

BEHIND THE SCENES

BY JOHN CROSS, P.E.

While high-tech companies garner attention and praise for U.S. job creation, the structural steel industry quietly puts up big numbers as well.

APPLE, MICROSOFT AND GOOGLE are often pointed to as the best examples of job creation in the United States.

They are leaders in their field, great places to work and major corporations providing good salaries and benefits. In many ways they have become the poster children for a rebound of U.S. employment, which is still three million jobs below pre-recession levels.

Yet these three major companies employ only 145,119 in the U.S. (50,250 are employed at Apple, 57,325 at Microsoft and 37,544 at Google). By comparison, employment numbers for the domestic fabricated structural steel industry comprise nearly the same total. The fact is that with little of the fanfare associated with these three high-tech giants, the production, fabrication and erection of structural steel creates a significant number of jobs—and the subsequent increase in personal income and tax revenue—in the U.S. In the depressed construction market of 2012 it is estimated that 136,200 direct jobs were created as a result of the use of structural steel. When indirect jobs (which create goods and services used by the industry) and induced jobs (jobs created by the spending of the earnings of the industry workers) are factored in, the total rises to 272,400. The impact of these jobs is significant, generating an estimated \$11.6 billion in personal income and \$1.8 billion in tax revenue.

As nonresidential construction volumes are anticipated to rebound by 60% by 2017, these economic impacts will grow

proportionally to nearly 450,000 jobs, \$18.5 billion in personal income and \$2.9 billion in tax revenue—far more than Apple, Microsoft and Google combined. There is no question that the fabricated structural steel industry provides a significant economic benefit to industry employees, those benefitting from the spending of industry employees, federal and state governments (in the form of tax revenues) and the overall U.S. economy.

Fabricated Structural Steel Industry Job and Income Creation

	Jobs Created	Average Annual Income	Total Income in Millions
Direct Fabrication Jobs (4.9 jobs/\$10 million project)	91,800	\$36,370	\$3,339
Direct Erection Jobs (2.4 jobs/\$10 million project)	35,100	\$50,160	\$1,761
Indirect Material Jobs (0.5 jobs/\$10 million project)	9,300	\$40,070	\$373
Total Direct & Indirect Industry Jobs	136,200		\$5,472
Induced Jobs (7.8 jobs/\$10 million project)	136,200	\$45,230	\$6,160
Total Job and Income Creation	272,400		\$11,632

Survey Says

This estimated employment and economic impact of the fabricated structural steel industry is based on an AISC study that evaluated the value of construction starts in the U.S., the market share of structural steel in the domestic construction market, the average intensity of structural steel in the construction market (dollars per ton) and the documented rate of industry productivity (labor hours per ton). A copy of the detailed study is available at www.aisc.org/madeinamerica.

The creation of these jobs results in the creation of additional jobs within the U.S. economy, as wages paid for these direct and indirect jobs are used to purchase goods and services. The ratio of direct and indirect job creation to induced job creation is often debated, but a conservative approach is to assume that an equal number of induced jobs are created as direct jobs.

The economic impact of fabricated structural steel industry employment was estimated using data provided by the Bureau of Labor Standards of the U.S. Department of Commerce, which indicated that the national average wage level for an individual in the metal fabrication industry is \$36,370 while an average individual in the material production industry (mill) earns \$40,070 and the average erection industry worker earns \$50,160.

Based on 42% of structural steel usage occurring in a \$123 billion non-residential construction market in which structural steel has a 60% market share, the resulting analysis, when combined with other structural steel usage, indicates the following numbers (in the chart, above).



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The personal income generated by domestic structural steel fabrication has a direct impact on federal and state personal income tax revenue. Based on an average net federal tax liability of 12.4% and an average net state tax liability of 3.9%, structural steel industry direct and indirect job creation would contribute \$650 million in federal tax revenue and \$205 million in state tax revenue. Induced job creation would contribute an additional \$733 million in federal tax revenue and \$231 million in state tax revenue for a total of \$1.4 billion in federal tax revenue and \$436 million in state tax revenue. These values only reflect tax collections based on personal income taxes; they do not include corporate income taxes or sales taxes resulting from the increase in consumer spending enabled by increased income, which would further increase both federal and state revenue.

Staying Stateside

This economic impact will be severely reduced if structural steel is obtained and fabricated outside of the United States. Not only will the jobs directly involved in the process of steel fabrication be lost, but also the jobs from the reduced volume for material suppliers (indirect jobs) and the jobs induced by the spending of the salaries will be lost. For every percentage point of structural steel fabrication activity that moves outside the country, our economy will lose nearly 2,000 jobs, resulting in \$75 million in lost personal income and \$12 million in lost tax revenue.

Apple, Microsoft and Google may be highlighted in the media as major job generators of the rebounding economy. And they should be; they are generating much-needed American jobs. But quietly, behind the scenes, the domestic fabricated structural steel industry is providing just as many good American jobs with an even greater potential for growth as the construction market rebounds.

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