Macroeconomic Impact of S ESOPs on the U.S. Economy

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Executive Summary

S corporations that sponsor employee stock ownership plans (ESOPs) have been shown to be vital economic players in the United States. This report quantifies the macroeconomic impact—the jobs, income, output, and tax revenue—attributable to these firms.

Employee ownership, which ESOPs help establish, cultivates loyalty among employees, and employee loyalty is known to enhance firm prosperity. The S ESOP structure in particular has been shown to lead to greater firm longevity and higher wages, wage growth, job stability, retirement plan contributions, employment, and sales than would otherwise have been anticipated. S ESOPs have also proven more resilient in the face of economic distress, outperforming other private U.S. employers during the recent recession. The S ESOP structure benefits not only S ESOPs, but also the broader economy. This report looks beyond the immediate benefit S ESOPs provide and highlights their macro impact.

S ESOPs' full economic impact includes the series of iterative rounds of income creation, spending, and re-spending that they and their employees initiate. In short, S ESOPs employ workers and make purchases from various types of suppliers. These suppliers in turn hire workers and buy from their own suppliers, and so on. In addition, S ESOP employees as well as the suppliers' employees spend their disposable income in various ways, benefiting other business and in turn supporting other jobs. In addition, as these rounds of expenditures take place, the government collects sales, property, income, and other kinds of taxes.

Both the number of S ESOPs in existence and the level of active participation in S ESOPs have more than doubled since 2002. This growth means that S ESOP prosperity is having an even greater positive impact on employee-owners, suppliers, customers, neighbors, local economies, and the U.S. economy. As this report details, in 2010, this positive impact is quantified as follows:

- **1.4 million jobs.** 2,643 S ESOPs directly employed 470,000 workers and supported an additional 940,000 jobs.
- **$77 billion in labor income.** S ESOPs paid $29 billion in labor income to their own employees, with $48 billion in additional income for supported jobs.
- **$246 billion in output.** Total output was equivalent to 1.7 percent of 2010 U.S. GDP. $93 billion (or 0.6 percent of GDP) came directly from S ESOPs, while output in supported industries totaled $153 billion (or 1.1 percent of GDP).
- **$27 billion in tax revenue.** Tax revenue initiated by S ESOPs amounted to $11 billion for state and local governments and $16 billion for the federal government.

This report uses data on active participation in S ESOPs to quantify this impact. Because employment levels are higher than active participation levels, the macroeconomic impact of these firms is likely significantly greater than the estimates presented here. One survey of S ESOPs found that employment was 39 percent higher on average than active participation.

Introduction

An economy consists of complex and intertwined relationships between and among various industries and sectors. Output from one sector relies on inputs from others, and these interdependencies vary across segments of the economy. This report explores these relationships and presents the macroeconomic impact in the United States of S corporations that sponsor employee stock ownership plans (ESOPs). The impact of these firms, known as S ESOPs, is measured through their direct, indirect, and induced effects on the overall economy. As discussed in greater detail below, the impact of these firms is quite significant and broad-based.

An ESOP is a tax-exempt defined contribution retirement plan designed to facilitate employee ownership of a company. S corporations have been allowed to sponsor ESOPs since 1998. S ESOPs have been shown to outperform other companies by several measures. Not surprisingly, S ESOPs are the fastest-growing employee-ownership structure and the most prevalent form of ESOP.

In an initial analysis of S ESOP growth trends over the last decade, I concluded that employment levels among S ESOPs fared better than the private-sector U.S. labor market during the recent recession.[1] This analysis, released in July 2012, found that S ESOPs were more resilient in the face of economic distress and outperformed other private employers in the United States. Other related research has established that S ESOPs offer an important benefit to the economy in firm productivity, growth, and job stability.

Building on these findings, this report goes a step further by quantifying S ESOPs' overall impact in the U.S. economy. S ESOPs are vital economic players in their communities and across the country. Beyond the immediate benefit they provide to employees and customers, S ESOPs' positive outcomes yield benefits to the U.S. economy broadly. To estimate the macro effects, this report employs an input-output model, which accounts for the full economic cycle that these firms initiate. Before presenting the results, I briefly review the highlights of last year's analysis and discuss the theory, model, and data used in constructing the new estimates.

Employee Ownership and Firm Performance

As detailed in the 2012 analysis, employee loyalty has been shown to enhance firm prosperity, and employee ownership has been found to cultivate employee loyalty.[2] ESOPs represent a proven way of successfully establishing employee ownership. The S ESOP structure in particular has been shown to lead to greater firm longevity and higher wages, wage growth, job stability, retirement plan contributions, employment, and sales than would otherwise have been anticipated.[3]

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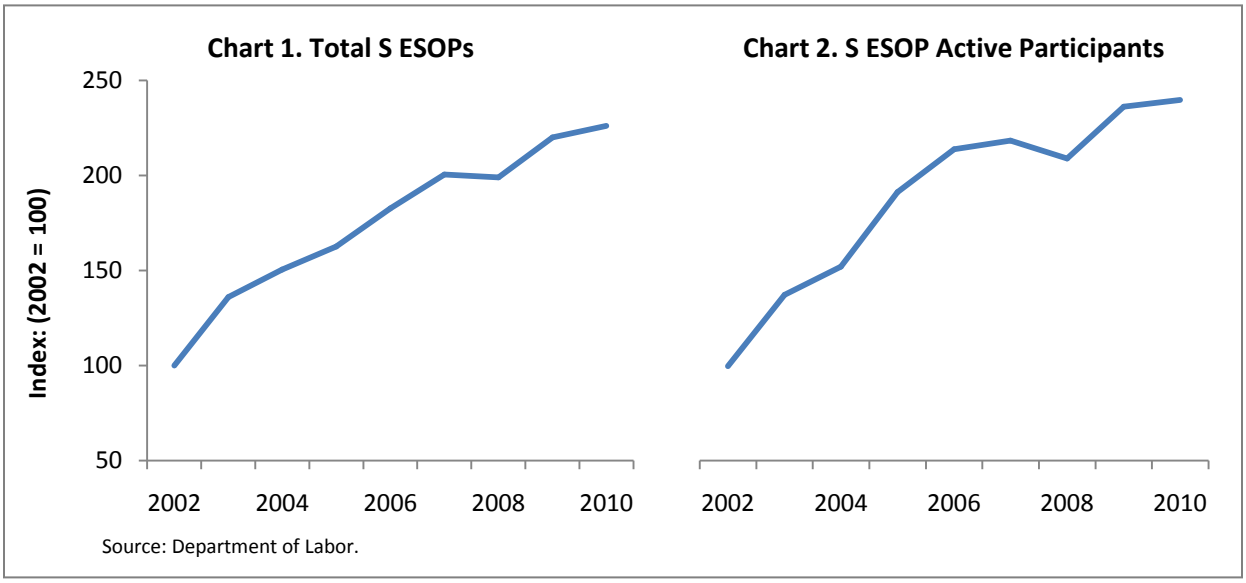
[1] See Alex Brill, "An Analysis of the Benefits S ESOPs Provide the U.S. Economy and Workforce," Matrix Global Advisors White Paper, July 26, 2012, www.esca.us/images/stories/Brill_S_ESOP_Study_2012.pdf.

[2] See Thomas E. Becker, Robert S. Billings, Daniel M. Eveleth, and Nicole L. Gilbert, "Foci and Bases of Employee Commitment: Implications for Job Performance," *The Academy of Management Journal* 39, no. 2 (April 1996): 464–82; Daniel J. Koys, "The Effects of Employee Satisfaction, Organizational Citizenship Behavior, and Turnover on Organizational Effectiveness: A Unit-Level, Longitudinal Study," *Personnel Psychology* 54, no. 1 (Spring 2001): 101–114; and Jon L. Pierce, Tatiana Kostova, and Kurt T. Dirks, "Toward a Theory of Psychological Ownership in Organizations," *The Academy of Management Review* 26, no. 2 (April 2001): 298–310.

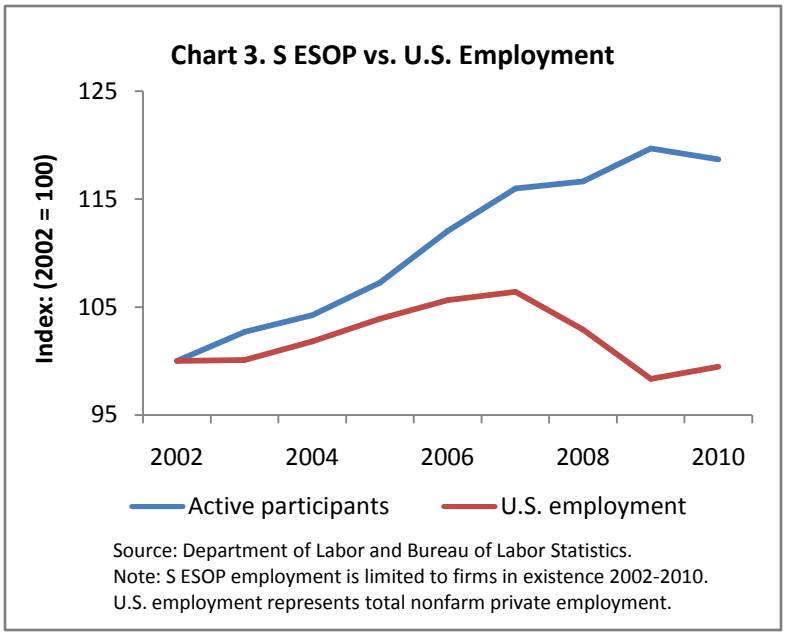
[3] See National Center for Employee Ownership, "Research on Employee Ownership, Corporate Performance, and Employee Compensation," 2012, www.nceo.org/articles/research-employee-ownership-corporate-performance.

Charts 1 and 2 show how the number of S ESOPs in existence and the level of active participation have more than doubled since 2002. Interrupted by the 2007–2008 recession, the steady rise immediately resumed thereafter.



Among a fixed set of S ESOPs—those that have existed from 2002 through 2010—participation is also up. In fact, compared to total private U.S. employment, this increase is substantial, as Chart 3 makes clear. In particular, in 2007, when the recession first hit, U.S. private employment took a dramatic downward turn while active participants among this subset of S ESOPs actually increased slightly.

Given S ESOPs' positive outcomes in the last fifteen years and resiliency during the recession, a logical area of inquiry is S ESOPs' impact on the overall U.S. economy today. Their performance likely has farther-reaching effects than the obvious benefits to their employee-owners. Also benefiting from their success are suppliers and contractors, as well as local businesses that S ESOP employees frequent.

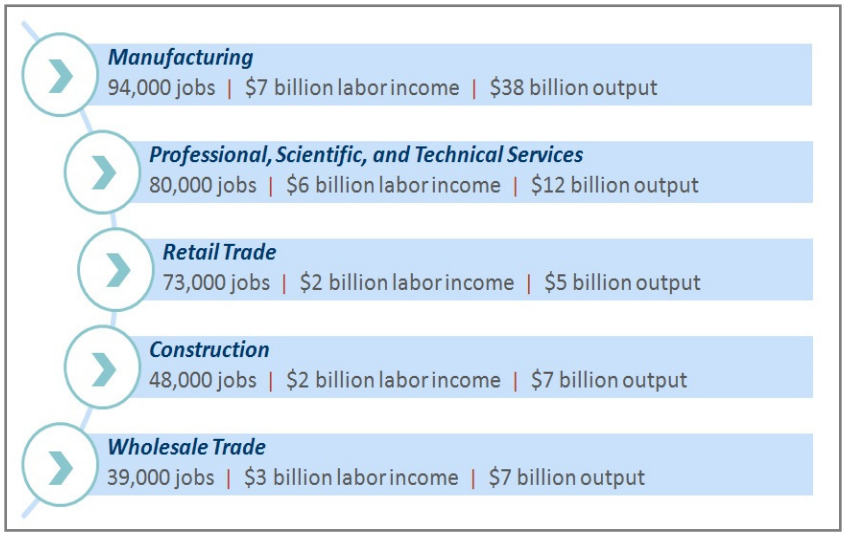


Put simply, in addition to benefiting employee-owners, S ESOPs benefit the U.S. economy broadly. The question is: how much? The remainder of this report is devoted to answering that question through a macroeconomic analysis. I begin by discussing the theory, model, and data used in this analysis.

Macroeconomic Analysis

A company's economic impact begins with its direct effect—that is, its operating expenditures and the salaries it pays its employees. Figure 1 shows the direct effects of the top five S ESOP industries in 2010.

Figure 1. Direct Effects of Top Five S ESOP Industries



However, the total impact of a company's resources spent within the economy is larger than these initial expenditures. To grasp a company's true economic impact, one must also take into account the series of iterative rounds of income creation, spending, and re-spending that a firm and its employees initiate. A type of economic model known as an input-output (IO) model offers such an opportunity by capturing the upstream and downstream effects of a company's presence in an estimation of the company's economic impact. In so doing, it allows the interactions among firms, industries, and social institutions within the economy to be quantified.

IO models are widely used in universities and the public and private sectors to conduct economic impact analyses. The results in this report are derived from an IO model known as IMPLAN, which accounts for the full economic cycle from production to intermediate and final consumption. The results encompass S ESOP firms across multiple industries throughout the United States. The measure of S ESOPs' initial impact, the effects of which IMPLAN models, is based on participation data submitted by S ESOPs to Department of Labor (DOL) for 2010 (the latest full year available).

Data

DOL makes companies' annual Form 5500 filings publicly available.[4] Form 5500 requires companies to disclose information about their employee benefit plans, such as the type of retirement plan they offer, including whether the plan is an S ESOP. Other information includes total active participants in the plan, retired participants receiving benefits, and the sponsor's employer identification number and NAICS code.

Because Form 5500 filings include total S ESOP plan participants but not actual employment numbers, the analysis assumes that the number of plan participants correlates to the number of firm employees. To establish that active participation is a valid proxy for S ESOP employment, I previously conducted a

[4] Form 5500 datasets are available at www.dol.gov/ebsa/foia/foia-5500.html.

survey of 56 S ESOP firms and correlated each firm's employment numbers with the respective Form 5500 data on active participants. These data were shown to be highly correlated, with a correlation coefficient of 0.9. In other words, we know that active participation in an S ESOP is an appropriate proxy for employment.

It should be noted that S ESOP active participation must be equal to or less than total employment. Among surveyed S ESOPs, employment is 39 percent higher on average than active participation. Using active participation as a proxy for employment yields a conservative estimate of both S ESOP employment and total economic impact.

Components of IMPLAN Analysis

IMPLAN measures companies' economic and fiscal impact in four areas: (1) jobs that S ESOPs support directly and indirectly; (2) labor income; (3) output (i.e., business sales); and (4) federal, state, and local tax revenue. The total economic impact is equal to the sum of three components: the direct effect, the indirect effect, and the induced effect.

S ESOPs' direct effect is the immediate upshot of the companies' production, operating expenditures, and payroll. The indirect effects are changes in production, employment, and income that result from the inter-industry purchases triggered by the direct effect. Finally, induced effects arise from changes in household income and spending patterns caused by the direct and indirect effects. As the rounds of expenditures initiated by S ESOPs take place, the government collects sales, property, income, and other kinds of taxes. This is S ESOPs' fiscal impact.

To aid in understanding the concepts behind the model, Figure 2 illustrates the direct and indirect effects of a hypothetical S ESOP that makes and sells bread. S ESOP Bread Co. employs workers and also purchases goods and services from suppliers. These suppliers have employees and suppliers of their own, all of whom benefit indirectly from S ESOP Bread Co.'s successful operations.

Figure 2. How an S ESOP Interacts in the Economy

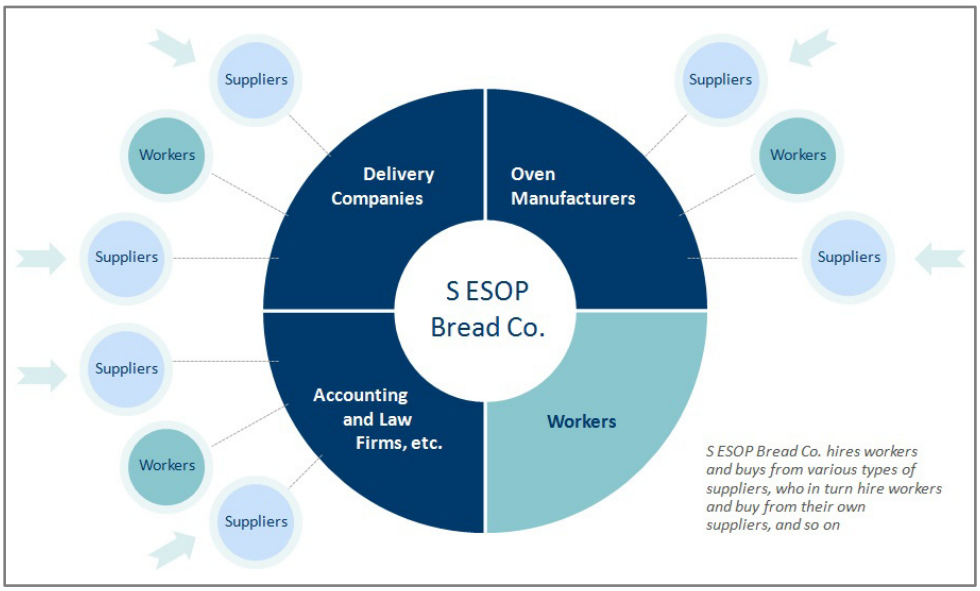
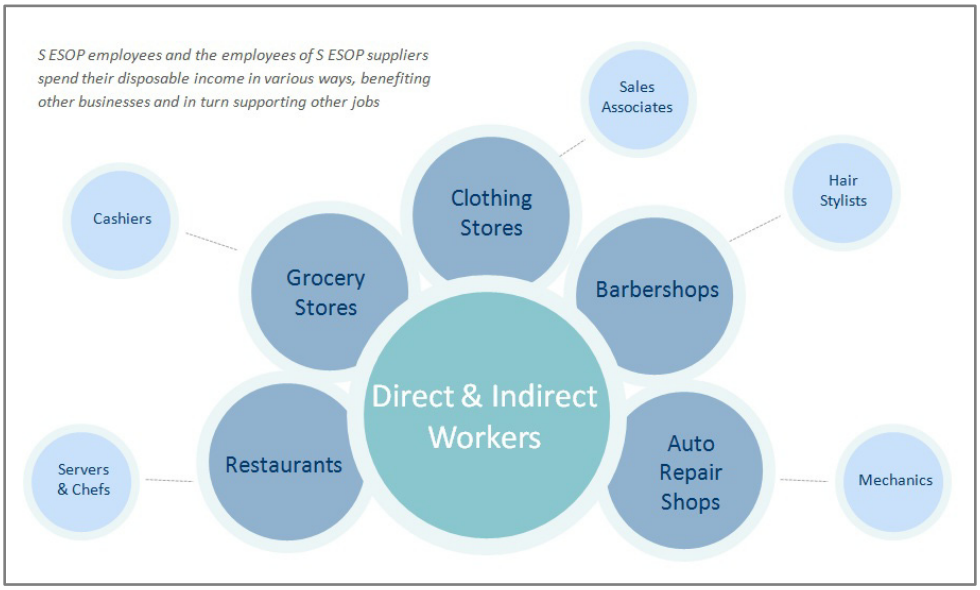


Figure 3 illustrates the induced effects, which arise when S ESOP Bread Co. employees spend their disposable income and when the employees of S ESOP Bread Co.'s suppliers spend theirs.

Figure 3. Effects of Workers' Spending



On a much larger scale, the components illustrated in Figures 2 and 3 yield the macroeconomic impact of all S ESOPs combined. The following section presents this impact as estimated by the IMPLAN model. For more detailed results, including industry breakdowns, please see the appendix.

S ESOPs' Macroeconomic Impact

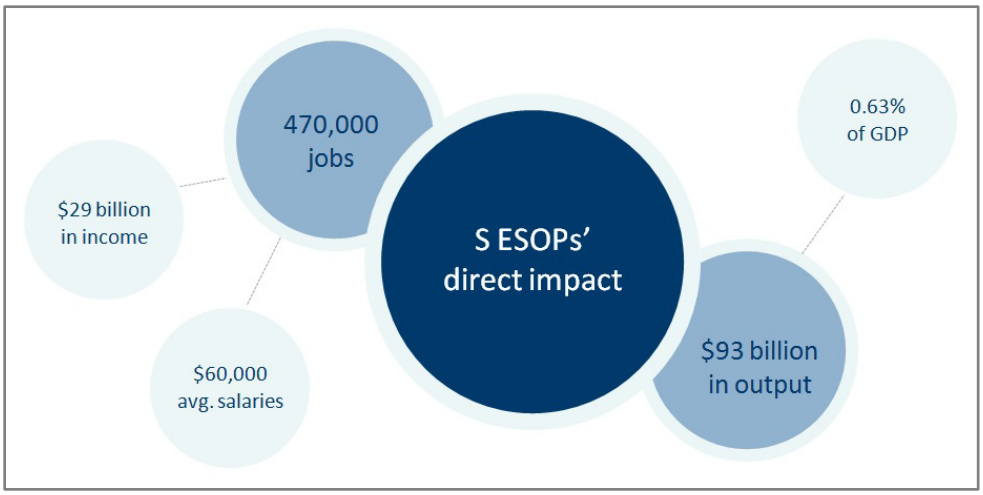
In 2010, DOL Form 5500 data included 2,643 S ESOPs—more than double the 2002 total. As Figure 4 shows, these S ESOPs created or supported 1.4 million jobs, which produced $77 billion in labor income and $246 billion (or 1.7 percent of 2010 U.S. GDP) in output. S ESOPs' fiscal impact totaled $11 billion in state and local government tax revenue and $16 billion in federal tax revenue. (The appendix offers a breakdown of the types of tax that make up the fiscal impact.)

Figure 4. Total Economic and Fiscal Impact of S ESOPs in 2010

Employment	• 1.4 million
Labor income	• $77 billion
Output	• $246 billion (1.7% of GDP)
State/local taxes	• $11 billion
Federal taxes	• $16 billion

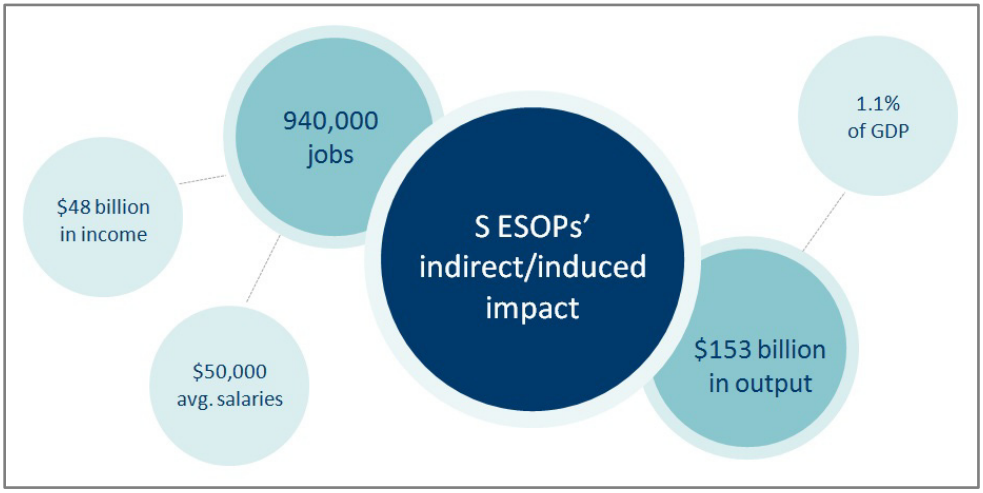
Figure 5 presents the portion of the total economic impact that is attributable directly to S ESOPs.

Figure 5. Direct Economic Impact of S ESOPs in 2010



Because the indirect and induced impacts are both supported by the direct impact, they are often thought of together and are thus presented in combination in Figure 6.

Figure 6. Indirect/Induced Economic Impact of S ESOPs in 2010



In summary, of the 1.4 million jobs attributable to S ESOPs, roughly 470,000 are S ESOP employees. At the same time, S ESOPs support an additional 940,000 jobs.

Of the $77 billion in labor income, $29 billion was paid to S ESOP employees, with $48 billion in income for indirect and induced jobs. This means that the estimated average wage of a direct job in 2010 was more than $60,000, while annual wages for indirect and induced jobs averaged roughly $50,000. These estimates are significantly higher than the overall U.S. average wage of approximately $40,000 in 2010.

Finally, of the $246 billion in output, $93 billion (or 0.63 percent of GDP) comes directly from S ESOPs. Indirect and induced output is estimated at $153 billion, which equates to 1.1 percent of GDP.

Given that the model results are based on active participation in S ESOPs and not actual employment, it is important to emphasize that these are conservative estimates. As mentioned above, the survey conducted to establish that active participation is a valid proxy for S ESOP employment showed employment levels 39 percent higher on average than active participation levels. If that average holds across all S ESOPs, then the macroeconomic impact of these firms is significantly greater than estimated here. But even these conservative results demonstrate that the macro effects attributable to S ESOPs' presence and success are substantial. S ESOP prosperity benefits employee-owners, suppliers, customers, neighbors, local economies, and the U.S. economy broadly.

Glossary

Direct Jobs – These jobs represent S ESOP active participants.

Direct Labor Income – The payroll associated with the direct jobs.

Indirect Jobs – Jobs supported by industries purchasing from industries.

Labor Income – The earnings associated with the indirect jobs. This amount can include both wages paid to workers as well as income earned by business owners.

Induced Jobs – Whereas indirect jobs are those positions that are created by industries purchasing from industries, induced jobs are those positions supported by household level purchasing, or the spending on goods and services by individuals. In this report, induced jobs are included with indirect jobs.

Induced Labor Income – The earnings associated with the induced jobs. This amount can include both wages paid to workers as well as income earned by business owners. In this report, induced earnings are included with indirect earnings.

Output – Represents the total value of all goods and services produced.

Appendix

Table 1. S ESOP State and Local Fiscal Impact in 2010

Indirect Business Taxes (Property Tax, Sales Tax, etc.*)	$8,483,661,000
Personal Taxes (Income Tax, Motor Vehicle License Tax)	$2,016,594,000
Social Insurance Taxes (Employee/ Employer Contribution)	$174,386,000
Corporate Taxes	$345,691,000
Total Estimated State and Local Fiscal Impact	**$11,020,332,000**

* Indirect business taxes consist of excise, sales, and property taxes, as well as fees, fines, licenses, and permits. These taxes occur during normal operation of businesses but do not include taxes on profit or income.

Table 2. S ESOP Federal Fiscal Impact in 2010

Indirect Business Taxes (Excise, Customs)	$1,270,669,000
Personal Taxes (Income Tax)	$4,863,865,000
Social Insurance Taxes (Employee/ Employer Contribution)	$8,161,565,000
Corporate Taxes	$1,885,546,000
Total Estimated State and Local Fiscal Impact	**$16,181,645,000**

Table 3. S ESOP Direct Economic Impact in 2010 by Industry

Industry	Employment	Labor Income	Output
Manufacturing	93,901	$6,933,542,342	$37,778,518,541
Professional, Scientific, and Technical Services	80,075	$6,000,290,237	$12,459,283,373
Retail Trade	72,749	$2,177,475,905	$4,543,405,278
Construction	47,609	$2,493,826,071	$7,015,093,978
Wholesale Trade	39,028	$3,067,038,164	$6,507,998,908
Finance and Insurance	26,231	$1,675,818,679	$9,095,875,526
Health Care and Social Assistance	24,530	$1,135,145,334	$2,016,543,356
Holding Companies	15,215	$1,773,488,713	$3,195,807,236
Publishing, Telecommunications, etc.	13,553	$740,968,146	$2,364,119,953
Administrative and Support Services	10,741	$368,671,069	$738,454,941
Utilities	9,102	$736,986,677	$2,144,615,586
Transportation and Warehousing	9,086	$569,950,546	$1,636,746,799
Accommodation and Food Services	8,595	$208,841,577	$639,302,917
Other Services	6,936	$318,524,550	$803,754,007
Real Estate and Rental and Leasing	3,843	$83,898,056	$620,787,820
Agriculture, Forestry, Fishing, and Hunting	3,518	$112,634,360	$173,109,289
Mining	1,072	$106,108,139	$377,748,672
Waste Management and Remediation Services	1,031	$66,265,486	$210,448,996
Educational Services	983	$36,333,212	$51,403,161
Arts, Entertainment, and Recreation	652	$34,550,536	$91,001,086
Total	**468,450**	**$28,640,357,799**	**$92,464,019,421**

Table 4. S ESOP Indirect/Induced Economic Impact in 2010 by Industry

Industry	Employment	Labor Income	Output
Health Care and Social Assistance	96,411	$5,295,419,593	$9,457,920,528
Retail Trade	92,941	$2,907,834,079	$6,129,404,297
Finance and Insurance	87,254	$5,961,442,089	$18,354,700,010
Administrative and Support Services	78,918	$2,580,348,682	$4,624,072,865
Professional, Scientific and Technical Services	77,578	$6,069,277,525	$11,198,583,626
Accommodation and Food Services	75,590	$1,642,678,521	$4,809,052,345
Manufacturing	74,565	$5,614,484,325	$37,117,338,153
Other Services	72,887	$3,293,728,892	$7,080,174,867
Real Estate and Rental and Leasing	49,305	$1,117,125,610	$15,426,007,945
Agriculture, Forestry, Fishing and Hunting	44,113	$1,009,681,492	$4,762,933,606
Transportation and Warehousing	41,841	$2,368,696,907	$5,571,658,268
Wholesale Trade	33,832	$2,658,718,952	$5,641,579,290
Arts, Entertainment, and Recreation	23,747	$598,994,469	$1,536,704,967
Publishing, Telecommunications, etc.	21,991	$1,777,994,827	$7,480,257,045
Educational Services	18,399	$786,406,649	$1,359,972,038
Holding Companies	15,755	$1,836,447,504	$3,309,258,291
Construction	13,948	$738,856,584	$1,821,661,791
Mining	11,290	$1,187,475,863	$3,477,700,051
Utilities	5,053	$707,128,491	$3,680,550,607
Waste Management and Remediation Services	2,627	$168,863,048	$536,283,073
Total	**938,044**	**$48,321,604,102**	**$153,375,813,664**

Table 5. Top S ESOP Headquarter States in 2010

	State	# S ESOP HQs
1	California	272
2	Illinois	182
3	Minnesota	142
4	Virginia	141
5	Texas	138
6	Pennsylvania	119
7	Ohio	117
8	New York	101
9	Florida	89
10	Wisconsin	83
11	Indiana	81
12	Michigan	80
13	Missouri	71
14	Maryland	67
15	Iowa	63
16	Colorado	61
17	Arizona	58
18	Georgia	54
19	Kansas	54
20	Kentucky	52

About the Author

Alex Brill is the CEO of Matrix Global Advisors, an economic policy consulting firm. He is also a research fellow at the American Enterprise Institute. In 2010, he served as an advisor to the Simpson-Bowles Commission. Previously, he was chief economist and policy director to the House Ways and Means Committee. Prior to his time on the Hill, he served on the staff of the President's Council of Economic Advisers.

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