



THE ECONOMIC AND FISCAL IMPACTS

of the

AFL-CIO Housing Investment Trust's Construction Jobs Initiative



Prepared for the AFL-CIO
Housing Investment Trust by
Pinnacle Economics

Alec Josephson

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Section I **Executive Summary**

Pinnacle Economics (the project team) analyzed 67 projects invested in by the AFL-CIO Housing Investment Trust (HIT) from its Construction Jobs Initiative (CJI), 2009 through the second quarter of 2014.¹ The HIT seeks to invest in projects that provide competitive returns and as a secondary benefit, strengthen communities, provide work for a variety of industries, and create jobs for union members and for pension plan investors.

This study estimates the economic and fiscal impacts associated with HIT investments in new construction projects and the rehabilitation of existing projects. Construction projects generate economic benefits for the communities in which they are located. Expenditures on skilled union construction labor; special trade contractors; and architectural, engineering and pre-design services create jobs and lead to additional economic impacts for workers and business owners in other sectors of the economy.

Although the direct impacts associated with construction spending occur over a specific time period, additional economic benefits continue to ripple through the economy after the construction project has been completed. The economic impacts include the direct, indirect, and induced effects on local economies as measured by changes in economic activity (output or sales), personal income, jobs and hours worked. In addition, this study provides estimates of the fiscal impacts from HIT investments as measured by changes in tax and fee revenues for state and local jurisdictions, and the federal government.

Total Economic and Fiscal Impacts of the Construction Jobs Initiative

Overall, HIT has invested approximately \$1.8 billion, in 2014 dollars (\$1.7 billion in nominal dollars), throughout the United States since the Great Recession. The direct economic impacts attributed to HIT investment spending are significant and consist of:

- Hard cost investments of \$3.38 billion that generated 20,272 construction jobs totaling 40.9 million hours of work. These construction workers received \$1.36 billion in wages and benefits. This construction activity generated \$111.2 million in tax and fee revenues for state and local governments.
- Soft cost investments of \$321.9 million that generated 2,371 jobs for technical and professional service sector employees that resulted in the payment of \$192.2 million in wages and benefits. Soft costs expenditures generated \$10.2 million in tax and fee revenues for state and local governments.

Also, HIT investment spending has a multiplier effect on communities. From the beginning of the initiative, the total economic impacts attributed to HIT's investment spending amount to:

- \$6.75 billion in economic activity (output or sales)

¹ These include projects receiving tax credits from HIT subsidiary Building America

- 42,974 jobs with 82.6 million hours of work
- \$2.71 billion in personal income, including health care insurance, retirement, and other benefits
- \$298.6 million in tax and fee revenues for state and local governments

Responsible Fixed Income Investing Economic and Fiscal Impacts

The AFL-CIO Housing Investment Trust is one of the earliest and most successful practitioners of socially responsible, economically targeted investing, with a nearly 50-year track record that demonstrates the added value derived from union-friendly investments. The investment objective of the HIT is to provide competitive returns for its investors and to promote the collateral objectives of constructing affordable housing and generating employment for union members in the construction trades and related industries.

The HIT's union labor policy is designed to achieve that employment objective. The labor policy requires all on-site construction work to be performed 100% union. Any construction or rehabilitation projects financed by the HIT must use contractors that have collective bargaining agreements with unions from the building and construction trades. No project is financed until the local building and construction trades council (BCTC) has concurred with plans for achieving the labor policies for the project. Moreover, every borrower agrees in writing to the HIT's labor policies, assuring that the developer and general contractor or construction manager (GC/CM) will adhere to the union requirement.

The HIT's full-time labor relations staff works with HIT investment staff as well as with the local BCTC, GC/CM, and developers prior to an investment to assure that the labor policy will be met on any project under consideration for investment. The labor relations staff is available to help the BCTC and GC/CM identify signatory subcontractors. Once a project is underway, the labor relations staff continues to monitor the project and works with the local BCTC to help assure that construction proceeds timely and harmoniously.

Section II: **Methodology**

Introduction

The objective of this study is to calculate economic and fiscal impacts of HIT investments made since the peak of the jobs crisis brought on by the Great Recession. The HIT established its Construction Jobs Initiative with support from AFL-CIO leadership in 2009 as a response to the worst unemployment in a generation. Workers' pension capital invested through the HIT's Construction Jobs Initiative has put thousands of union members back to work on projects that are building affordable housing and promoting economic recovery. This section of the report contains information on the methodology used to measure economic and fiscal impacts.

Methodology

Economic impact analysis provides a framework for analyzing how some activity—such as the entry or exit of an industry, changes in government policies, or a business expansion project—affects regional economic activity. The most widely used modeling framework for economic impact analysis is known as input-output modeling.² Input-output models are mathematical representations of an economy and how different parts (or sectors) are linked to one another.

Input-output models generally are not available for state and regional economies. As a result, special data techniques have been developed to estimate the necessary empirical relationships from a combination of national technological relationships and county-level measures of economic activity. This non-survey approach means that input-output models can be economically constructed using commercially available modeling software that relies on secondary source data collected by government agencies.

The IMPLAN Model

The most commonly used input-output modeling software is called IMPLAN (for IMPact Analysis for PLANning).³ This is the modeling software that the project team used in this analysis. In simple terms, the IMPLAN model works by tracing how and where money spent on HIT investments circulates through the economy.

² Input-output analysis was first put to practical use by Wassily Leontief in the late 1930's. While at Harvard, Leontief used his input-output system to construct an empirical model of the United States economy. This research gave rise to his 1941 classic, "Structure of American Industry, 1919-1929." For his research, Leontief was awarded the Nobel Prize in Economics in 1973.

³ IMPLAN was initially developed as part of a joint effort by the USDA Forest Service, the Federal Emergency Management Agency, and the USDI Bureau of Land Management. IMPLAN is currently licensed and distributed by Minnesota IMPLAN Group, Inc., (MIG).

There are three types of impacts; each is discussed below within the context of this analysis.

- **Direct impacts** represent the output, jobs, and wages generated as a result of HIT spending on the construction of new buildings or improvements to existing structures. Specifically, in this analysis, the services provided by construction contractors (hard costs), and architects and engineers (soft costs) necessary to construct or improve a building generate the direct impacts.
- **Indirect impacts** occur as businesses that are directly impacted by HIT spending buy from other businesses. The construction contractor, for example, may purchase tools or lease construction equipment. The tool supplier will, in turn, purchase utilities, accounting and landscaping services. These purchases of goods and services by businesses from other businesses indirectly generate sales, jobs, and income for others.
- **Induced impacts** result from the increased income and purchasing power of households who are either directly or indirectly affected by HIT spending. Construction workers, for instance, will take their families to dinner or purchase healthcare services for their children. Employees at the tool supply business will spend their income in much the same way. This spending induces sales, jobs, and income for workers and businesses in other sectors of the economy.

Multipliers

Economic impact multipliers allow researchers to follow the initial change in economic activity as it “ripples” through each industry sector. The IMPLAN model produces multipliers that are specific to the economy being studied. In addition, the IMPLAN model provides different types of multipliers for each measure of economic impacts. Impacts can be in terms of direct and indirect effects (commonly known as Type I multipliers), or in terms of direct, indirect, and induced effects (Type II, Type III, and Type SAM multipliers).⁴

Report Tables

The economic impacts measured in this analysis will be reported in tables that show the direct effects (hard and soft costs), as well as the indirect and induced effects. Within these tables are five measures of economic impact attributed to HIT investments, including: total output, personal income, employment, hours worked, and tax and fee revenues for state and local governments.

All economic and fiscal impacts are temporary in nature and occur as project spending unfolds. The five impact measures are:

- **Output** represents the total value of production and is approximately equal to sales plus additions (or subtractions) to inventories.

⁴ A Type I multiplier is used to evaluate the linkages among backward linked industries, i.e., those that supply other industries with goods and services. A Type I multiplier is useful to isolate the indirect impacts. All other multipliers include the indirect impacts, but then add the impacts from additional consumption spending.

- **Personal Income** consists of the wages and benefits to workers, plus the income (sometimes called small business income) earned by self-employed workers and the working owners of small businesses.
- **Employment** represents job impacts reported as full-time equivalents. Importantly, given the temporal nature of HIT investment spending, these job impacts can be thought of as person-years of employment.
- **Hours Worked** represents the total number of hours required to produce the output, and is measured for each industry sector by multiplying the employment impacts by estimates of annual hours worked.
- **Fiscal impacts** consist of the taxes and fees generated for state and local governments as a result of hard and soft cost expenditures, and the associated multiplier spending effects, i.e., indirect and induced impacts. They are all-inclusive and consist of personal income taxes; sales taxes; property taxes; social insurance taxes; and various licensing, fines, and fees.

Modeling Inputs

HIT provided annual expenditure data for all hard and soft costs associated with the construction of new buildings and improvements to existing structures. Hard costs represent expenditures on actual construction. Soft costs represent expenditures on architectural and engineering, legal, financial, and permitting services.

The most current IMPLAN data is for 2012. All monetary measures of economic impacts are reported in 2014 dollars. For consistency, HIT's investment expenditures were inflated to match the 2014 model results.

Section III: Impact Results

Introduction

In total, from the beginning of the Construction Jobs Initiative, HIT investment spending has funded 67 construction projects in 31 cities located and in 12 states.

Total HIT Impacts

Table 1 shows the cumulative economic impacts resulting from HIT spending on new construction and rehabilitation of existing buildings since the recession. As shown in the first row of Table 1, HIT investment spending has generated approximately \$3.38 billion in spending on hard costs, which has generated \$1.36 billion in personal income, and 20,272 jobs with 40.9 million hours of work for construction workers and special trade contractors during the 2009 to 2014 time period. Alone, the expenditures on hard costs have generated \$111.2 million in tax and fee revenues for state and local governments.

The overall impacts from HIT spending are significant. In total, HIT investments have generated \$6.75 billion in total economic activity (or output) to impacted communities throughout the United States. As seen in Table 1, between 2009 and 2014, the total benefits for workers and business owners amount to 42,974 jobs with 82.6 million hours of work, and \$2.71 billion in personal income. The fiscal benefits for state taxing jurisdictions associated with HIT investment spending totaled \$298.6 million.

Table 1: CJI Economic Impacts, by Type (2014 dollars)

Type of Spending	Output	Personal Income	Jobs	Hours Worked
Direct - Hard Cost	\$3,377,031,000	\$1,356,231,000	20,272	40,937,400
Direct - Soft Cost	\$321,867,000	\$192,245,000	2,371	4,251,800
Indirect	\$1,407,484,000	\$559,845,000	8,996	16,599,400
Induced	\$1,645,429,000	\$604,157,000	11,335	20,814,800
Total	\$6,751,812,000	\$2,712,478,000	42,974	82,603,400

Table 2 shows how HIT spending affects various industry sectors. With a large proportion of new construction and rehabilitation of existing building expenditures on hard costs, most of the direct impacts occur in the construction sector. In addition, the construction sector receives additional economic benefits as spending “ripples” through different sectors that also demand construction services. Indeed, the total economic impacts for the construction sector amount to \$3.41 billion in output, \$1.37 billion in personal income, and 20,457 jobs with 41.3 million hours of work.⁵

⁵ Construction impacts reported in Table 2 include the construction impacts from hard cost spending, as well as the construction impacts from indirect and induced economic activity.

Table 2: Total CJJ Economic Impacts, by Major Industry Sector (2014 dollars)

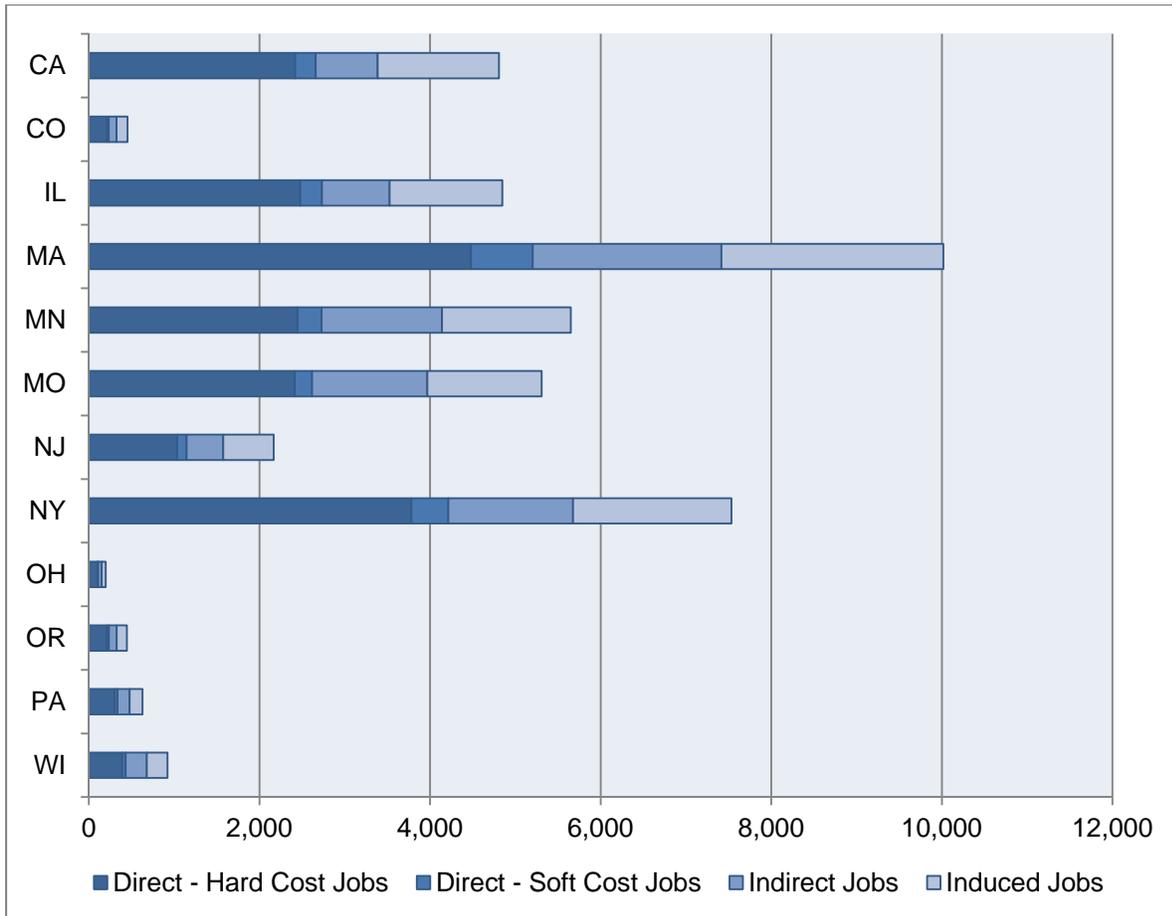
Major Industry Sector	Output	Personal Income	Jobs	Hours Worked
Agriculture	\$11,026,000	\$3,771,000	98	183,900
Mining	\$20,270,000	\$6,007,000	77	156,700
Construction	\$3,406,350,000	\$1,369,221,000	20,457	41,312,800
Manufacturing	\$419,751,000	\$79,242,000	1,061	2,150,600
TIPU	\$152,807,000	\$48,389,000	917	1,779,800
Trade	\$494,315,000	\$233,753,000	5,128	9,460,300
Service	\$2,183,235,000	\$925,289,000	14,397	26,102,400
Government	\$64,057,000	\$46,806,000	837	1,456,900
Total All Industry Sectors	\$6,751,812,000	\$2,712,478,000	42,974	82,603,400

Note: TIPU stands for Transportation, Information and Public Utilities.

Table 2 also shows significant economic impacts for the service and trade sectors. Economic impacts in the service sector begin with expenditures on soft costs, but economic impacts for both major industry sectors reveal the potency of the ripple effect associated with HIT spending.

Figure 1 shows the geographic distribution of jobs impacts, by type, across the 12 states.

Figure 1: Job Impacts, by Type and by State



The economic activity generated by HIT spending supports additional tax and fee revenues for state and local taxing jurisdictions, and the federal government. Table 3 summarizes the fiscal impacts associated with HIT spending.

Table 3: CJI Fiscal Impacts, by Type of Spending

Type of Spending	State and Local Taxes and Fees	Federal Taxes and Fees	Total All Taxes and Fees
Direct - Hard Cost	\$111,153,000	\$272,281,000	\$383,434,000
Direct - Soft Cost	\$10,229,000	\$26,248,000	\$36,477,000
Indirect	\$71,707,000	\$190,955,000	\$262,662,000
Induced	\$105,465,000	\$98,744,000	\$204,209,000
Total	\$298,554,000	\$588,228,000	\$886,782,000

Finally, Table 4 reports the economic and fiscal impacts for every million dollars in HIT spending. These “normalized” impact measures represent averages across all projects, across all states, but provide additional information to understand the potency of HIT spending. The first column of data shows the direct economic and fiscal impacts generated by expenditures on hard costs. These are construction sector impacts. For example, every million dollars in funding committed by HIT supports \$1.6 million in hard costs, and almost 10 construction jobs with \$633,900 in wages and benefits.

Table 4: Economic and Fiscal Impacts per \$1 Million in HIT Spending

Type of Impact	Direct Hard Cost Impacts	Total Impacts
Output	\$1,632,500	\$3,241,200
Personal Income	\$633,900	\$1,275,900
Jobs	9.6	20.5
Hours Worked	19,470	39,480
State and Local Taxes	\$56,500	\$147,000
Federal Taxes	\$129,200	\$279,300

The second column of data reports the total economic and fiscal impacts attributed to project hard and soft costs, as well as multiplier spending effects. Every million dollars in funding committed by HIT supports \$3.2 million in economic activity, including \$1.3 million in wages and over 20 jobs.