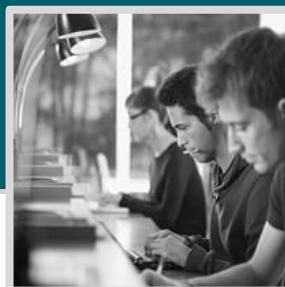
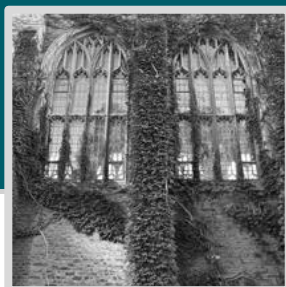


# The Economic Impact of FHDA on Santa Clara County

Prepared for Foothill-De Anza Community College District

December 2014



In the following report, Hanover Research examines Foothill-De Anza Community College District's contribution to the Santa Clara County economy from a demand-side perspective, estimating the District's impact in terms of economic output and jobs supported.

# TABLE OF CONTENTS

<b>Executive Summary and Key Findings .....</b>	<b>3</b>
INTRODUCTION .....	3
KEY FINDINGS.....	3
<b>Demand-Side Economic Impact .....</b>	<b>5</b>
METHODOLOGY .....	5
Defining the Geographic Study Area .....	5
Modeling Software .....	5
Spending Assumptions and Summary of Inputs .....	6
DEMAND-SIDE ANALYSIS .....	9

# EXECUTIVE SUMMARY AND KEY FINDINGS

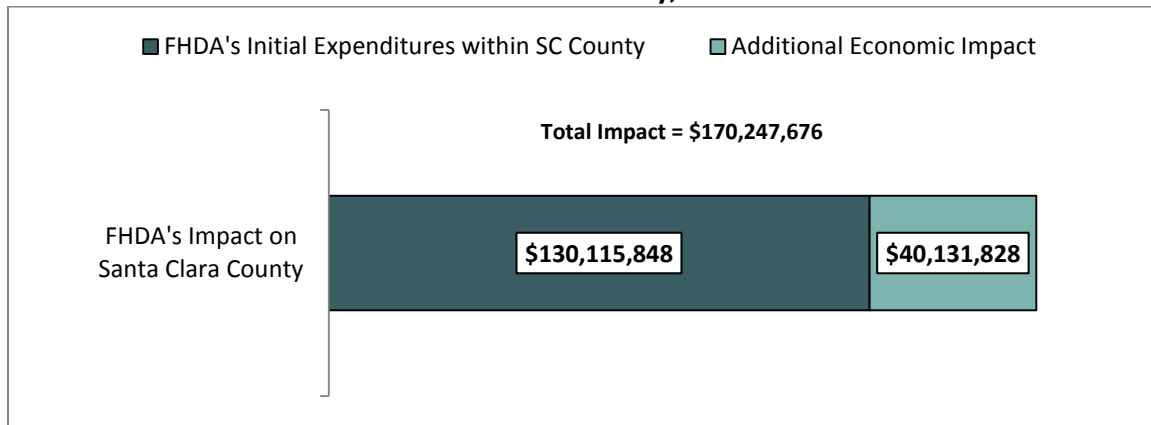
## INTRODUCTION

In this report, Hanover Research presents an estimate of Foothill-De Anza Community College District’s (FHDA) contributions to the economy of Santa Clara County from a demand-side perspective. Such an analysis seeks to quantify the economic impact resulting from goods and services demanded by FHDA, relating specifically to its operating and capital activities, as well as the Santa Clara County residents it employs. In a previous report, Hanover Research examined the District’s economic impact from a supply-side perspective, by measuring the credits contributed to the workforce, and the value of those credits in terms of increased wages of Santa Clara County residents.<sup>1</sup> The current report provides another perspective on the District’s benefits to its surrounding community.

## KEY FINDINGS

- FHDA contributed more than \$170.2 million to the Santa Clara County economy in FY 2013.** Based on budget data reported by the District, we found that FHDA spent roughly \$130.1 million in Santa Clara County in FY 2013, on operating, capital, and payroll activities. Analyzing these expenditures through an input-output model (created by IMPLAN Group, LLC), we estimate that FHDA’s direct spending triggered an additional \$40.1 million in economic output within Santa Clara County, reflecting further spending by County businesses and households throughout the local economy.

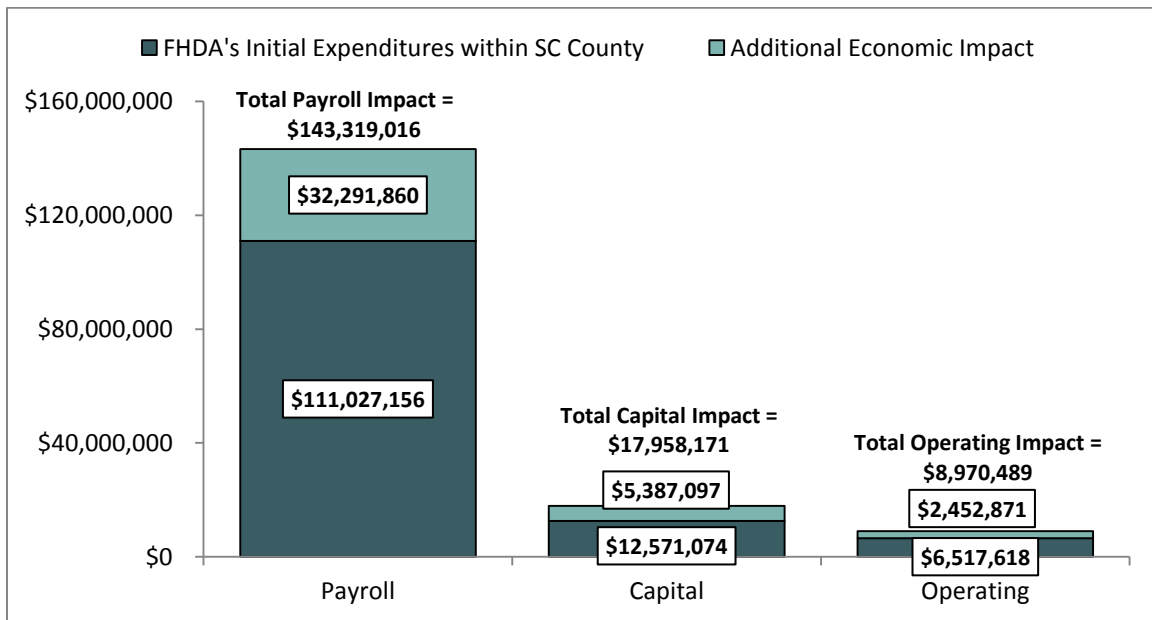
**Figure A1: Total Economic Impact of FHDA’s Payroll, Operating, and Capital Expenditures on Santa Clara County, FY 2013**



<sup>1</sup> Please note that in requesting the previous report, as well as the current economic impact analysis, FHDA asked that Hanover Research seek to replicate a 2005 study completed for the District. As such, we used the 2005 study as a broad guide for our research. See: Stange, Kevin. 2005. “The Economic Impact of the Foothill-De Anza Community College District and its Students.” Prepared for Foothill-De Anza Community College District. <http://fhdafiles.fhda.edu/downloads/homefhda/FHDAEconImpact.pdf>

- District expenditures on faculty and staff represented the most significant portion of the total \$170.2 million impact, followed by capital and operating expenditures.** The District reported \$111.0 million in salary and benefit expenditures on employees who reside within Santa Clara County,<sup>2</sup> as well as \$12.5 million and \$6.5 million in payments to County-based vendors for capital and operating activities, respectively. Accounting for the additional economic activity triggered by these types of expenditures resulted in a roughly \$143.3 million payroll impact, an \$18.0 million capital impact, and a \$9.0 million operating impact in FY 2013.

**Figure A2: Economic Impact of FHDA’s Payroll, Operating, and Capital Expenditures on Santa Clara County, FY 2013, Segmented by Spending Type**



- FHDA’s activities are estimated to have supported more than 1,650 jobs in Santa Clara County in FY 2013.** This figure represents both jobs directly associated with the District and jobs resulting from additional economic activity spurred by the District’s initial expenditures on payroll, capital, and operating activities. In sum, FHDA’s economic impact extends beyond its campuses and central offices, supporting jobs throughout the local economy.
- When interpreting the above figures, it is important to keep in mind the scope of this analysis; most notably that the estimated impact only represents the economic benefit of FHDA’s activities within Santa Clara County.** Further, the analysis focuses on three major District expenditure types – payroll, capital, and operating. The District makes additional contributions to its local economy through the spending of out-of-county students and visitors, as well as contributions to its broader region and the state through its spending on goods and services outside of Santa Clara County.

<sup>2</sup> Note that this figure does not include an additional \$2,561,966.94 paid to student employees within the County.

# DEMAND-SIDE ECONOMIC IMPACT

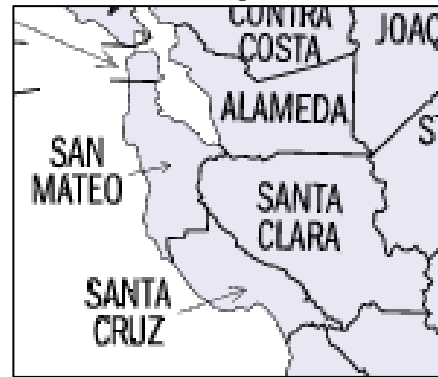
This section describes FHDA's economic impact in dollar and employment terms on Santa Clara County.

## METHODOLOGY

### DEFINING THE GEOGRAPHIC STUDY AREA

The geographic study area used for this analysis is FHDA's local community, operationalized as Santa Clara County. In correspondence with the District regarding this study, we noted that the selection of the study area should not only be based on where the District operates but also where its employees live, as a considerable portion of the impact of an institution is the spending of its employees.<sup>3</sup> Based on a review of a previous study conducted on behalf of FHDA, we observed that a significant proportion of the District's employees reside in Santa Clara County.<sup>4</sup>

**Figure 1.1: Santa Clara and Surrounding Counties**



Source: U.S. Census Bureau.

### MODELING SOFTWARE

FHDA provided data on institutional spending in Santa Clara County for fiscal year (FY) 2013 – July 1, 2012 to June 30, 2013. Using the assumptions explained below, these data were entered into IMPLAN, an economic input-output (I-O) modeling software program originally developed by University of Minnesota researchers and now offered commercially through IMPLAN Group LLC (formerly MIG, Inc). IMPLAN Group's extensive client list and our own research and familiarity with the model indicate that the IMPLAN I-O model is widely implemented in a variety of economic impact studies.<sup>5,6,7</sup>

The IMPLAN software allows the analyst to apply the appropriate "multipliers" to all dollars originally spent in an area by an institution (e.g., FHDA and its employees). Multipliers account for the fact that a certain percentage of every dollar spent within a local economy

<sup>3</sup> Day, F. *Principles of Impact Analysis & IMPLAN Applications*. IMPLAN Group. p. 9.

<sup>4</sup> Stange, Kevin. 2005. "The Economic Impact of the Foothill-De Anza Community College District and its Students." Prepared for Foothill-De Anza Community College District. p. 6. <http://fhdafiles.fhda.edu/downloads/homefhda/FHDAEconImpact.pdf>

<sup>5</sup> "About Us." IMPLAN Group, LLC. [http://implan.com/index.php?option=com\\_content&view=article&id=871&Itemid=1047](http://implan.com/index.php?option=com_content&view=article&id=871&Itemid=1047)

<sup>6</sup> The current client list on the IMPLAN Group's website includes over 150 academic institutions. Please see: "Client Listing." IMPLAN Group LLC. [http://implan.com/index.php?option=com\\_content&view=article&id=751:client-list-103012&catid=141:client-list-&Itemid=52](http://implan.com/index.php?option=com_content&view=article&id=751:client-list-103012&catid=141:client-list-&Itemid=52)

<sup>7</sup> Among I-O models, IMPLAN is considered particularly effective for its ability to calculate economic multipliers at the regional/local level. IMPLAN Group LLC maintains a database of statistics regarding employment, industry output, value added, institutional demands, and other information for 509 industrial sectors, providing the foundation for effective modeling.

remains in the economy (e.g., in the form of profits and net payroll in the case of a local retail store) and is, in turn, re-spent, generating additional income and expenditure in the process. The value of the IMPLAN model is its vast collection of data on the spending habits of businesses and consumers within a specific area, such as Santa Clara County. The use of this software allows us to quantify the impact of FHDA on parts of the County economy not directly involved in the original transactions.

**The IMPLAN software yields three distinct types of impacts:**

- ***Direct Impact:*** This refers to initial expenditures that remain in the local economy (e.g., that of Santa Clara County)
- ***Indirect Impact:*** These estimates track each dollar of local spending from one business to another until those dollars are spent outside the local economy. For example, Business A purchases a product from Business B, which uses that money to purchase products from Businesses C and D, and so forth.
- ***Induced Impact:*** These estimates track the effects of direct and indirect spending on local, individual household purchases.

The direct, indirect, and induced impacts are summed to attain FHDA's total economic impact on Santa Clara County. In addition to an estimated impact figure expressed in dollars, the IMPLAN software also provides an estimated employment impact. This figure represents the number of jobs supported by institutional and employee spending. It will not represent any additional impact beyond the reported monetary effects. However, it will provide another way of visualizing FHDA's contribution to the Santa Clara County economy.

*SPENDING ASSUMPTIONS AND SUMMARY OF INPUTS*

In support of this analysis, FHDA provided expenditure data for four key spending categories, including:<sup>8</sup>

- **Employee payroll salary expenditures**, for employees living within Santa Clara County, and excluding salaries paid to student-employees.<sup>9</sup>
- **Employee payroll benefits expenditures**, for employees living within Santa Clara County, and excluding benefits provided to student-employees.
- **Non-payroll operating expenditures**, restricted to payments within Santa Clara County.
- **Non-payroll capital expenditures**, restricted to payments within Santa Clara County.

<sup>8</sup> Payroll figures (restricted to employees residing within Santa Clara County), along with data supporting our earlier supply-side analysis, were provided by FHDA to Hanover Research via email (October 10, 2014) in response to our data request. Revised operating and capital expenditure figures (restricted to payments made within Santa Clara County) were provided by FHDA via email (October 16, 2014).

<sup>9</sup> Student-employee payroll is excluded in order to avoid double-counting. Students make payments to the Colleges in return for instruction (tuition), books, supplies, and other goods and services. These payments then fund expenditures made by the District, which are captured in our model under payroll, operating, and capital expenditures.

Figure 1.2 below provides a summary of FHDA’s local spending data, reflecting its initial impact on the Santa Clara County economy, prior to our application of economic multipliers. Note that in our analysis, we combined the salary and benefits expenditures to achieve a total payroll figure.

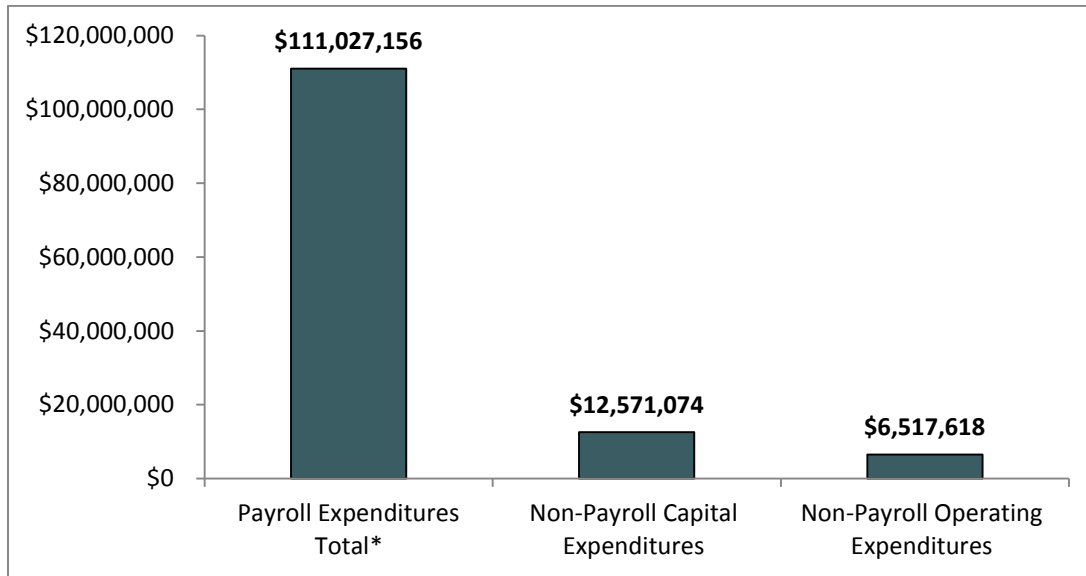
**Figure 1.2: FY 2013 Expenditures by FHDA within Santa Clara County**

SANTA CLARA COUNTY EXPENDITURES	
Non-Payroll Operating Expenditures	\$6,517,618
Non-Payroll Capital Expenditures	\$12,571,074
Payroll Expenditures Total*	\$111,027,156
<i>Salary Expenditures</i>	\$86,975,874.76
<i>Benefit Expenditures</i>	\$24,051,281.65
<b>Total In-County Expenditures</b>	<b>\$130,115,848</b>

\*Excludes student employee payroll.

Source: In-county expenditure estimates provided by FHDA.

**Figure 1.3: FY 2013 Expenditures by FHDA within Santa Clara County**



\*Excludes student employee payroll.

Source: In-county expenditure estimates provided by FHDA.

We note that the above expenditures only represent a subset of the District’s total spending, which was reported at \$275,237,629 for 2012-2013.<sup>10</sup> Nevertheless, as the goal of this economic impact analysis is to estimate the effect of spending on a specific region (in this case, FHDA’s local community of Santa Clara County), it is critical to identify the expenditures that occur within that region. We note that the IMPLAN software provides the analyst the option of allowing the model to estimate the amount of an institution’s expenditures that take place within the study area versus payments to vendors outside of the study area. This feature is described as a Local Purchase Percentage (LPP) and can be set to a default model

<sup>10</sup> “2013-2014 Adopted Budget.” Foothill-De Anza Community College District. p. 94.  
<http://fhdafiles.fhda.edu/downloads/budget/1314AdoptedBudget.pdf>

value or customized. As the District was able to supply estimates of known local expenditures, we set the LPP’s for all spending categories to 100 percent.

The figure below illustrates how the in-county expenditures were entered into the IMPLAN software. As the figure depicts, operating expenditures were run as an “institutional spending pattern,” a feature that allows the analyst to model the spending of a public educational institution. As the payroll of the District was known, we removed payroll from the spending pattern and placed it in its own separate entry in the model (an institutional spending pattern comprised solely of payroll). Capital expenditures were entered into the model as an “industry change” within the “maintenance and repair construction of nonresidential structures” sector. This sector was selected as the District and its Colleges engaged in a variety of maintenance, repair, and construction projects that could not be separated into exclusively new construction or repair of existing facilities.<sup>11</sup>

**Figure 1.4: IMPLAN Model Inputs for Study of FHDA’s Economic Impact**

SPENDING CATEGORY	FY 2013 EXPENDITURE	PLACEMENT IN IMPLAN MODEL	NOTES
Non-Payroll Operating Expenditures	\$6,517,618	<i>Institutional Spending Pattern: State/Local Government, Education</i>	<ul style="list-style-type: none"> <li>■ Event Year: 2013</li> <li>■ Payroll Event removed, included under Employee Payroll Salary and Benefits Expenditures</li> <li>■ Coefficients of all remaining (non-payroll) Events normalized</li> </ul>
Non-Payroll Capital Expenditures	\$12,571,074	<i>Industry Change: Maintenance and Repair Construction of Nonresidential Structures</i>	<ul style="list-style-type: none"> <li>■ Event Year: 2013</li> </ul>
Employee Payroll Salary and Benefits Expenditures	\$111,027,156	<i>Institutional Spending Pattern: State/Local Government, Education</i>	<ul style="list-style-type: none"> <li>■ Event Year: 2013</li> <li>■ All Events except Payroll were removed</li> <li>■ Sum of Salary and Benefits Expenditures below</li> </ul>

<sup>11</sup> See: “Foothill College Project Updates.” Foothill-De Anza Community College District. February 5, 2014. [http://www.foothill.edu/president/parc/minutes/parc2013-14/parc020514/8.%20construction%20update/ParC%20presentation\\_03.pdf](http://www.foothill.edu/president/parc/minutes/parc2013-14/parc020514/8.%20construction%20update/ParC%20presentation_03.pdf)  
 “Measure C – Citizens’ Bond Oversight Committee 2012-2013 Annual Report.” Foothill-De Anza Community College District. <http://measurec.fhda.edu/AR1213/completed.html>



## DEMAND-SIDE ANALYSIS

The Santa Clara County model describes the economic impact, in dollars and employment, of three “Activities” – operating expenditures, capital expenditures, and employee payroll expenditures. The results of our analysis are presented below.

The total financial impact of FHDA on Santa Clara County was estimated at approximately **\$170,247,676** in FY 2013 (expressed in 2013 dollars, Figure 1.5). This reflects the impact of FHDA’s operating, capital, and employee payroll expenditures within the County, both in terms of initial spending directly associated with the District, as well as additional economic activity triggered by the District’s spending. Expressed in terms of employment effects, in 2013, spending associated with the institution is estimated to have supported **1,653 jobs** in Santa Clara County alone.<sup>12</sup> Overall, this analysis illustrates how FHDA’s impact extends beyond its campuses and central offices, supporting economic activity throughout the local community.

**Figure 1.5: Santa Clara County Impact Summary, 2013 Dollars**

EXPENDITURE CATEGORY	DIRECT EFFECT	INDIRECT EFFECT	INDUCED EFFECT	TOTAL EFFECT
Operating Expenditures	\$6,427,291	\$1,356,037	\$1,187,162	<b>\$8,970,489</b>
Capital Expenditures	\$12,571,075	\$2,362,954	\$3,024,142	<b>\$17,958,171</b>
Payroll Expenditures	\$111,027,151	\$0 <sup>13</sup>	\$32,291,865	<b>\$143,319,016</b>
<b>Total</b>	<b>\$130,025,517</b>	<b>\$3,718,991</b>	<b>\$36,503,169</b>	<b>\$170,247,676</b>

Note: Total values may not precisely match column and row sums due to rounding.

**Figure 1.6: Santa Clara County Impact Summary, Employment**

EXPENDITURE CATEGORY	DIRECT EFFECT	INDIRECT EFFECT	INDUCED EFFECT	TOTAL EFFECT
Operating Expenditures	33	8	8	<b>48</b>
Capital Expenditures	92	15	21	<b>128</b>
Payroll Expenditures	1,250	-	228	<b>1,477</b>
<b>Total</b>	<b>1,374</b>	<b>23</b>	<b>257</b>	<b>1,653</b>

Note: Total values may not precisely match column and row sums due to rounding.

<sup>12</sup> Once again, it is important to note that this analysis focuses exclusively on the effects of FHDA’s expenditures within Santa Clara County. The District employs individuals and makes operating and capital expenditures beyond the borders of its immediate surrounding area that are outside the scope of this study.

<sup>13</sup> Note that the indirect effect represents transfers specifically from businesses to businesses. As payroll expenditures are expensed to individuals, not to businesses, IMPLAN therefore restricts the indirect impact of payroll expenditures to \$0.

## PROJECT EVALUATION FORM

Hanover Research is committed to providing a work product that meets or exceeds partner expectations. In keeping with that goal, we would like to hear your opinions regarding our reports. Feedback is critically important and serves as the strongest mechanism by which we tailor our research to your organization. When you have had a chance to evaluate this report, please take a moment to fill out the following questionnaire.

<http://www.hanoverresearch.com/evaluation/index.php>

## CAVEAT

The publisher and authors have used their best efforts in preparing this brief. The publisher and authors make no representations or warranties with respect to the accuracy or completeness of the contents of this brief and specifically disclaim any implied warranties of fitness for a particular purpose. There are no warranties which extend beyond the descriptions contained in this paragraph. No warranty may be created or extended by representatives of Hanover Research or its marketing materials. The accuracy and completeness of the information provided herein and the opinions stated herein are not guaranteed or warranted to produce any particular results, and the advice and strategies contained herein may not be suitable for every partner. Neither the publisher nor the authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Moreover, Hanover Research is not engaged in rendering legal, accounting, or other professional services. Partners requiring such services are advised to consult an appropriate professional.



4401 Wilson Boulevard,  
Suite 400  
Arlington, VA 22203

P 202.559.0500 F 866.808.6585  
[www.hanoverresearch.com](http://www.hanoverresearch.com)