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An Economic Analysis of the U.S. Cleaning Products Industry "Executive Summary"

A Report Prepared for the
American Cleaning Institute

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An Economic Analysis of the U.S. Cleaning Products Industry "Executive Summary"

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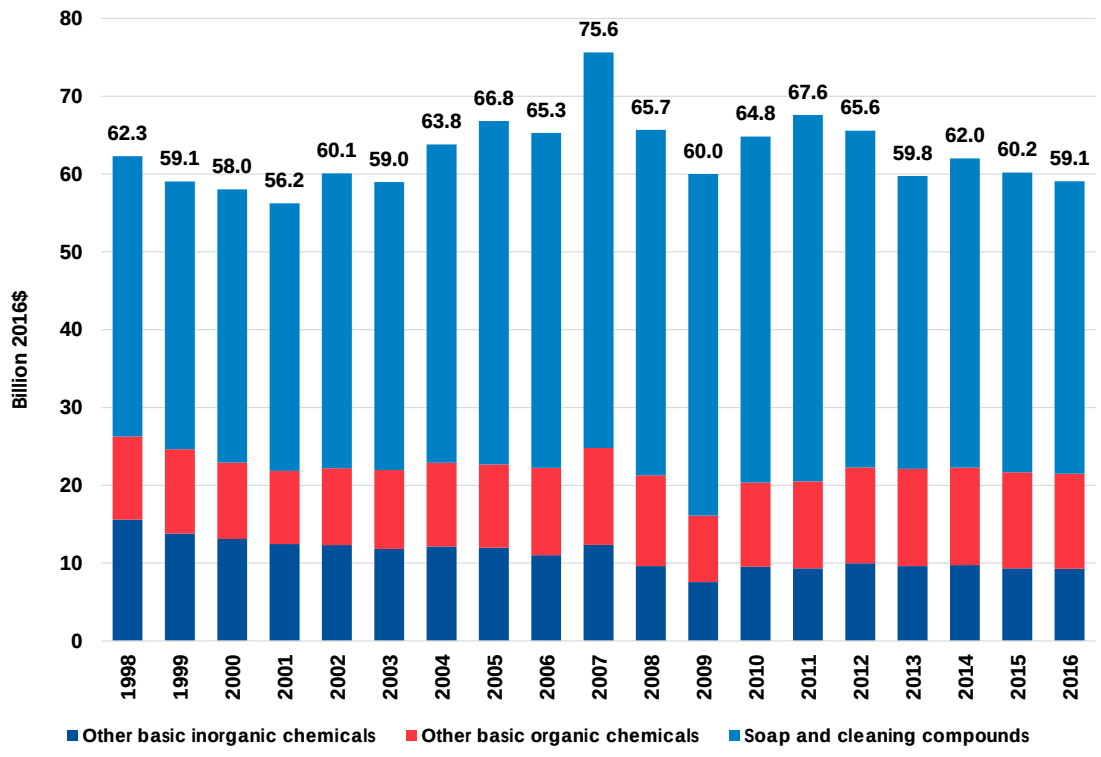
This report presents a current snapshot and summary of the recent economic evolution of the domestic cleaning products industry. The analysis provides information on the size, scope, and growth of the industry as a whole, along with its contributions to the U.S. economy.

The industry segments analyzed in this study include portions of:

- All Other Inorganic Chemicals (NAICS 32518)
- All Other Organic Chemicals (NAICS 32519)
- Soap and Cleaning Compounds (NAICS 32561)

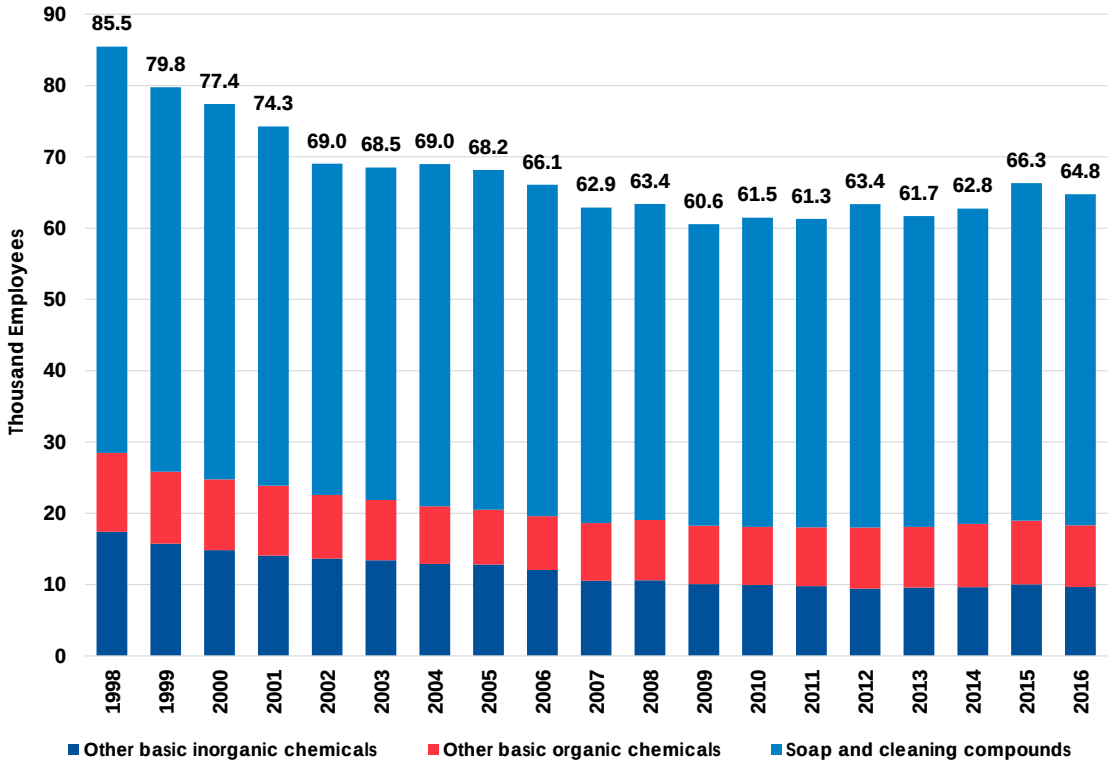
Over the period analyzed, output of ACI-related products rose from a low of $56.2 billion in 2001 to a peak of $75.6 billion in 2007, growing an average of 4.9 percent per year. Following the Great Recession, ACI-related output quickly gained traction and recovered to levels of $67.6 billion by 2011. However, expansion could not be sustained and output levels have experienced a declining trend in subsequent years. Most recently, total ACI-related output slipped from $62.0 billion in 2014 to $59.1 billion in 2016.

Figure E.1. Real Output, ACI Product Scope
Units: Billions of 2016 Dollars



Like most manufacturing industries, the cleaning product industry experienced rapid labor productivity growth. This has led to a general decline in employment over the period studied, from a high of 85.5 thousand jobs in 1998 to a low of 60.6 in 2009. ACI-related employment has trended upwards since 2009, reaching 66.3 thousand in 2015 and finishing off 2016 at 64.8 thousand jobs.

Figure E.2. Employment
Units: Thousands of Jobs



The impact of the cleaning product industry extends beyond the direct economic impacts as measured by the variables described above. In this analysis, the domestic production of cleaning products is our starting point. This concept is called the *direct output*. This activity does not exist in isolation. Instead, it generates demand from supplier industries. These supplier industries in turn generate demand for their supplier industries. All of the output generated beyond the *direct output* is called the *indirect output.* In addition to the direct and indirect impacts, we calculate *induced output*. This represents the additional demand generated by the disposable income earned in the industry (this may be both wage income and capital income).

Associated with the output at each round of impact is the employment required in that sector to produce that output, as well as the value added or income earned. The "upstream" impacts of supplier industries are displayed below in Table E.1. Total jobs within the industry (54,600) plus upstream suppliers (121,800) plus induced jobs (241,000) came to a total of 417,400 in 2015.

Table E.1. Summary of Upstream Analysis
Units Indicated

	Output (Billion $)	Employment (thousand persons)	Value Added (Billion $)	Labor Income (Billion $)
Direct	59.1	64.8	29.4	8.3
Indirect	42.3	127.3	20.7	10.4
Induced	45.3	231.0	26.7	13.2
Total	146.7	423.0	76.8	32.0

In addition to these upstream impacts, economic activity is generated in wholesale and retail trade ("downstream") industries that distribute cleaning products. These are displayed in Table E.2. Total downstream jobs, including direct, indirect, and induced, came to 333,400 in 2016. The combined impacts are seen in Table E.3, with total upstream and downstream employment amounting to 756,400.

Table E.2. Summary of Downstream Analysis
Units Indicated

	Output (Billion $)	Employment (thousand persons)	Value Added (Billion $)	Labor Income (Billion $)
Direct	15.2	187.8	10.2	6.6
Indirect	8.3	34.6	4.5	2.4
Induced	21.8	111.1	12.8	6.4
Total	45.3	333.4	27.5	15.4

Table E.3. Combined Summary
Units Indicated

	Output (Billion $)	Employment (thousand persons)	Value Added (Billion $)	Labor Income (Billion $)
Upstream	146.7	423.0	76.8	32.0
Downstream	45.3	333.4	27.5	15.4
Total	192.0	756.4	104.3	47.3

The national level economic impacts can be seen as the sum of economic impacts at the state level. National level direct production, employment, value added, and earnings have been distributed to the state level using employment shares taken from the BLS Census of Employment and Wages (CEW), for both the upstream and the downstream analysis.

In order to calculate the indirect and induced impacts of production, we use the Regional Input-Output Modeling System (RIMS II) multipliers purchased from the Bureau of Economic Analysis. RIMS II is often used by investors, planners and elected officials to assess potential local economic impacts of various projects. We have used RIMS to calculate direct, indirect, and induced upstream impacts for output, employment (jobs), total value added, and labor income.

ACI staff have identified five states of interest. These include California, Illinois, Minnesota, New York, and Texas. State-level upstream output effects are summarized in Figure E.3. Employment effects are shown in Figure E.4.

Figure E.3. State-Level Upstream Output Effects
Units: Million $

	Output (Million $)			
	Direct	Indirect	Induced	Total
California	3,816	2,456	4,109	10,381
Illinois	3,358	2,601	2,510	8,468
Minnesota	696	520	717	1,933
New York	1,619	840	2,059	4,518
Texas	4,316	4,763	4,467	13,546
Other States	45,274	31,159	31,432	107,865
USA	59,079	42,339	45,294	146,712

Figure E.4. State-Level Upstream Employment Effects
Units: Number of Jobs

	Employment (Number of Jobs)			
	Direct	Indirect	Induced	Total
California	4,401	6,751	20,206	31,359
Illinois	3,806	7,711	11,992	23,509
Minnesota	768	1,440	3,591	5,800
New York	1,759	2,504	9,868	14,130
Texas	4,079	12,718	21,756	38,553
Other States	49,937	96,126	163,537	309,599
USA	64,750	127,250	230,950	422,950

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Direct Impacts, 2016
Output: $59.1 billion
Employment: 64,800 jobs

Total output of the focus industries amounted to $59.1 billion in 2016. This activity supported roughly 64,800 jobs and generated $29.4 billion of value added, including $8.3 billion of labor compensation.

Sales from the industry can be viewed as the net result of several components. Approximately 53.1 percent of total sales are purchased by other industries. These are called intermediate demand, while all other sales are considered final demand. Final demand consists of sales to consumers (40.7 percent), sales to business for investment (1.8 percent), inventory change (1.3 percent), and net exports (3.1 percent).

Together with upstream suppliers and downstream distributors, the cleaning products industry accounts for $192 billion in output and 756,400 U.S. jobs.

Total Impacts, 2016
Output: $192.0 billion
Employment: 756,400 jobs

Important economic trends and developments impacting this industry are primarily:

- ***Employment*** – Low unemployment and rising wages bolster purchasing power, making it easier for households to purchase a wide variety of cleaning products.
- ***General Economic Health*** – Strong economic performance helps both consumers and businesses. Purchases from other industries account for 53.1 percent of cleaning products. A recession or economic slowdown would result in reduced revenues for manufacturers.
- ***Regulation and policy*** – Government regulations can have important consequences on how a product is made, marketed, and sold. Onerous regulations and standards can make small producers uncompetitive, as compliance often implies large fixed costs.
- ***Innovation*** – Breakthroughs in science and production methods could produce valuable new products that benefit both consumers and businesses.