

US EPA ARCHIVE DOCUMENT

RECYCLING is WORKING

The U.S. Recycling Economic Information Project

Documenting the economic impact of recycling
and reuse in the United States.

Frequently Asked Questions

A product of the National Recycling Coalition

Q: What was included in the definition of the recycling and reuse industry?

A: Establishments, whether private sector or local governments, whose employees perform hands-on recycling and reuse activities, including the first stage of manufacturing where recovered materials are consumed instead of virgin materials covered by the Project. "Hands-on" refers to physical acts of adding value to reusable products or recycled materials. This includes collecting, processing, and manufacturing products from recycled materials.

Q: How were business categories chosen?

A: Twenty-six business categories were included as part of the analysis. These twenty-six categories were selected and defined so that they were consistent with existing industrial classifications, allowing data that already existed (e.g., U.S. Economic Census data on employment, payroll, and revenue) to be used in the study.

Q: Were repair shops included in the reuse sector?

A: No. Establishments that provide repair services to an owner of a product (such as an automobile repair shop) were not included in the reuse sector. Establishments that recover products or compo-

nents that were disposal-bound and sell them back into the stream of commerce were included in the reuse sector. Examples include: computer demanufacturers, pallet rebuilders, used motor vehicle parts wholesalers, used merchandise stores (thrift stores, including antique shops), tire retreaders, and materials exchanges. Because existing data or complete contact lists (for survey purposes) for many remanufacturing establishments don't exist, the reuse economic activity estimated by this study can be considered to be very conservative.

Q: Did the study miss any segments of the recycling or reuse industry?

A: The study was extremely comprehensive in that it attempted to capture all economic activity where recyclables or reusable products were recovered and sold or otherwise transferred from generators to recyclers (including "pre-consumer" manufacturing scrap and industrial byproduct materials not classified as municipal solid waste). However, the study does omit recycling of materials for fuel use and instances in which in-house manufacturing scrap is re-injected by a manufacturer into its internal manufacturing process at that same facility.

Q: Some facilities use both recycled material and virgin material to manufacture their products – for example, a paper mill that makes 30 percent recycled-content products. How were these establishments treated in the study?

A: Establishments that have adjusted their purchasing patterns and/or processing lines to incorporate significant recycled content in their products were considered to be in the recycling and reuse industry. Economic activity for those establishments was not downgraded or otherwise apportioned by applying estimates of national average recycled-content percentages, although it is important to note that data from virgin-only establishments were excluded. However, data for establishments that use both recovered and virgin material were discounted to eliminate certain activities that were patently not recycling or reuse related, such as virgin material preparation steps (e.g., debarking trees and wood pulp production). Similarly, haulers that collect both recyclables and solid waste were discounted so that only the recyclables collection portion of their respective businesses were included.

Q: Did this study determine additional economic activity (“impacts”) created by recycling?

A: This study measured the existing number of establishments engaged in recycling and reuse, quantified the employees, wages paid and gross sales receipts of those establishments, and developed economic multipliers that can be used to project future impacts associated with increased diversion. Determining the overall “impact” of recycling and

reuse would entail comparing the entire U.S. economy in its current state to a hypothetical U.S. economy that had no recycling and reuse businesses. Unfortunately, creating a model of such an economy would be extremely complex, and would be based on many untested assumptions. Other researchers have attempted to model smaller and simpler economies (such as a state’s economy) with and without the recycling and reuse industry and have concluded that recycling and reuse produces more economic activity than an economy where all discards are disposed of.

Q: Is the study taking credit for economic activity that would still exist in an economy without recycling and reuse?

A: If recycling and reuse weren’t practiced, much of the economic activity associated with the recycling and reuse industry would likely shift to additional virgin material extraction and increased solid waste disposal activities. However, diverting materials and products of value from disposal and returning them to the stream of commerce in an efficient manner recovers the value that has previously been added to the virgin materials, conserves resources, improves industrial competitiveness, and spurs additional economic activity.

Q: Can economic modeling data from this study be used to estimate impacts for my state or locality?

A: No. Economic models are constructed based on government data for specific economic units such as a county, state, or nation. An individual model’s

numerical results, therefore, can be applied only to the specific economy it was made for because each economy is different. This was confirmed by the differences between modeling results for a series of state-level studies that were done jointly with the national study. Attempting to apply the results of the national model to a state or local economy will produce inaccurate results.

Q: How accurate are the modeling results?

A: While the modeling techniques used in the study represent the best available tools for estimating economic effects, it is thought that overall bottom-line total modeling results may be inflated as much as 15 percent due to limitations inherent in the modeling process. Modeling results for individual business categories are not subject to this error. Valid conclusions about the recycling and reuse industry as a whole can still be drawn as long as this inflation is realized and accounted for.

Q: Are there any important questions that this study has not answered, and would additional study be useful?

A: This project measured the economic effects of the recycling and reuse industry at a single point in time. It does not present a time series of data from which one could discern trends. A regular re-application of the project methodology (e.g., every three to five years) would provide useful trend data that would enable one to track changes in the size and impact of the industry. The study also found that there is not a direct connection of the complete economic benefits of recycling and reuse to those who make the choice to divert their waste products from disposal into a recycling or reuse stream. Quantifying costs and benefits that accrue at various levels of the direct recycling chain, at various levels of government, and to society in general would be useful in stimulating discussion about how to make recycling collection programs and policies consistent with the full economic benefits that can be achieved.