8	\$236.5
Utilities	\$210.8	\$218.8	\$234.4
Food services and drinking places	\$94.7	\$98.3	\$105.3
Securities, commodity contracts, investments	\$89.5	\$92.9	\$99.5
Federal Reserve Banks, credit intermediation, and related services	\$80.4	\$83.5	\$89.4
Real estate	\$68.3	\$70.9	\$76.0
Households	\$45.7	\$47.4	\$50.8
Hospitals and nursing and residential care	\$40.8	\$42.4	\$45.4
Amusements, gambling and recreation	\$21.3	\$22.1	\$23.6
Accommodation	\$28.3	\$29.4	\$31.5
Construction	\$15.2	\$15.8	\$16.9
Transit and ground passenger transportation	\$16.0	\$16.6	\$17.8
Educational services	\$8.9	\$9.2	\$9.9
Rental and leasing services	\$13.8	\$14.3	\$15.3
Total pension benefits	\$2,104.0	\$2,184.1	\$2,339.6
Healthcare Benefits, PEEHIP			
Retail trade (Pharmacies)	\$274.7	\$289.9	\$272.8
Hospitals and nursing and residential care	\$322.6	\$340.4	\$320.4
Insurance carriers and related activities	\$30.5	\$32.2	\$30.3
Ambulatory health services	\$397.7	\$419.7	\$395.0
Total PEEHIP benefits	\$1,025.4	\$1,082.2	\$1,018.5
Healthcare Benefits, SEIB			
Retail trade (Pharmacies)	\$77.2	\$74.9	\$72.9
Hospitals and nursing and residential care	\$76.9	\$74.6	\$72.6
Ambulatory health services	\$298.5	\$289.7	\$281.9
Total	\$452.5	\$439.2	\$427.3

Note: Rounding effects may be present.

Source: U.S. Department of Labor, Bureau of Labor Statistics; RSA; SEIB; and Center for Business and Economic Research, The University of Alabama.

Table 8. RSA, PEEHIP, and SEIB Pension and Healthcare Benefits Payment Impacts

RSA Pension Benefits	2009	2010	2011
(Millions, unless otherwise stated)			
Gross Business Sales or Output Impact	\$3,921.4	\$4,070.7	\$4,360.5
Value-added or GDP Impact	\$2,320.4	\$2,408.7	\$2,580.2
Earnings Impact	\$1,166.4	\$1,210.8	\$1,297.0
Employment Impact (Jobs)	40,171	41,700	44,668
State Income Tax	\$38.3	\$39.8	\$42.6
State Sales Tax	\$18.8	\$19.5	\$20.9
State Other Taxes	\$31.8	\$32.2	\$34.8
State Tax Total	\$88.9	\$91.5	\$98.4
Local (County and City) Sales Tax	\$23.5	\$24.4	\$26.1
Total State Tax and Local Sales Tax Receipts	\$112.4	\$115.9	\$124.5
PEEHIP			
(Millions, unless otherwise stated)			
Gross Business Sales or Output Impact	\$2,029.3	\$2,141.7	\$2,015.6
Value-added or GDP Impact	\$1,238.2	\$1,306.8	\$1,229.8
Earnings Impact	\$740.2	\$781.2	\$735.2
Employment Impact (Jobs)	21,789	22,996	21,642
State Income Tax	\$24.3	\$25.7	\$24.2
State Sales Tax	\$11.9	\$12.6	\$11.8
State Other Taxes	\$20.2	\$20.8	\$19.7
State Tax Total	\$56.4	\$59.1	\$55.7
Local (County and City) Sales Tax	\$14.9	\$15.7	\$14.8
Total State Tax and Local Sales Tax Receipts	\$71.3	\$74.8	\$70.6
SEIB			
(Millions, unless otherwise stated)			
Gross Business Sales or Output Impact	\$907.3	\$880.6	\$856.8
Value-added or GDP Impact	\$557.0	\$540.6	\$526.0
Earnings Impact	\$345.8	\$335.6	\$326.6
Employment Impact (Jobs)	9,165	8,896	8,655
State Income Tax	\$11.4	\$11.0	\$10.7
State Sales Tax	\$5.6	\$5.4	\$5.3
State Other Taxes	\$9.4	\$8.9	\$8.8
State Tax Total	\$26.4	\$25.4	\$24.8
Local (County and City) Sales Tax	\$7.0	\$6.8	\$6.6
Total State Tax and Local Sales Tax Receipts	\$33.3	\$32.1	\$31.3

Note: Rounding effects may be present.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; RSA; SEIB; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

Table 9. Combined Pension and Healthcare Benefits Payment Impacts

(Millions, unless otherwise stated)	2009	2010	2011
Gross Business Sales or Output Impact	\$6,858.0	\$7,093.0	\$7,232.9
Value-added or GDP Impact	\$4,115.5	\$4,256.0	\$4,336.0
Earnings Impact	\$2,252.4	\$2,327.6	\$2,358.8
Employment Impact (Jobs)	71,125	73,591	74,965
Statewide Fiscal Impacts			
State Income Tax	\$74.1	\$76.5	\$77.5
State Sales Tax	\$36.3	\$37.5	\$38.0
State Other Taxes	\$61.4	\$61.9	\$63.3
State Tax Total	\$171.7	\$176.0	\$178.9
Local (County and City) Sales Tax	\$45.4	\$46.9	\$47.5
Total State Tax and Local Sales Tax Receipts	\$217.1	\$222.8	\$226.4

Note: Rounding effects may be present.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; RSA; SEIB; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

The combined pension and healthcare benefits economic and fiscal impacts in 2009 are \$6.9 billion in output, \$4.1 billion value-added, \$2.3 billion in worker earnings, 71,125 jobs, and \$217.1 million in taxes (\$171.7 million state and \$45.4 million local sales taxes). For 2010 the impacts are \$7.1 billion in output, \$4.3 billion value-added, \$2.3 billion in worker earnings, 73,591 jobs, and \$222.8 million in taxes (\$176 million state and \$46.9 million local sales taxes). The 2011 benefits payments impacts are \$7.2 billion in output, \$4.3 billion value-added, \$2.4 billion in worker earnings, 74,965 jobs, and \$226.4 million in taxes of which \$178.9 million is state taxes and \$47.5 million is local sales taxes.



Photo courtesy of The Retirement Systems of Alabama.

Conclusions

This report presents the economic and fiscal impacts of RSA investments and benefit payments on the Alabama economy in the years 2009, 2010, and 2011. The impacts are presented separately for RSA investment construction activity, RSA investment operations activity, and pension and healthcare benefit payments. The last component is further broken down into impacts of RSA pensions, PEEHIP healthcare benefits, and SEIB healthcare benefits. Table 10 shows the combined economic and fiscal impacts.

Table 10. Combined Pension and Healthcare Benefits Payment Impacts

Economic Impacts	<u>2009</u>	<u>2010</u>	<u>2011</u>
(Millions, unless otherwise stated)			
Gross Business Sales or Output Impact	\$9,287.3	\$9,538.9	\$9,463.3
Value-added or GDP Impact	\$5,219.6	\$5,371.8	\$5,339.7
Earnings Impact	\$2,645.0	\$2,735.3	\$2,694.4
Employment Impact (Jobs)	81,921	84,883	84,068
Fiscal Impacts			
State Income Tax	\$87.0	\$89.9	\$88.6
State Sales Tax	\$42.6	\$44.1	\$43.4
State Other Taxes	\$72.1	\$72.8	\$72.3
State Tax Total	\$201.6	\$206.8	\$204.3
Local (County and City) Sales Tax	\$53.3	\$55.1	\$54.3
Total State Tax and Local Sales Tax Receipts	\$254.9	\$261.9	\$258.6

Note: Rounding effects may be present.

Source: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; RSA; SEIB; Alabama Department of Revenue; and Center for Business and Economic Research, The University of Alabama.

The combined impacts in 2009 are \$9.3 billion in output, \$5.2 billion value-added, \$2.6 billion in worker earnings, 81,921 direct and indirect jobs, and \$254.9 million in taxes of which \$201.6 million is state taxes and \$53.3 million is local sales taxes. For 2010 the impacts are \$9.5 billion in output, \$5.4 billion value-added, \$2.7 billion in wages and salaries, 84,883 jobs, and \$261.9 million in taxes (\$206.8 million state and \$55.1 million local sales taxes). The 2011 combined impacts are \$9.5 billion in output, \$5.3 billion value-added, \$2.7 billion in worker earnings, 84,068 jobs, and \$258.6 million in taxes (\$204.3 million state and \$54.3 million local sales taxes). It is important to note that the fiscal impacts are conservative because at the local level only sales taxes are considered; other local taxes (e.g., local property taxes) are not. In each of those years, the value-added impacts represent a 3.1 percent contribution to Alabama GDP and the jobs impacts are about 3.3 percent of total employment in the state; output impacts are roughly 5.5 percent of GDP.

APPENDIX

Methodology - Economic Impact Analysis

Economic impact analysis measures the effects of a specific economic activity or event on a specified geographic area. Examples include the economic impact on a state or county of a proposed industrial plant, an existing industry, or closing of a military installation. In some cases, federal laws, as well as state and local regulations, require economic impact studies prior to the implementation of a particular policy (relocation of an economic activity, changes in zoning ordinance, etc.). No matter what the justification, impact studies are designed to provide information for instituting policies to facilitate positive economic impacts and/or mitigate potential negative impacts. Economic impact analysis is therefore an important tool that can enhance the quality of decisions made, as well as the decision making process in both public and private sectors.

The analysis typically focuses on one or more of the major economic indicators: output or gross sales, value-added (which is akin to gross domestic product or GDP, the total value of goods and services within the area on a value-added basis), employment, and income (wages and salaries). The purpose of an impact study usually determines which socioeconomic variable(s) should be monitored. In this study the primary focus is on all four major indicators and the consequent changes in state tax revenue and local (combined county and city) sales tax revenues resulting from the RSA investments and pension and healthcare benefits.

Economic impacts comprise direct and indirect types. Direct impacts are those that are most obvious and include the wages and salaries of the employees who work directly for an organization or industry, as well as all other expenditures of the firm or an industry, including taxes and distributed profits. Indirect economic impacts, often referred to as the “ripple” or “multiplier” effects, occur because of the additional demands arising from new income and expenditures for inputs and products related to the activity under study. New income creates demand for consumer products and services and their associated indirect impacts are often called induced impacts. Indirect and induced impacts may spark new demand for the output of the firm or industry under study. For example, RSA and SEIB create indirect impacts on wholesale and retail industries through payments made to or on behalf of benefit recipients. These industries then make use of public services that are manned by government workers who are RSA members. The total economic impacts of the organization being studied are the combined direct, indirect, and induced impacts. The ratio of the total economic impact to the direct impact is the multiplier that can be used to summarize the economic effects of the organization on the region(s) or area(s) of focus, the State of Alabama in this study.

Economic relationships do not obey strict geographic boundaries; workers and their incomes and firms' purchases flow across these boundaries enabled by transportation and communication. Thus a portion of the indirect effects of purchases or expenditures may occur beyond the boundaries of the specified region. Such occurrences are called *leakages*, as opposed to *linkages* (supplier-purchaser relationships) within the region. In general a small geographic area will have a small *absolute* economic impact due to a high likelihood of leakage. A large region will have a larger absolute economic impact, but a smaller *relative* economic impact of an individual firm or industry on that area. The closure of one plant within a state, for example, may have only a small relative impact even if the plant employs thousands of workers; the absolute impact could be very large. The important point is that the effect or size of the economic impact is influenced by the size of the study area. If the area is too broadly defined, the relative impact will be small. If narrowly defined, the relative impact will be large.

Determining the Multiplier

Several methodological approaches are used in estimating economic impacts. These include the construction of econometric, economic base, computable general equilibrium (CGE), and input-output (I-O) models. Econometric and CGE models can be very costly and time-consuming to build. Economic base models require a very detailed set of information that is sometimes not available. The other methodological approaches generate slightly smaller multipliers than I-O models because of assumptions on factors such as input substitution and optimization behavior by economic agents.

The I-O modeling framework is used in this study. The technique generates multipliers for the economic activity of interest by focusing on economic interactions among all industries and all other economic transactions in the specified region. Interindustry relationships exist in both a backward direction (suppliers and other upstream linkages and leakages), and a forward direction (distributors, retailers, customers, and other downstream linkages and leakages). The number and strength of these backward and forward linkages and leakages determine the multiplier effects of the industry. In general, products and services that require a small number of inputs and little additional processing (little value addition) will have smaller multiplier effects than complex ones that require lots of inputs and extensive processing.

The four main types of multipliers—output or gross sales, value-added or GDP contribution, income or earnings, and employment—are defined as follows. Output multipliers represent the total dollar change in all industries that results from a \$1 change in output delivered to final demand (final consumption) by the industry under study. All the benefit payments and investments in this study go to final demand. Value-added multipliers represent the total dollar change in all industries' value

addition that results from a \$1 change in output delivered to final demand (final consumption) by the industry under study. Earnings multipliers represent the total dollar change in earnings of households employed by all industries for each dollar of payroll expenditure or each dollar of output delivered to final demand by the industry whose economic impact is being estimated. Employment multipliers represent the total change in the number of jobs in all industries for each direct job or for each million dollars of output delivered to final demand by the industry whose economic impact is being estimated.

The nature of the product and technology largely determine the degree of interindustry linkages and leakages (and thus the overall impact), and the specific impact on a region depends upon the degree to which these interindustry relationships are localized. Technology determines inputs and economics determines the geographic source of supply. Inputs purchased outside the economic impact study area constitute a leakage of potential impact. Leakage represents activities of local firms that have no economic impact on the local economy; it provides opportunities for “localizing” such impact. Identifying leakage can provide valuable planning information to local economic development authorities for commercial or industrial development. An activity’s maximum impact on a specific area is obtained when all interindustry linkages occur within the area. A systemwide view is required because different firms have different linkages. The I-O technique permits the incorporation of such systemwide perspectives.

To estimate the economic impact of RSA investments and benefit payments on the Alabama economy, linkages between that spending and the rest of the economy must be traced. This task is facilitated by the Regional Input-Output Modeling System (RIMS II), an input-output model developed and maintained by the U.S. Department of Commerce’s Bureau of Economic Analysis. The model is available for every states, metro areas, and counties in the nation, and also for regions for which enough data are available to generate multipliers. This study uses RIMS II for the state of Alabama.

The RIMS II I-O model consists of nearly 500 industries. I-O models are based on a table of transaction balances, which ensures economy-wide consistency. Total payments equal total receipts for each sector or industry. Aggregate final demand (GNP) equals aggregate value-added (National Income). Data on each industry reflects the value of inputs used per dollar of output in the production of that industry’s output. For example, data for the motor vehicle, body, trailer, and parts industry show the value of each input per dollar of product produced. Since the rows (outputs) are produced by specific industries, they are also columns (inputs). Demand for a particular input will cause supply from the industry that produces it. This then creates demand for the inputs that are used to produce the particular product, and so on; the round-by-round impacts converge. The I-O model captures the total effect of these rounds of spending as the multiplier

effect. RIMS II multipliers for an economy account for all linkages within and leakages from that economy.

Multipliers are determined mathematically from I-O tables that are constructed from observed and reported data for the economic area of interest. The economy is divided into a number of producing industries or sectors that sell and purchase goods and services to and from each other (*interindustry* or *intersectoral* flows). These interindustry flows are key data. Sector goods and services are purchased by domestic consumers (households), international customers (exports), governments (federal, state, and local), and for private investment purposes. These external to production purchases are for direct use and termed *final demand*. Assume an economy with n sectors and let X_i represent total output for sector i , Y_i represent final demand for sector i products, z_{ij} represent interindustry flows. Then for each sector we can write

$$X_i = \sum_{j=1}^n z_{ij} + Y_i \quad (1)$$

If we let a_{ij} represent the I-O technical coefficients where $a_{ij} = z_{ij} / X_j$ so that sectors use inputs in fixed proportions (the constant returns to scale Leontief production function) then the above equation becomes

$$X_i = \sum_{j=1}^n a_{ij} X_j + Y_i \quad (2)$$

The standard formulation of the basic I-O model and its application, in matrix notation is:

$$\text{Transactions balance: } X = AX + Y \quad (3)$$

$$\text{Solving for X: } X = (I - A)^{-1}Y \quad (4)$$

$$\text{For a change in Y: } \Delta X = (I - A)^{-1}\Delta Y \quad (5)$$

where X is the gross output column vector, A is the matrix of fixed I-O coefficients, Y is the final demand column vector, and I is the identity matrix. With this basic model, the resulting output is computed given changes in final demand levels (consumption, investment, government, or exports). The Leontief inverse, $(I - A)^{-1}$, is the source of multipliers for determining impacts in the I-O methodology. The elements of the matrix are really very useful and important. Each captures in a single number an entire series of direct and indirect effects. Gross output requirements are translatable into employment coefficients in a diagonal matrix that is used together with the Leontief inverse to generate employment impacts. Similar manipulations generate income or earnings multipliers.