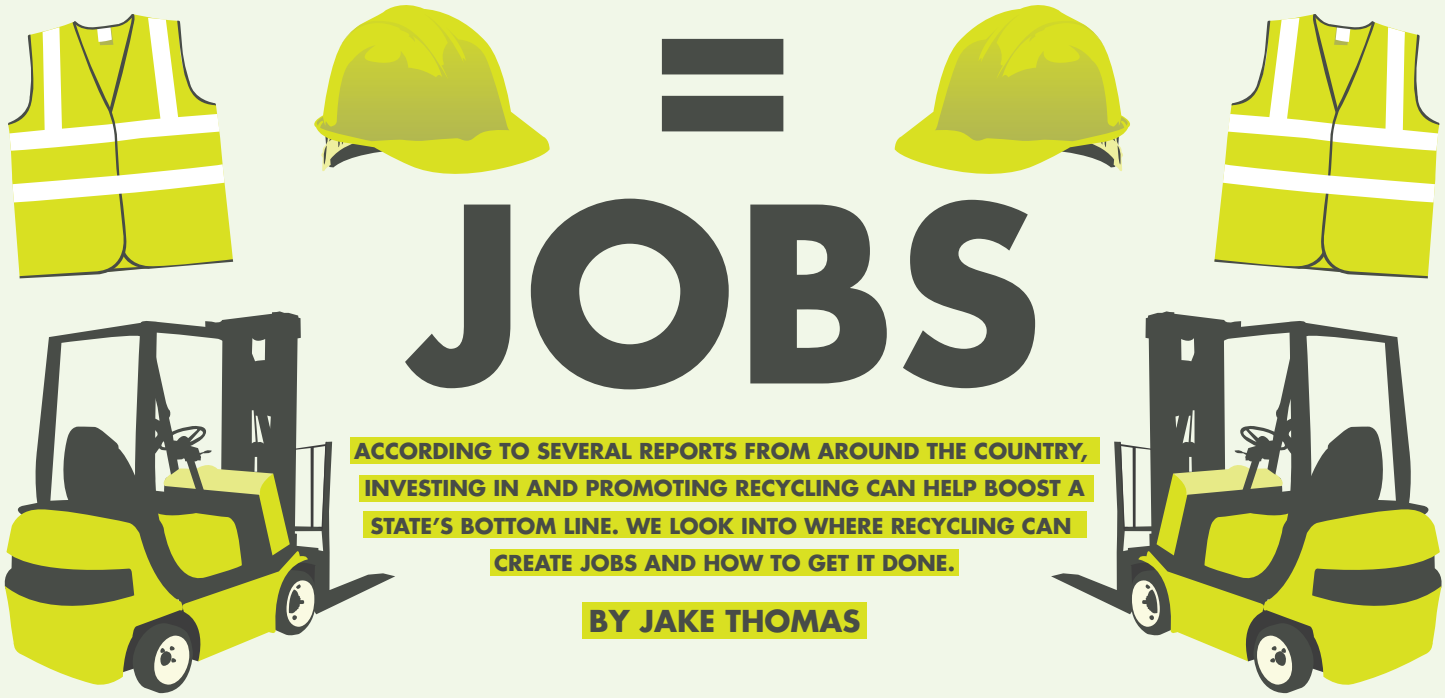
Reprinted from
RESOURCE RECYCLING

RECYCLING = JOBS



ACCORDING TO SEVERAL REPORTS FROM AROUND THE COUNTRY, INVESTING IN AND PROMOTING RECYCLING CAN HELP BOOST A STATE'S BOTTOM LINE. WE LOOK INTO WHERE RECYCLING CAN CREATE JOBS AND HOW TO GET IT DONE.

BY JAKE THOMAS

The phrases "joblessness" and "budget cuts" have been in newspaper headlines as well as on the lips of politicians locally and nationally as unemployment remains at a stubbornly-high 9 percent. But if two more words could make their way into policymakers' actions, namely "recycling" and "investment," it could result another phrase becoming a reality: "jobs created."

As politicians scramble for a way to jump-start the economy, they could be well-advised to adopt policies that direct valuable materials from landfills and towards economic activity. Scores of academic studies, conducted in different parts of the country, all reach similar conclusion: Investments in recycling create jobs and economic activity.

Jobs, jobs and more jobs

Numbers from the U.S. Department of Labor's Bureau of Labor Statistics (BLS) show that the recycling industry isn't just about hugging trees, it's big business. For the year 2010, 107,500 people were employed in what the BLS categorized as the "recyclable materials" industry, which also includes businesses working in automotive disassembly. Since 2005, the number of people employed in this sector rose by 8 percent. BLS numbers also show that the average pay for jobs in the industry is about $19 an hour, which is within striking distance of the roughly $23-an-hour average for the U.S. Additionally, on average, these jobs are full-time.

These are the sort of jobs the U.S. desperately needs right now. According to a report released last February by the National Employment Law Project, lower-wage industries, which it defined as jobs paying between $9.03 and $12.91 an hour, made up 49-percent of recent job growth.

"I think recycling has been faring better than most. The last employment report nationally was kind of a disappointment, but recycling has been one of the leaders on the employment front," says Joseph Pickard, chief economist and director of commodities for the Institute of Scrap Recycling Industries, Inc.

According to statistics from the U.S. Census Bureau, sales generated by materials recovery facilities across the country rose 46 percent between 1997 and 2007, to $4 billion annually. According to 2007 numbers, there were 1,133 materials recovery facilities in the country that had an annual payroll of $557 million.

Ten years after

One of the central ways recycling drives economic activity is explained in one of the most comprehensive studies done on the topic: "*U.S. Recycling Economic Information Study*."

Although the study, commissioned by the U.S. Environmental

Multiplicity

No industry is an island. Any of its activity is bound to influence other businesses, which was made painfully clear in the 2008 financial crises that the country is still reeling from.

The activities of businesses can have positive effects on other businesses, creating jobs, tax revenue and general prosperity. When a business makes a transaction with another business, that money is then used for other transactions and is passed further into the economy. When a company pays its workers, they spend their paychecks at other businesses that then have money to spend on its activities.

But getting an exact measure one industry has on the broader economy (usually called a "multiplier") can be tricky, and there is more than one approach.

Many studies measuring the broader economic benefits of recycling use a model referred to as "IMPLAN", which is a shortened version of "Impact analysis for PLANning." It was developed in 1993 by two researchers at the University of Minnesota and is used by a number of federal, state, academic and non-profit entities. Studies examining the recycling industries in South Carolina, Illinois and elsewhere, rely on it. So does the U.S. Environmental Protection Agency's 2001 landmark national study on the topic.

IMPLAN breaks down the economy into specific industrial categories and uses multipliers to measure their broader economic effect. The model first gauges the total output of an industry, then looks at "indirect" effects, which are the value of goods and services that the industry generates while conducting business. This might be fuel, wholesale goods, financial and legal services, raw and processed commodities and others. IMPLAN also takes into account "induced" effects, which are basically workers in the industry and related industries spending their paychecks.

IMPLAN then uses two multipliers. The Type I multiplier identifies the value of direct and indirect purchases from the industry. Type II takes into account all economic activities, including spending by workers.

A study done by DSM Environmental for the Northeast Recycling Council on the economic benefits of recycling that uses IMPLAN includes a section on the model's limitations. It states that including the indirect and induced impacts from an industry in measuring its total impact uses inputs that have already been counted for in its direct activities, which results in "significant double counting."

The study also notes that because different states have different economies of scale, a multiplier used in one part of the country shouldn't be applied to another. Additionally, it points out there is the issue of import/exports that could affect the multipliers. Additionally, the categories used for various industries don't neatly encompass all activity in the economy, reads that study.

"For example," reads the report "while the Census Bureau has reasonably captured the 'tire retread' industry, there are no precise industry sectors for 'plastics manufacturers that use secondary resin as a feedstock' or other recycling processors and manufacturers."

Protection Agency, is a bit dated (it was conducted in 2001), it still provides a good glimpse at the scope of the industry. It puts the number of recycling establishments at 56,061 that employ over a million people with an annual payroll at nearly $37 billion and gross receipts at $236 billion.

The report divides individuals employed in the industry into three segments: collection, processing and manufacturing. Of these segments, manufacturing produced the most jobs at over 29 million compared to 3 million for processing and just under a million for recycling collection.

"The progression in size from recycling collection, to recycling processing, to recycling manufacturing follows from the fact that those sectors are part of a chain where increasingly more value is added to the recovered material as it moves through the recycling chain," reads the report. "The greatest value is added in manufacturing where relatively useless raw materials of little value are made into useful products of considerable value."

In other words, recovering useful materials that would otherwise be discarded as waste and recycling them into new products that have value generates economic activity – which is needed more than ever.

Job reporting, region by region

A number of reports focusing on individual states and geographic regions have drawn similar conclusions, while presenting evidence that if governments adopt certain policies that encourage recycling and make investments to support the industry, it'll pay dividends.

A 2006 report, entitled "*Expanding Recycling in Michigan*" from Public Sector Consultants commissioned for the state, found that if Michigan made efforts to raise its low recycling rate, it would provide benefits in employment, income and tax revenue.

"Although more discards are disposed of than recycled, the recycling and reuse industry is larger than the waste management industry. This is because recycling and reuse are inherently value-added, whereas disposal is not, and value-adding processes support jobs and economic activity," reads the report echoing the earlier EPA study.

However, it also found that the state has a long way to go in bolstering its recycling rate and reaping the benefits from it. The study, which uses a calculation from the Michigan Recycling Coalition, puts the state's present recycling rate at 20 percent, lower than the average 30 percent of other Great Lakes states.

The study suggests that increasing the recycling rate in Michigan to that of its neighbors would create (either directly or through associated activity) a total of 6,810 to 12,986 jobs, about $155 to $300 million in annual income and roughly $1.8 to $3.9 billion in receipts. All of the direct and associated economic activity from the recycling sector would also generate $12 to $22 million per year in state taxes.

But getting these benefits requires investment.

"The states with the highest recycling rates are those that generally provide the greatest opportunity to recycle and have strong statewide solid waste and recycling policies," reads the report.

Citing data showing that only 37 percent of residents of Michigan have access to curbside recycling, lower than the 50 percent nationwide average, the report states

that the Wolverine State has generally not invested in developing or sustaining markets for recycled materials and has not provided adequate funding for collection programs.

The study points to other states that use money generated from tipping fees to support markets for recycled material, as well as clear recycling targets as policies worth pursuing. Earlier this year, the Michigan Recycling Coalition outlined a specific strategy in "*2011 State of Recycling in Michigan: A Way Forward*," which calls for over $75 million in investments in better data collection, education and technical assistance, infrastructure, market development, county planning and improved solid waste policy administration.

Reports and web resources

U.S. Recycling Economic Information Study	http://tinyurl.com/EPARecyclingStudy
Expanding Recycling in Michigan	http://tinyurl.com/PubMIStudy
The Economic Impact of Recycling	http://tinyurl.com/SCRecyclingJobs
Recycling Economic Information Study Update: Delaware, Maine, Massachusetts, New York, and Pennsylvania	http://tinyurl.com/StateRecyclingUpdate
2010 Recycling Economic Information Study Update for Illinois	http://tinyurl.com/ILRecyclingStudy

Creating jobs in South Carolina

Another study on a different part of the country also demonstrates the economic benefits of the recycling industry. "*The Economic Impact of Recycling*" is a 2006 study supported by the South Carolina Department of Commerce and the state Department of Health and Environmental Control, which put the Palmetto State's recycling rate at about 29 percent.

The 340 firms designated as providers of recycling services by the study offered a median annual salary of $32,222, which is higher than the $31,940 average salary paid in South Carolina. A survey conducted as part of the study also found that 92 percent of responding firms were optimistic about the growth of the industry, and 84 percent reported an average annual growth rate of 12 percent. Ninety-one percent had plans to expand, although it's worth noting that the survey was conducted before the Great Recession.

Additionally, the economic multiplier for the study found that for every dollar spent by the industry there is a total impact of $1.59 in the state economy. Additionally, it found that for every job created in the recycling industry creates another 1.4 jobs through associated economic activity.

"Our survey estimated that there are 15,600 direct jobs in the state attributable to recycling activities. This implies a total jobs impact of 37,440 jobs," reads the report.

The total economic impact of the recycling industry is estimated to be $1.5 billion per year in 2006 in South Carolina, according to the report, which generates $30,604,726 in sales taxes and $38,674,883 in income taxes.

But despite the economic benefits of recycling in the state, more could be done. The study calculated the value of recyclable materials put in landfills using data primarily from 2003, and found that there is nearly 889,615 tons of glass, steel, aluminum, plastic, paper and other scrap material annually that is languishing in landfills. Adjusting for inflation, the study found that there was over $132 million per year worth of material in landfills that could be used for economic activity and that $30 million could have been saved in tipping fees.

Exporting jobs with materials?

But not so fast, says Chaz Miller, director of state programs for the National Solid Waste Management Association, who points out that exports of recovered paper and plastic to China have surged, leaving the full economic potential of recycling unfulfilled. "I think a lot of recycling advocates don't own up to that," says Miller.

However, he also notes that there are still trucking, processing and extraction jobs at MRFs, which are kept in the country, to a large extent, as is a considerable amount of aluminum, glass and paper.

Will Sagar, board president of Carolina Recycling Association, says that there would be more jobs in the U.S. if so much material wasn't exported. However, he does say that there is still considerable collection potential that can be realized through expanded curbside collection and more efforts to get people to recycle while on the go.

He also says that the U.S. PET recycling capacity is at 1.2 billion pounds annually, and new facilities under construction will increase that by 50 percent. But with exports high, and collection of the material low, he says the industry will have a shortfall in capacity by over a billion pounds.

"That's industrial investment that's not going to be running at capacity and is going to be a drag on our economy," he says.

But the news isn't all bad, says Sagar. He points out that the industry is still growing despite the poor economy. He also says that there is enough material in the U.S. for export and to meet demands at home, if capture rates can be improved.

Sagar says that manufacturers used to set up their plants near locations where raw virgin materials could be easily extracted. Now, says Sagar, they are mining urban areas and other places where recyclables can be more easily acquired.

Specifically, he mentions a venture by Sonoco Recycling, Inc. and Shoosmith Brothers Inc. to set up a recycling facility at a landfill in Chester, Virginia in order to better collect materials.

Additionally, beverage giants Coca-Cola and PepsiCo have launched new initiatives to collect recyclables from consumers in urban areas.

According to Sagar, these developments are good news.

"We're seeing a change in the way we do business," he said. ♻

Jake Thomas is the senior writer for *Resource Recycling*. He can be reached at jake@resource-recycling.com.

Reprinted with permission from Resource Recycling, *P.O. Box 42270, Portland, OR 97242-0270; (503) 233-1305, (503) 233-1356 (fax); www.resource-recycling.com.*