The Household and Commercial Products Industry:

National Economic Impacts and Insights

A Report Prepared for:

HOUSEHOLD & COMMERCIAL PRODUCTS ASSOCIATION

Innovative Products For **Home. Work. Life.**

Prepared by:

Inforum

www.inforumecon.com

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Executive Summary

- The household and commercial products industry produces a wide variety of products used for "cleaning, protecting, maintaining, and disinfecting in homes and commercial environments."[1] Products are categorized as part of one of seven segments:

    1. Aerosols
    2. Air Care
    3. Antimicrobials
    4. Cleaning
    5. Floor Care
    6. Industrial and Automotive
    7. Pest Management

- Household and commercial product industry sales were estimated using uniquely detailed information available in the 2022 Economic Census, input from industry experts, and Inforum model forecasts.

- Even after adjusting for historic inflation, estimated total industry sales increased from $59 billion in 2020 to $61 billion in 2024.

- In 2024, household and commercial product manufacturing activity supported approximately 75 thousand jobs.

- The industry's workforce encompasses a diverse array of occupations. Production workers form the backbone of day-to-day manufacturing operations. Equally important, the industry relies on a substantial number of other professionals, including managers, transportation and logistics specialists, scientists, and engineers.

- The industry's economic contributions extend beyond the direct effects typically reported in standard statistical publications. Inforum uses input-output tables and modeling techniques to estimate the broader ripple effects of economic activity, including the activity of supply chains (indirect effects) and the spending of labor income (induced effects).

[1] https://www.thehcpa.org/

- Inforum modeled the direct, indirect, and induced impacts of two distinct categories of activity: Upstream and Downstream.

- Upstream – Captures the manufacturing of household and commercial products, including the activities of supply chains that provide essential inputs. Overall, upstream activity supports more than 315 thousand jobs and generates $143 billion in economic output.

Table ES-1: Upstream Impact Summary
Units: Thousand Jobs and Billion $

	Employment (Thousand Jobs)	Labor Income (Billion 2024$)	Value Added (Billion 2024$)	Output (Billion 2024$)
Direct	75.2	$7.3	$32.1	$60.6
Indirect	108.9	$10.7	$23.2	$49.0
Induced	131.1	$7.4	$20.9	$33.9
Total	315.1	$25.4	$76.2	$143.5

Source: Inforum

- Multipliers represent the ratio of indirect and induced activity to the activity of the focus industry.
  - Job multiplier: The upstream impacts in Table ES-1 reveal that for every household and commercial product manufacturing job, an additional 3.2 jobs are supported elsewhere in the economy.
  - Output multiplier: Each dollar of the industry's output generates $1.37 of output in other sectors.

- Downstream – Covers the sales of products through retail and wholesale channels.

Table ES-2: Downstream Impact Summary
Units: Thousand Jobs and Billion $

	Employment (Thousand Jobs)	Labor Income (Billion 2024$)	Value Added (Billion 2024$)	Output (Billion 2024$)
Direct	232.4	$10.9	$20.6	$32.7
Indirect	56.6	$5.4	$10.9	$20.2
Induced	119.1	$6.8	$19.0	$30.8
Total	408.1	$23.0	$50.5	$83.7

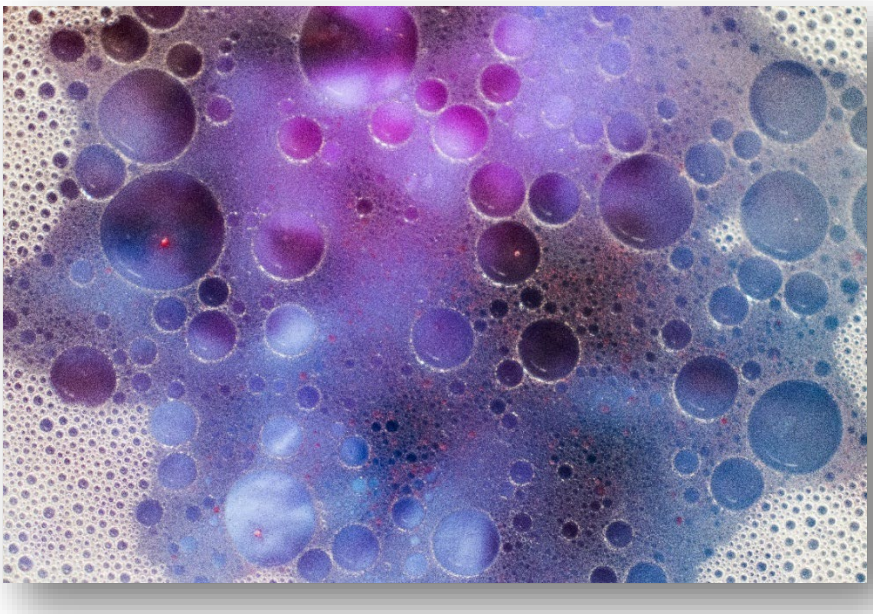
Source: Inforum

- In addition to providing essential products for homes and businesses nationwide, the household and commercial products industry makes major contributions to the U.S. economy. When the impacts associated with manufacturing (upstream) and distribution and sale (downstream) are combined, the industry supports:
  - More than 723 thousand jobs
  - Over $48 billion in labor income
  - Almost $127 billion in GDP (value added)
  - Over $227 billion in economic output

Table ES-3: Combined (Upstream + Downstream) Impact Summary
Units: Thousand Jobs and Billion $

	Employment (Thousand Jobs)	Labor Income (Billion $)	Value Added (Billion $)	Output (Billion $)
Direct	307.6	$18.2	$52.7	$93.3
Indirect	165.5	$16.1	$34.1	$69.2
Induced	250.2	$14.2	$39.8	$64.6
Total	723.3	$48.4	$126.6	$227.1

Source: Inforum



1. Introduction

The purpose of this study is to better understand the economic landscape of the U.S. household and commercial products industry, as defined by the Household & Consumer Products Association (HCPA). This report does so by:

- Defining the industry using Census Bureau data and input from industry experts.
- Examining recent industry trends through analysis based on information from Inforum's[2] economic models.
- Quantifying the industry's impact on the U.S. economy using input-output tables and methods.

1.1 Defining the Industry

The first step in any economic research is to define the scope of the analysis. Traditionally, the 6-digit NAICS[3] data typically available from statistical agencies are sufficient for most industry-based research. However, these classifications are often too broad to accurately capture the distinct components of the household and commercial products industry. For example, candle manufacturing represents only a small fraction of the NAICS category titled 'All Other Miscellaneous Manufacturing.'

In an effort to address this challenge, Inforum utilized detailed NAPCS-based product data[4] available from the Economic Census to focus on relevant activity. This information, released every five years by the Census Bureau, provides unique levels of granularity not usually available in economic data publications. The 2025 publication describes 2022 sales.

In a limited number of cases, the product-level data was still too broad; to address this, industry experts were consulted to make a conservative estimate of the relevant share of product sales.

[2] With over 50 years of experience, Inforum is dedicated to improving business planning, government policy analysis, and the general understanding of the economic environment. Learn more about Inforum at: https://inforumecon.com/

[3] NAICS refers to the North American Industry Classification System. Most U.S. economic statistical agencies use this system to classify businesses by industry. More digits in a NAICS code correspond to a more granular industry. Additional information about NAICS can be found at: https://www.census.gov/naics/

[4] Census product level data is defined using the North American Product Classification System (NAPCS). More information about NAPCS is available at: https://www.census.gov/naics/napcs/

Table 1 presents the product segments covered by HCPA and provides examples of products within each segment that were analyzed.

Table 1: Household and Commercial Product Segments

Aerosol	Product Code (NAPCS Collection Code)
Air fresheners (aerosol-type)	2046250000
Contract manufacturing	2053425000
Hair spray	2010550000
Shave foam	2010650000
Spray paint	2040350000
Sunscreen	2010625000
Waste disposal	6000525000
Whipped cream	2001305000

Air Care	Product Code (NAPCS Collection Code)
Air fresheners	2007850000
Candles	2006750000
Potpourri	2007050000
Toilet preparations	2010500000

Antimicrobials	Product Code (NAPCS Collection Code)
Disinfectants, nonagricultural, industrial, and institutional	2046225000
Household soaps, excluding specialty cleaners	2007800000
Hard surface cleaners for the bathroom, toilet and kitchen	2007875000

Cleaning	Product Code (NAPCS Collection Code)
Dishwashing detergents	2007775000; 2046075000
Fabric softeners and laundry additives	2046375000; 2007950000
Glass, carpet, drain and biochemical cleaners	2046210000
Hard surface cleaners for the bathroom, toilet and kitchen	2046060000
Industrial and institutional laundry products	2046350000
Laundry detergents	2007925000
Leather Care	2005375000; 2021825000
Misc. cleaning products	2007825000
Soap	2010480000
Surfactants (surface active agents)	2021775000

Floor Care	Product Code (NAPCS Collection Code)
Polish	2046300000; 2007900000
Waxes	2041980000

Industrial and Automotive	Product Code (NAPCS Collection Code)
Automotive antifreeze, automotive cleaners, fuel additives	2042325000
Automotive lubricant	2042330000
Automotive polishes	2042255000
Belt dressings, cutting oils, mold releases and multi-purpose solvents	2041920000
Contract Manufacturing	2053430000
Industrial and institutional soaps	2046175000
Kerosene	2019425000
Lubricants	2024025000
Solvents	2024075000; 2024100000; 2040500000

Pest Management	Product Code (NAPCS Collection Code)
Commercial, institutional, and lawn and garden pesticides and chemicals	2034830000
Personal insect repellents	2034860000

1.2 Report Layout

Section 2 of the study provides an overview of recent industry activity, including trends for sales, employment, and labor income.

Section 3 makes use of input-output tables and techniques to judge the total economic contribution of household and commercial products manufacturing and sales. The focus industries listed above help support activity in addition to the *direct impacts* reported in official statistics. Indeed, they operate in a dynamic supply chain that buy from and sell to each other. Materials, energy, and services are purchased by the focus industries to support manufacturing efforts; such effects are known as *indirect impacts*. Additionally, a portion of the income earned by direct and indirect employees is spent on goods and services; this activity is known as *induced impacts*.

Section 4 summarizes the report's findings and offers concluding thoughts.

2. Industry Overview

This section provides an overview of recent industry activity, including trends for sales, employment, and labor compensation.

For the presentation below, data was aggregated to the following categories which align with HCPA divisions:

1. Aerosols
2. Air Care
3. Antimicrobials
4. Cleaning
5. Floor Care
6. Industrial and Automotive
7. Pest Management

2.1 Industry Sales

Table 2 and Figure 1 summarize recent sales activity for relevant industry divisions.

As described in Section 1.1, detailed sales estimates for 2022 come from the Census Bureau's Economic Census. Inforum used this data to track recent sales trends, matching each product to its main producing industry and analyzing performance over a five-year period. Sales data was adjusted for inflation and are presented in real 2024 dollars.

Total inflation-adjusted sales grew three of the last four years, rising from $59.3 billion in 2020 to $60.6 billion in 2024. Most segments experienced moderate sales growth in 2021 and small declines in 2022. In 2024, all segments experienced a growth in sales from the previous year, with the largest percentage gains seen in 'Air Care' and 'Pest Management.'

Contributing $33.7 billion in sales in 2024, the 'Cleaning Products' segment dominates the household and commercial products industry, accounting for over 55 percent of 2024 sales. The 'Industrial and Automotive' segment ($9.1 billion) also contributed a large share, followed by 'Pest Management' ($5.4 billion), 'Air Care' ($4.8 billion), 'Antimicrobials' ($4.7 billion), 'Floor Care' ($1.7 billion) and 'Aerosol' ($1.1 billion).[5]

The final column of Table 2 highlights the average annual growth between 2020 and 2024. Four of the seven segments listed recorded positive sales growth over the analyzed time horizon. The most rapid growth was within 'Air Care' (+3.6 percent per year), 'Pest Management' (+3.1 percent per year) and 'Industrial and Automotive' (+2.4 percent per year). Overall, inflation-adjusted sales grew by an average of 0.5 percent per year between 2020 and 2024.

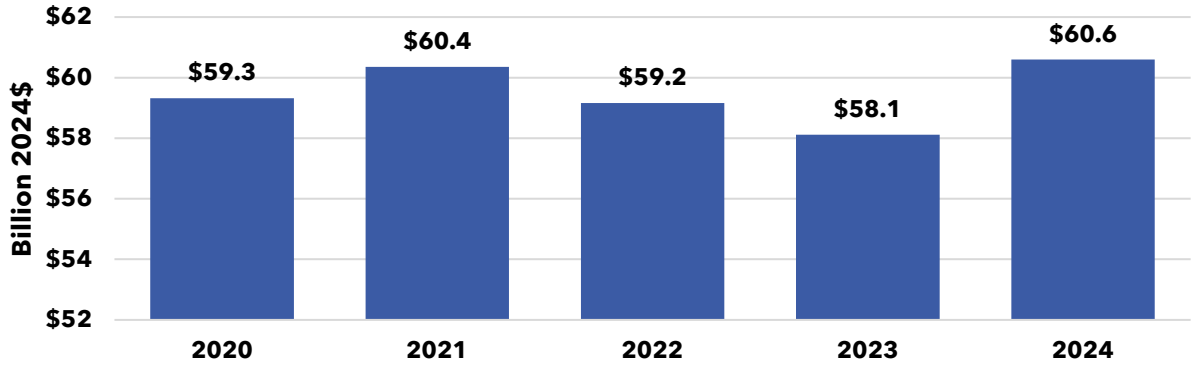
[5] Due to available economic data, levels in this report for the 'Aerosol' segment are likely lower than the true HCPA scope, as a significant amount of activity is captured in other segments. For example, an antimicrobial product using aerosol technology is likely included in the 'Antimicrobial' segment throughout this report, and not in the 'Aerosol' segment. Sales data from the Census Bureau's 2022 Economic Census is classified by product, and though it contains vast detail, it does not contain the level of granularity needed to distinguish these types of aerosol products from others, in many cases. See Table 1 for a breakdown of specific products classified in the 'Aerosol' segment for the scope of this report.

Table 2: Sales by Segment
Units: Billion 2024$

	2020	2021	2022	2023	2024	*2020-2024 Avg. Annual % Change*
Aerosol	$1.2	$1.2	$1.1	$1.1	$1.1	*-1.1%*
Air Care	$4.2	$4.4	$4.4	$4.3	$4.8	*3.6%*
Antimicrobials	$4.9	$4.8	$4.8	$4.5	$4.7	*-0.6%*
Cleaning	$34.4	$34.3	$34.2	$32.3	$33.7	*-0.5%*
Floor Care	$1.7	$1.7	$1.7	$1.7	$1.7	*1.1%*
Industrial and Automotive	$8.3	$8.8	$8.3	$9.1	$9.1	*2.4%*
Pest Management	$4.7	$5.2	$4.6	$5.1	$5.4	*3.1%*
Total	$59.3	$60.4	$59.2	$58.1	$60.6	*0.5%*

Source: Census Bureau, Inforum calculations

Figure 1: Total Sales
Units: Billion 2024$



Source: Census Bureau, Inforum calculations

2.2 Industry Employment

Table 3 and Figure 2 highlight household and commercial products industry employment over the last half-decade. Each product was mapped to an Inforum model sector and 2022 employment data was calculated using industry-level ratios of sales to employment (i.e. number of jobs per million $ of output). Trends over time correspond to data found in the Bureau of Labor Statistics' Quarterly Census of Employment and Wages.

According to estimates, total household and commercial product industry employment jumped from about 71 thousand in 2020 to almost 74 thousand in 2021. Since then, total employment has climbed gradually, reaching over 75 thousand jobs in 2024.

Taking a closer look, over half of the industry's total jobs are concentrated in the 'Cleaning' segment, which employed an estimated 43 thousand employees in 2024. 'Air Care' supported over 12 thousand employees, while the other five segments each employed less than 10 thousand employees in the year.

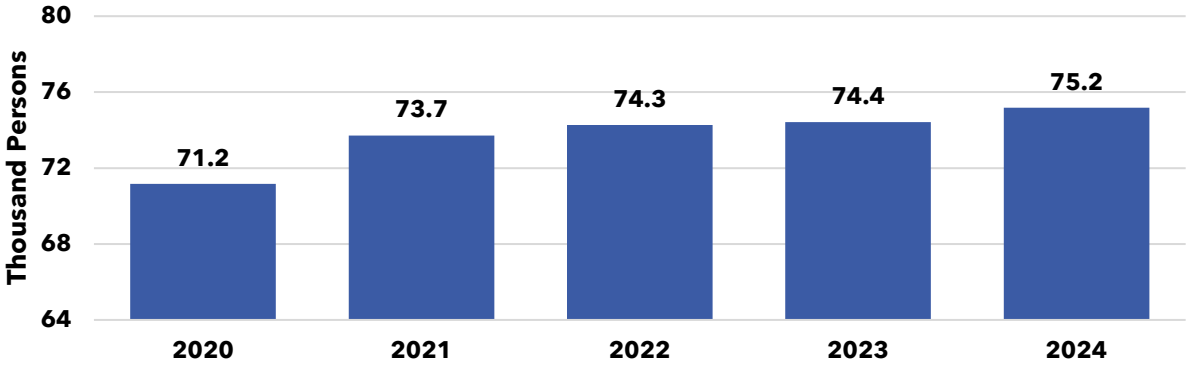
The 'Air Care' segment recorded the most rapid average annual growth over the period analyzed, with the number of jobs increasing by 2.6 percent per year. All seven segments recorded average annual gains between 2020 and 2024, with overall industry employment expanding by approximately 1.4 percent per year.

Table 3: Employment by Segment
Units: Thousand Persons

	2020	2021	2022	2023	2024	*2020-2024 Avg. Annual % Change*
Aerosol	1.5	1.5	1.6	1.6	1.5	*0.9%*
Air Care	11.3	11.9	12.4	12.6	12.5	*2.6%*
Antimicrobials	5.9	6.2	6.1	6.1	6.2	*1.3%*
Cleaning	40.7	42.2	42.0	42.0	42.8	*1.2%*
Floor Care	1.7	1.7	1.7	1.7	1.7	*1.0%*
Industrial and Automotive	6.5	6.5	6.6	6.6	6.6	*0.5%*
Pest Management	3.6	3.7	3.8	4.0	3.7	*0.9%*
Total	71.2	73.7	74.3	74.4	75.2	*1.4%*

Source: Bureau of Labor Statistics (BLS), Census Bureau, Inforum calculations

Figure 2: Total Employment
Units: Thousand Persons



Source: BLS, Census Bureau, Inforum calculations

Importantly, the workforce in the household and commercial product industry encompasses a diverse range of occupations. Each employee type brings unique skills that contribute to the industry's overall operations.

Table 4 presents the primary occupation types of workers in chemical manufacturing, a key segment of the household and commercial product industry, which accounted for over 80 percent of total employment in 2024.

Table 4: Occupational Composition in 2024
Units: Percent Share

Occupation Type	Share of Employment
Production occupations	42.9%
Management occupations	9.6%
Office and administrative support occupations	8.5%
Transportation and material moving occupations	8.1%
Installation, maintenance, and repair occupations	7.2%
Life, physical, and social science occupations	6.0%
Business and financial operations occupations	6.0%
Architecture and engineering occupations	5.6%
Sales and related occupations	3.3%
Computer and mathematical occupations	1.3%
Construction and extraction occupations	0.6%
Building and grounds cleaning and maintenance occupations	0.4%
All other occupations	0.6%

Source: BLS

More than four in ten workers in the industry are classified under the 'Production' category. These roles are primarily filled by chemical processing machine operators, packaging and filling machine operators, and related production staff, who are essential to the day-to-day operations of the industry.

The next largest occupation groups are 'Management' (9.6 percent) and 'Office and Administrative Support' (8.5 percent), which provide leadership, coordination, and organizational support. Other occupation types, including 'Life, Physical, and Social Science' (6.0 percent) and 'Architectural and Engineering' (5.6 percent), make critical contributions through product design, technical innovation, and process improvement.

2.3 Industry Labor Income

Table 5 and Figure 3 summarize labor force income for relevant industry segments. Labor income was estimated by multiplying the 2022 sales information by a ratio of labor income to output. Next, data was projected forward and backward using information from the BLS Quarterly Census of Employment and Wages. Finally, labor income was adjusted for inflation using the BLS Consumer Price Index.

Despite employment growing between 2020 and 2022, inflation-adjusted labor income shrank. Both economic impacts from the pandemic and historic levels of inflation in the country were likely contributing factors. However, the household and commercial products industry's labor income stabilized in 2023 and recorded annual growth of over 5 percent in 2024.

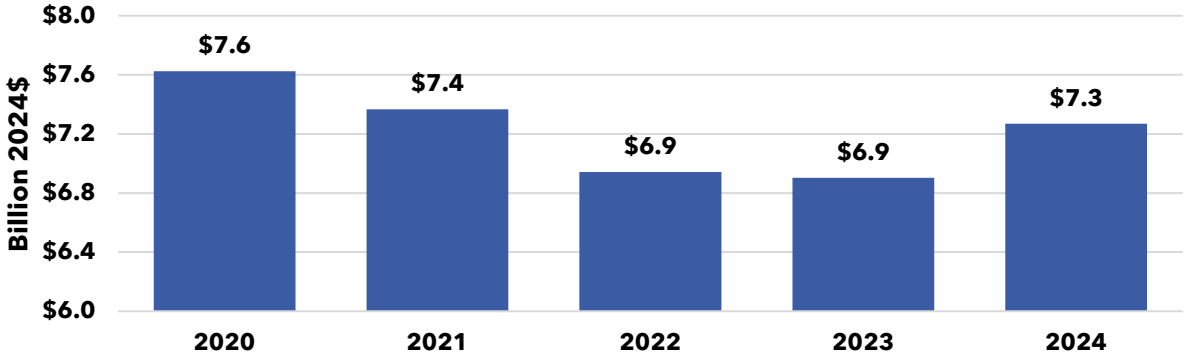
Upon closer examination, the recent expansion in labor income is primarily due to growth within the 'Cleaning' segment (+7.7 percent in 2024); this growth outpaced the segment's employment growth of approximately 2.0 percent that same year.

Table 5: Labor Compensation by Segment
Units: Billion 2024$

	2020	2021	2022	2023	2024	*2020-2024 Avg. Annual % Change*
Aerosol	$0.1	$0.1	$0.1	$0.1	$0.1	*-0.5%*
Air Care	$0.9	$0.9	$0.9	$0.9	$0.9	*1.9%*
Antimicrobials	$0.7	$0.6	$0.6	$0.6	$0.6	*-1.7%*
Cleaning	$4.7	$4.4	$4.1	$4.0	$4.3	*-1.7%*
Floor Care	$0.2	$0.2	$0.2	$0.2	$0.2	*-1.8%*
Industrial and Automotive	$0.7	$0.7	$0.6	$0.6	$0.7	*-1.5%*
Pest Management	$0.4	$0.4	$0.4	$0.4	$0.4	*-0.9%*
Total	$7.6	$7.4	$6.9	$6.9	$7.3	*-1.2%*

Source: BLS, Census Bureau, Inforum calculations

Figure 3: Total Labor Compensation
Units: Billion 2024$



Source: BLS, Census Bureau, Inforum calculations

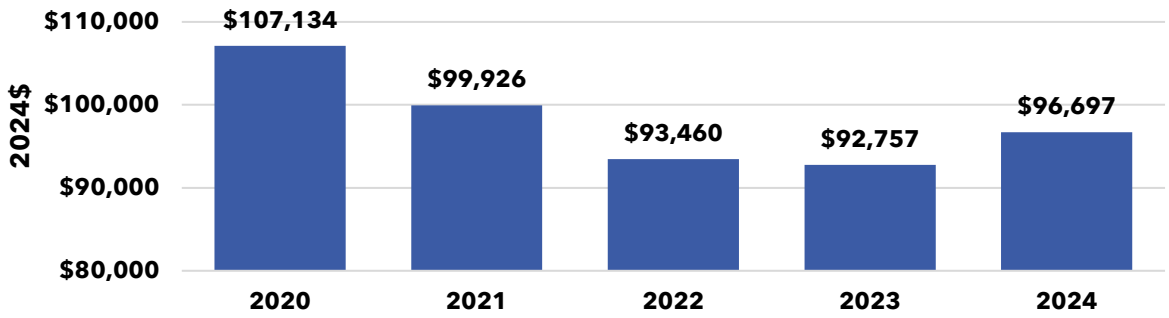
Table 6 and Figure 4 show another useful measure, average compensation per employee in each segment. This is calculated as total labor compensation divided by total employees for each segment. Following a similar pattern as total labor compensation, average compensation fell significantly from 2020 through 2022 before steadying in 2023 and climbing in 2024. Over the full period, average income fell by 2.6% each year on average, which can be explained by simultaneous employment growth and labor income declines. The 'Pest Management' segment had the highest average labor income in 2024, at $105 thousand, while 'Air Care' had the lowest, at $74 thousand.

Table 6: Average Labor Compensation by Segment
Units: 2024$

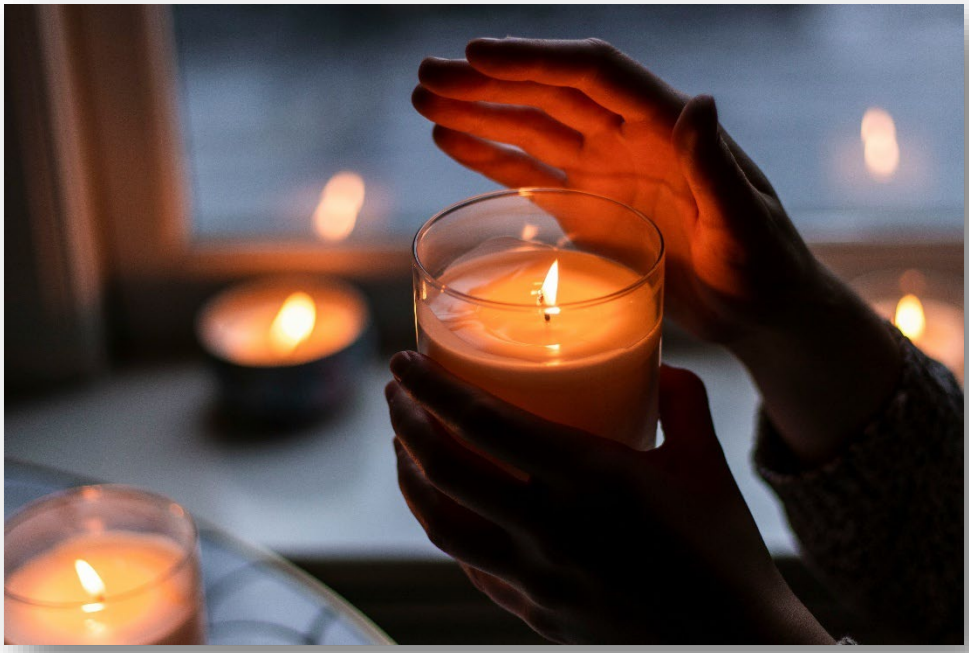
	2020	2021	2022	2023	2024	*2020-2024 Avg. Annual % Change*
Aerosol	$88,772	$85,851	$82,935	$81,394	$83,939	-1.4%
Air Care	$76,505	$75,352	$72,460	$72,822	$74,447	-0.7%
Antimicrobials	$114,263	$104,941	$96,813	$95,984	$101,441	-3.0%
Cleaning	$114,314	$105,105	$97,046	$96,216	$101,595	-2.9%
Floor Care	$111,815	$103,535	$96,565	$95,778	$100,061	-2.8%
Industrial and Automotive	$108,379	$103,080	$98,831	$97,887	$99,846	-2.1%
Pest Management	$113,336	$110,029	$110,504	$109,000	$105,346	-1.8%
Total	$107,134	$99,926	$93,460	$92,757	$96,697	-2.6%

Source: BLS, Census Bureau, Inforum calculations

Figure 4: Average Labor Compensation
Units: 2024$



Source: BLS, Census Bureau, Inforum calculations



3. National-Level Economic Impacts

The impact of the household and commercial products industry extends beyond the direct economic impacts as measured by the data presented in the previous section. Economic activity is also supported in upstream industries which provide materials, energy, and various services. Additionally, economic activity is generated downstream of manufacturers through wholesalers and retailers that distribute household and commercial products to end markets.

3.1 Metrics and Key Terms

This section describes the concepts being measured, key terms, and other considerations to keep in mind.

Three types of economic impacts are derived in this study:

1. Direct Impacts - Activity generated within the focus industry. In this case, the manufacture and sales of household and commercial products serve as the direct impact.
2. Indirect Impacts - Activity generated in other industries due to purchases (materials, energy, and services) by the focus industry through the supply chain. For example, an automobile manufacturing firm might purchase tires, steel, and electrical components to produce their final product.
3. Induced Impacts - Activity generated by spending linked to income earned from direct and indirect production.

The concepts measured in this analysis include:

1. Employment - Persons employed by an industry.
2. Labor Income - Labor income is the sum of salary/wages and supplements. Supplements may take the form of employer contributions for employee pensions and insurance funds (such as health insurance) and employer contributions for government social insurance (social security).
3. Value Added – Value added is equivalent to the GDP impact and represents the enhancement an industry provides (ex: assembly) to a product/service before offering it to the end consumer. Furthermore, it is the difference between the total revenue of an industry and the cost of intermediate inputs.

Components of value added include employee labor compensation, taxes on production and imports, and gross operating surplus (including profits).

4. Output – Output refers to the total value of all goods and services produced by an industry. This includes both intermediate demand (sales of intermediate inputs to other industries) and final demand (personal consumption, investment, government investment/consumption, and net exports).

Other considerations:

- The results described in subsequent sections describe the economic contribution of household and commercial products manufacturing and wholesale/retail sales for a single year. For this analysis, the impacts describe the year 2024.
- Due to lags in the publication of data, 2024 represents a forecast year in Inforum's models. With that said, Inforum regularly updates its models to incorporate the latest data from BEA, BLS, and other statistical agencies.
- Recent policy changes, including the implementation of import tariffs, may affect how representative the impacts described in this report are to 2025 and beyond.

3.2 Upstream Impacts

In the upstream analysis, the activity of household and commercial products manufacturers serves as the direct impacts. The direct output ($60.6 billion), employment (75.2 thousand), and labor income ($7.3 billion) match the 2024 values described in Section 2. Additionally, the industry directly contributes $32.1 billion in value added; recall that value added is equivalent to GDP. These figures are shown in the first row of Table 7.

Input-output tables and methods help quantify the upstream supply chain purchases associated with the production of household and commercial products. The upstream indirect impacts represent the materials, energy, and services required by the focus industry. As displayed in the second row of Table 7, indirect impacts include 108.9 thousand jobs, $10.7 billion in labor income, $23.2 billion in value added, and nearly $49.0 billion in output.

After taxes and savings are removed, employees of direct and indirect firms spend their earnings on a wide variety of goods and services. This activity, known as induced impacts, is shown in the third row of Table 7. Estimated induced impacts include 131.1 thousand jobs, $7.4 billion in labor income, $20.9 billion in value added, and $33.9 billion in output.

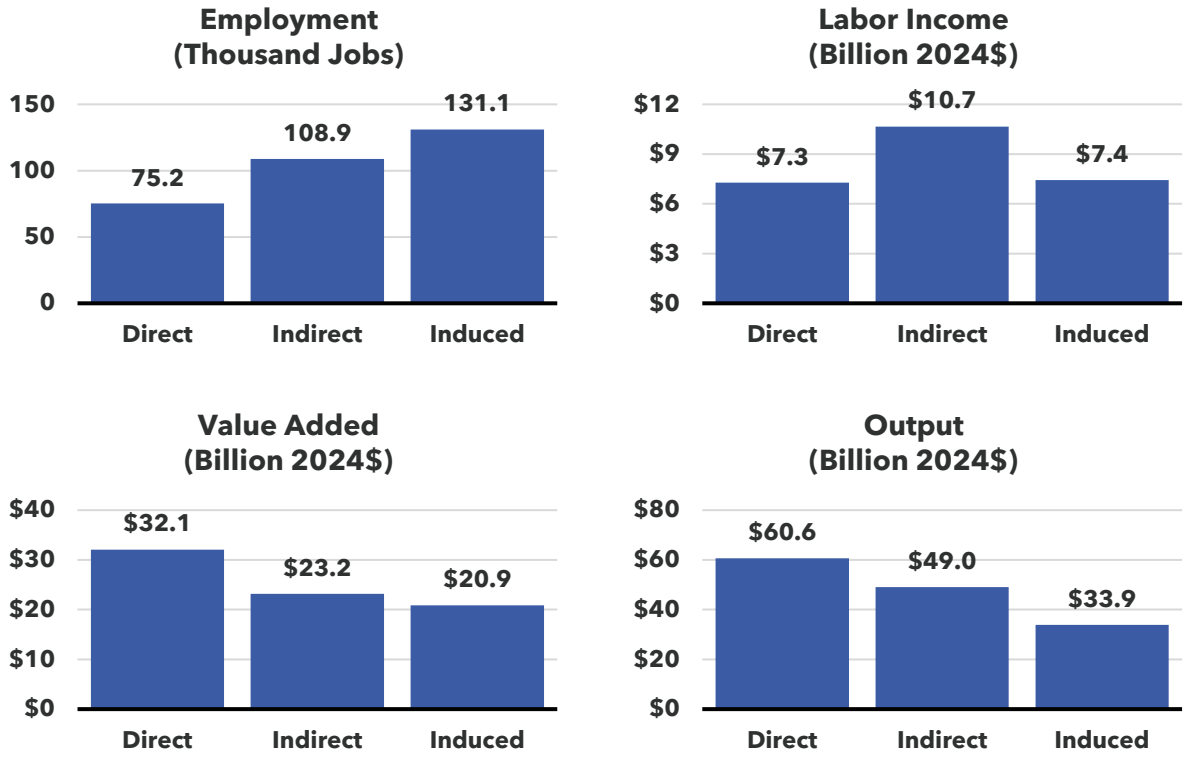
Total upstream impacts, shown in the final row of Table 7, are approximately 315 thousand jobs, $25 billion in labor income, over $76 billion in value added, and $143 billion in total output.

Table 7: Upstream Impact Summary
Units: Thousand Jobs and Billion 2024$

	Employment (Thousand Jobs)	Labor Income (Billion 2024$)	Value Added (Billion 2024$)	Output (Billion 2024$)
Direct	75.2	$7.3	$32.1	$60.6
Indirect	108.9	$10.7	$23.2	$49.0
Induced	131.1	$7.4	$20.9	$33.9
Total	315.1	$25.4	$76.2	$143.5

Source: Inforum

Figure 5: Upstream Impact Summary
Units: Thousand Jobs and Billion 2024$



Economic multipliers can be calculated using the information provided in Table 7. Multipliers represent the ratio of indirect and induced activity to the activity of the industry of focus. Each household and commercial product manufacturing job supports 3.2 additional jobs elsewhere in the economy.[6] Likewise, every dollar of the industry's output generates $1.37 of output in other sectors.[7]

As noted earlier, activity in the household and commercial products industry stimulates upstream business within the supply chain. These transactions generate economic output across a distinct set of industries. Table 8 highlights the top industries based on indirect output, with each row representing a specific industry from which household and commercial product manufacturers source goods and services.

[6] Employment multiplier = (Indirect Employment + Induced Employment) / Direct Employment = (108.9 + 131.1) / 75.2 = 3.2

[7] Output multiplier = (Indirect Output + Induced Output) / Direct Output = ($49.0 + $33.9) / $60.6 = $1.37

At more than 11 percent of indirect output, 'Wholesale trade' ($5.5 billion) is ranked first. This industry supports manufacturers by helping to facilitate the efficient purchase of necessary inputs. The 'Soap and cleaning compounds' industry ($3.1 billion), contribute essential inputs for household and commercial products manufacturing. Other key categories of upstream inputs provide various types of chemicals, including 'Other basic organic chemicals' ($3.0 billion), 'Petrochemicals' ($1.9 billion), and 'Petroleum refineries' ($1.9 billion). In particular, 'Management of companies and enterprises' ($2.3 billion) assist firms by providing strategic or organizational planning support. Collectively, the top ten industries listed in Table 8 account for nearly half of total indirect output.

Table 8: Upstream Indirect Output – Top Industries
Units: Billion $ and Share of Total

Rank	Industry	Indirect Output (Billion 2024$)	% Share
1	Wholesale trade	5.5	11.2%
2	Soap and cleaning compounds	3.1	6.3%
3	Other basic organic chemicals	3.0	6.2%
4	Management of companies and enterprises	2.3	4.7%
5	Petrochemicals	1.9	3.9%
6	Petroleum refineries	1.9	3.9%
7	Other real estate	1.3	2.6%
8	Paperboard containers	1.1	2.3%
9	Other basic inorganic chemicals	1.0	2.1%
10	Crude oil extraction	1.0	2.1%
	All Other Industries	26.8	54.6%
	Total Indirect Output	49.0	100.0%

Source: Inforum

Table 9 lists the top industries, as measured by induced output. Induced activity reflects the spending of labor income earned by employees in both the direct and indirect sectors, linking economic activity to household consumption patterns. Consequently, the industries listed match what a typical household consumes. Major categories include real estate ('Owner-occupied housing' and 'Tenant-occupied housing'), health care ('Hospitals' and 'Offices of physicians'), and general personal consumption ('Other retail' and 'Wholesale Trade'). This listing helps illustrate how earnings generated by the household and commercial products industry and its supply chain circulate through the broader economy.

Table 9: Upstream Induced Output – Top Industries

Units: Billion $ and Share of Total

Rank	Industry	Induced Output (Billion 2024$)	% Share
1	Owner-occupied housing	4.1	12.0%
2	Hospitals	2.6	7.7%
3	Other retail	2.5	7.3%
4	Wholesale trade	1.5	4.3%
5	Offices of physicians	1.2	3.5%
6	Tenant-occupied housing	1.0	3.1%
7	Limited-service restaurants	1.0	2.9%
8	Insurance carriers	0.9	2.6%
9	Full-service restaurants	0.8	2.3%
10	Monetary authorities and depository credit intermediation	0.7	2.0%
	All Other Industries	17.7	52.4%
	Total Induced Output	33.9	100.0%

Source: Inforum

3.3 Downstream Impacts

In addition to the economic activity attributed to manufacturers and their upstream supply chains, output and employment are supported by the sale of household and commercial products. This downstream activity encompasses the wholesale and retail distribution of goods to end consumers and is quantified using wholesale and retail margin data from the Bureau of Economic Analysis (BEA) input-output tables. Margins represent "the value of the trade services provided in delivering commodities from producers' establishments to purchasers, where the purchaser pays for the services."[8]

Table 10 and Figure 6 summarize the direct, indirect, and induced impacts associated with downstream sales. The wholesale and retail margins linked to the manufacturing activity discussed in Section 3.2 serve as the basis for the direct impacts in this downstream analysis. This wholesale and retail activity directly supports approximately 232 thousand jobs, $11 billion in labor income, $21 billion in value added, and $33 billion in output.

The wholesale and retail industries engaged in downstream sales purchase a unique set of materials, energy, and services. The resulting indirect downstream impacts amount to roughly 57 thousand jobs, $5 billion in labor income, $11 billion in value added, and $20 billion in output.

Finally, a portion of the income earned through downstream direct and indirect activity circulates back into the economy through household spending. Induced impacts, shown in the third row of Table 9, are estimated to support about 119 thousand jobs, $7 billion in labor income, $19 billion in value added, and $31 billion in output.

In total, these downstream impacts are estimated to support roughly 408 thousand jobs, $23 billion in labor income, $50 billion in value added, and $84 billion in total output. These results underscore how the sale, in addition to the manufacture, of household and commercial products contributes to the economy.

[8] https://www.bea.gov/help/glossary/margin-or-margin-costs

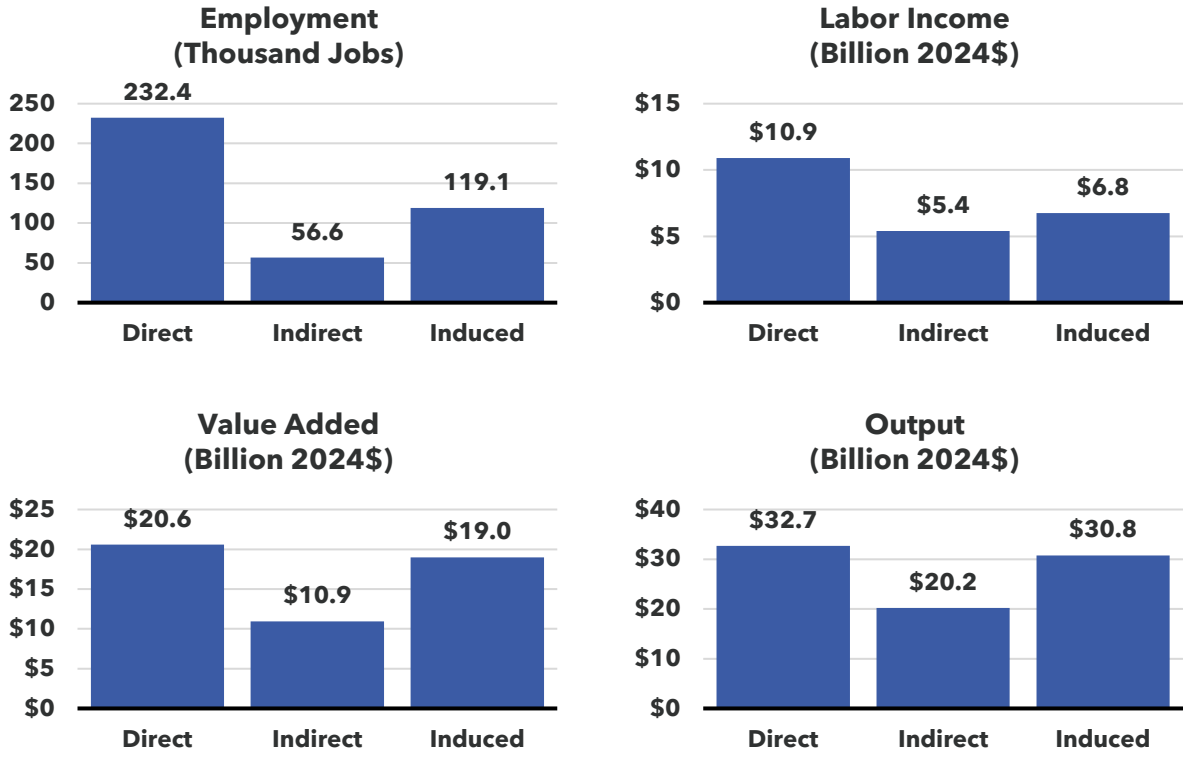
Table 10: Downstream Impact Summary
Units: Thousand Jobs and Billion $

	Employment (Thousand Jobs)	Labor Income (Billion 2024$)	Value Added (Billion 2024$)	Output (Billion 2024$)
Direct	232.4	$10.9	$20.6	$32.7
Indirect	56.6	$5.4	$10.9	$20.2
Induced	119.1	$6.8	$19.0	$30.8
Total	408.1	$23.0	$50.5	$83.7

Source: Inforum

Economic multipliers can also be calculated for downstream activity. One downstream job engaging in wholesale/retail sales of household and commercial products helps support 0.8[9] other jobs in the economy. Additionally, one dollar of wholesale/retail output generates $1.56[10] of output elsewhere in the economy.

Figure 6: Downstream Impact Summary
Units: Thousand Jobs and Billion $



[9] Employment multiplier = (Indirect Employment + Induced Employment) / Direct Employment = (56.6 + 119.1) / 232.4 = 0.76

[10] Output multiplier = (Indirect Output + Induced Output) / Direct Output = ($20.2 + $30.8) / $32.7 = $1.56

Table 11 provides a detailed view of the industries contributing to downstream indirect output. These are the sectors from which wholesalers and retailers purchase goods and services to support their day-to-day operations.

The largest expenditure is on 'Other real estate' ($3.0 billion), which includes spending on facilities and land. Ranked second, the 'Management of companies and enterprises' ($1.6 billion) industry provides strategic guidance and other professional services. The third largest purchase, at $0.9 billion, is for 'Electric power generation, transmission, and distribution.' Together, these three industries account for more than a quarter of all indirect downstream output.

Table 11: Downstream Indirect Output – Top Industries
Units: Billion $ and Share of Total

Rank	Industry	Indirect Output (Billion $)	% Share
1	Other real estate	3.0	14.8%
2	Management of companies and enterprises	1.6	8.0%
3	Electric power generation, transmission, and distribution	0.9	4.5%
4	Advertising, public relations, and related services	0.9	4.4%
5	Wholesale trade	0.9	4.4%
6	Lessors of nonfinancial intangible assets	0.9	4.2%
7	Warehousing and storage	0.7	3.3%
8	Monetary authorities and depository credit intermediation	0.6	3.2%
9	Services to buildings and dwellings	0.6	3.0%
10	Insurance carriers	0.5	2.4%
	All Other Industries	9.6	47.8%
	Total Indirect Output	20.2	100.0%

Source: Inforum

Table 12 shows the induced output by industry generated through downstream activity. Although the industry rankings mirror those for upstream induced output, the dollar values differ. This similarity in ranking reflects that both tables capture household consumption, particularly spending on housing, healthcare, and general goods and services.

Table 12: Downstream Induced Output – Top Industries
Units: Billion $ and Share of Total

Rank	Industry	Induced Output (Billion $)	% Share
1	Owner-occupied housing	3.7	12.0%
2	Hospitals	2.4	7.7%
3	Other retail	2.2	7.3%
4	Wholesale trade	1.3	4.3%
5	Offices of physicians	1.1	3.5%
6	Tenant-occupied housing	0.9	3.1%
7	Limited-service restaurants	0.9	2.9%
8	Insurance carriers	0.8	2.6%
9	Full-service restaurants	0.7	2.3%
10	Monetary authorities and depository credit intermediation	0.6	2.0%
	All Other Industries	16.1	52.4%
	Total Induced Output	30.8	100.0%

Source: Inforum

3.4 Combined (Upstream + Downstream) Impacts

The previous two subsections examined upstream and downstream activity individually. Table 13 displays the sum of these impacts. When the upstream and downstream impacts are combined, activity related to the household and commercial products industry supports approximately 723 thousand jobs, $48 billion in labor income, $127 billion in value added, and $227 billion in output.

Table 13: Combined (Upstream + Downstream) Impact Summary
Units: Thousand Jobs and Billion $

	Employment (Thousand Jobs)	Labor Income (Billion $)	Value Added (Billion $)	Output (Billion $)
Direct	307.6	$18.2	$52.7	$93.3
Indirect	165.5	$16.1	$34.1	$69.2
Induced	250.2	$14.2	$39.8	$64.6
Total	723.3	$48.4	$126.6	$227.1

Source: Inforum

4. Conclusion

Household and commercial products play an essential role in the daily lives of Americans, from the goods used at home to the products that support businesses across the country. Beyond their practical importance, this report demonstrates that the industry also makes substantial contributions to the national economy, supporting hundreds of thousands of jobs and generating billions in economic activity.

This study began by defining the household and commercial products industry using detailed product-level data from the Census Bureau's 2022 Economic Census. To capture recent trends, these estimates were projected forward and backward by aligning each product with the closest corresponding sector in Inforum's model.

Inflation-adjusted sales reached $61 billion in 2024. Of the seven product segments described in this report, approximately 70 percent of sales are concentrated in the 'Cleaning' and 'Industrial and Automotive' categories.

Industry employment approached an estimated level of 75 thousand jobs in 2024. After accounting for price changes, workers earned approximately $7.3 billion in labor income last year. While industry employment has expanded in each of the last five years, inflation-adjusted labor income mildly diminished between 2020 and 2023; however, labor income began growing again in 2024.

The report also underscored the wide range of occupations that make up the household and commercial products industry. Production workers on factory lines account for more than 40 percent of the total workforce, reflecting the industry's strong manufacturing base. Equally important, the sector depends on a broad mix of other professionals, including managers, transportation and logistics specialists, scientists, and engineers, whose expertise supports innovation, efficiency, and market competitiveness.

Critically, these data describe the activity *directly* associated with the industry. In an effort to quantify the broader economic impacts of the household and commercial products industry, Inforum leveraged input output tables and methods. Doing so allows one to examine activity in relevant supply chains, as well as effects of household spending from income earned throughout the industry.

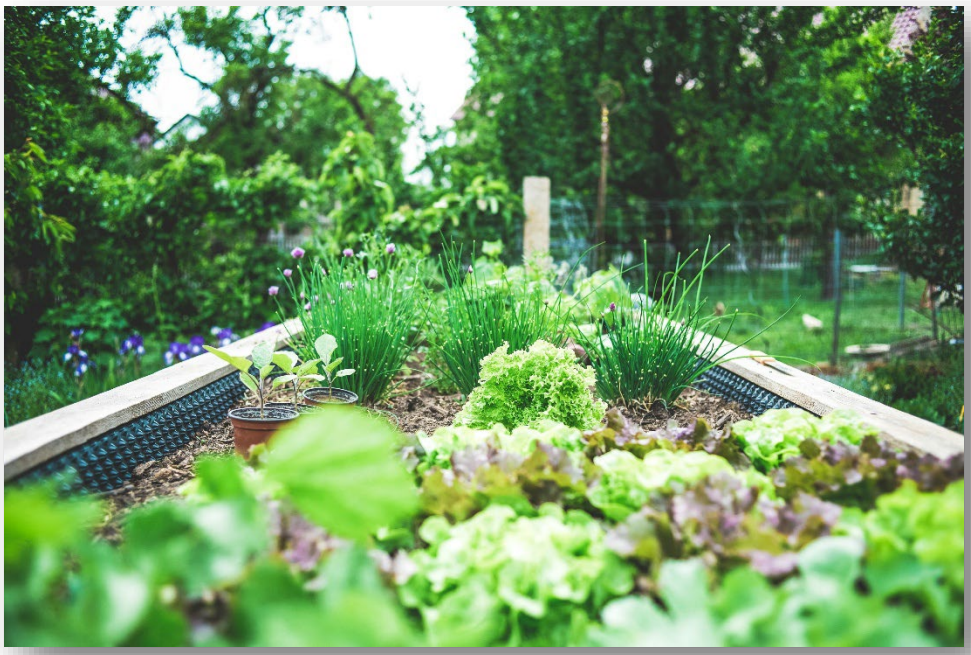
Upstream impacts describe the impacts surrounding manufacturers themselves, as well as supply chains which provide required goods and services needed to produce household and commercial products. These amounted to approximately 315 thousand jobs, $25 billion in labor income, $76 billion in value added and $143 billion in output.

Downstream impacts quantify the activity associated with the wholesalers and retailers which bring household and commercial products to market. Downstream impacts were associated with 408 thousand jobs, $23 billion in labor income, $50 billion in value added, and $84 billion in output.

Taken together, the household and commercial products industry makes major contributions to the U.S. economy. These include:

- 723 thousand jobs
- $48 billion in labor income
- $127 billion in value added
- $227 billion in output

Looking ahead, Inforum plans to build on this study by analyzing state-level impacts. This is important, as activity is likely concentrated in regions where manufacturing and related supply chains have a comparative advantage.



Appendix A – Data Sources and Methodology

A.1 Data Sources

Inforum relies on a variety of data sources to build its models and produce impact studies. The three most important agencies are the Census Bureau, the Bureau of Economic Analysis (BEA), and the Bureau of Labor Statistics (BLS). Table A.1 reviews the main data sources used to support this analysis.

Table A.1. Main Data Sources Used for this Study

Agency or Source	Survey or Publication	Frequency	Economic Variables Available
Census Bureau	Economic Census of Manufacturing	Quinquennial	Establishments, Employment, Industry and Product Shipments, Value Added, Payroll, Investment, Inventories, Purchased Inputs
Census Bureau	Annual Survey of Manufacturers, Annual Integrated Economic Survey	Annual	Establishments, Employment, Industry and Product Shipments, Value Added, Payroll, Investment, Inventories
Census Bureau	USA Trade	Annual	Exports and Imports
BEA	Benchmark Input-Output Table	Quinquennial	Make and Use Tables, 2007 and 393 Commodities
BEA	Gross Output by Industry	Annual	393 Industries, Real, Nominal and Price
BEA	Annual Input-Output Tables	Annual	Make and Use Tables, Consumption and Investment Bridges, 71 Industries, 74 Commodities
BLS	Jobs, Hours and Output by Industry	Annual	Employment, Hours, Real and Nominal Output, 193
BLS	Occupational Employment	Annual	Employment by Occupation by Industry
BLS	CEW	Annual	Employment, Wages

Industry data on output, employment, value added, and other variables are organized according to the North American Industry Classification System (NAICS). The first version of NAICS was released for 1997, and since then there have been five more versions, for the years 2002, 2007, 2012, 2017, and 2022. Current Economic Census and annual data are for the most part published according to the 2022 NAICS. However, the most recent Benchmark IO table is for 2017, and this is published according to the 2017 version of the NAICS.

Table A.2. Illustration of NAICS 2022

2022 NAICS	Product or Industry Title
32	Manufacturing (31-33)
325	Chemical manufacturing
3256	Soap, cleaning compound and toilet preparation manufacturing
32561	Soap and cleaning compound manufacturing
325612	Polish and other sanitation good manufacturing

NAICS is a hierarchical system. All codes beginning with '33' are part of Manufacturing, which includes codes 31, 32 and 33. More digits indicate finer levels of detail. For example, within 33 there are 8 3-digit codes. The code 333 includes all Machinery manufacturing. Within manufacturing as a whole, there are 21 3-digit sub-sectors, 86 4-digit industry groups, 180 5-digit industries, and 360 6-digit industries. At the 6-digit level, the NAICS for the U.S., Canada, and Mexico are consistent. The U.S. Census Bureau employs finer levels of detail in certain publications, such as the Economic Census (EC).

Table A.3. HCPA Focus Industries Product Output

NAICS Code	NAICS Title	Total Product Output	HCPA Share	HCPA Product Output
31199	All other food	43,470	0.1%	48
32411	Petroleum refineries	681,948	0.0%	128
32419	Other petroleum and coal products	33,877	15.1%	5,109
32511	Petrochemicals	82,684	1.0%	851
32519	Other basic organic chemicals	143,297	1.6%	2,348
32532	Pesticide and other agricultural chemicals	20,027	26.7%	5,357
32551	Paint and coating manufacturing	31,982	1.4%	445
32561	Soap and cleaning compounds	44,674	92.0%	41,113
32562	Toilet preparations	43,997	1.6%	717
32592, 32599	All other chemical products and preparations	50,930	1.6%	833
33999	All other miscellaneous manufacturing	42,915	8.4%	3,620
562	Waste management and remediation services	208,121	0.0%	23
	Total			60,594

Table A.3 describes the relative size of HCPA activity by industry. HCPA member companies produce a particular share of the goods from the industries listed. Other companies and organizations produce the remainder. The first column lists industry

codes and titles. The second column shows total product outputs in the Inforum Iliad model. Next, the column labeled 'HCPA Share' describes the percentage that represents HCPA activity. For instance, 26.7% of '32532 - Pesticides and other agricultural chemicals' are produced by HCPA member companies. These shares were developed after consultation with HCPA experts. The final column lists the amount of product output produced by each industry in dollar terms. Total HCPA product output is estimated to amount to $60.6 billion in 2024.

A.2 Methodology for the National Economic Impact Analysis

The tool used for the national economic impact analysis is the Inforum *Iliad* model, which is a detailed model of the U.S. economy. For each of 360 industries, it shows the demand and supply structure for each industry. The demand structure includes the sales to other industries (intermediate), and sales to final demand. Final demand includes personal consumption (household) expenditures, equipment investment, construction investment (residential and nonresidential), federal and state and local government spending, and exports less imports. The supply structure of each industry includes the other industries it buys from, the labor cost, indirect taxes, and capital income.

The input-output (IO) relationships are arrayed as a matrix, with each industry showing up both as a column and a row of the matrix. Each row of the matrix shows the distribution of sales of that industry's product or service. Each column of the matrix shows the purchases made by that industry.

The *Iliad* model is built on a detailed industry database, which draws from the U.S. Benchmark Input-Output Accounts, the U.S. Annual Input-Output Accounts, gross output by industry, and Census merchandise trade statistics. Both domestic and import prices have been compiled for each sector, so results can be expressed either in nominal (current prices) or real (constant prices) form.

The economic impact analysis consists of several parts:

1. *Upstream analysis* – This traces the impact of a given producing industry on supplier industries, including the suppliers to those suppliers. For each industry, calculations are made on output, jobs, earnings and value added impacts.
2. *Downstream analysis* – This traces the impact of purchases of products through wholesale and retail trade distribution channels. The input-output

table is used to estimate the distribution and total level of wholesale and retail trade activity generated through the distribution of a given product.

3. *Induced analysis* – This additional level of impact comes about through the earnings generated in the upstream or downstream industries. It represents the impact of consumer spending from the capital and labor earnings in these industries.

The analysis is done for 2024, and all results are in 2024 dollars. The impact analysis begins with the national output of each industry segment. In the first iteration, all supplier industries' output is calculated, using the input-output coefficients from the column of the matrix. Note that not all of the output of the focus industry goes to domestic suppliers. Some is supplied by imports, which are calculated in each iteration according to the average import share of that industry. Some of the output is paid out in value added. Both imports and value added can be thought of as leakages that reduce the total output required from domestic suppliers. In each subsequent iteration, the suppliers to the previous round of suppliers are calculated. Because of the leakages just described, the amount necessary to supply each further round becomes smaller and smaller. At some point, the additional supplier output is very small, and the process converges.

Associated with each round of direct and supplier (indirect) output are the employment, earnings and value added necessary to supply that output. When the solution has completed, the model shows the total direct and indirect effects, as well as detailed impacts by supplying industry.