Sustainable Market Share Index™
2021 Report

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Sustainable Market Share Index™: Executive Summary

We reviewed consumer purchasing of sustainability-marketed products in 36 consumer packaged goods (CPG) categories comprising ~40% of the total CPG market* ($). Our findings are:

**Sustainability-Marked Products Share Performance.**

- Products marketed as sustainable now hold a 17.0% market share, **up +3.3 ppts** vs 2015, with significant **growth during the pandemic** (Pgs. 5, 6).
- Sustainability-marketed products delivered approximately **one third of all CPG growth**, despite representing 17% share (Pg. 7).
- Products marketed as sustainable **grew 2.7x faster** than products not marketed as sustainable (Pg. 7) and achieved a **6-YR CAGR of 7.3%** vs. 2.8% for its conventional counterparts (Pg. 8).
- **Carbon Labeled** products now account for $3.4B in Sales, up from $1.7B in 2020 (Pg. 9).
- The market share of sustainability-marketed products roughly aligns along a **continuum** based on perceived category **functionality** or efficacy. Even in categories with low shares, shares of sustainability-marketed products increased (Pgs. 12-13).
- Sustainability marketed products enjoy **stronger shares online** vs. in-store (Pgs. 19, 20).
- **Availability** of sustainability-marketed products strongly **correlates with share** performance (Pgs. 27, 28).

*Excluding alcohol and tobacco. **Weighted by $ Sustainable Sales of categories examined*
Price Premiums and Elasticity of Sustainability-Marketed Products

- Sustainability-marketed branded products still enjoy a price premium of 28%** vs. their conventionally-marketed branded counterparts, but the differential has decreased since 2019 (Pgs. 14-15).
- Since the pandemic, year to year price increases of conventionally-marketed products have outpaced their sustainable counterparts (Pg.16).
- Sustainability-marketed products are largely less sensitive to price. (Pg. 17).

Innovation

- The percentage of new products that incorporate sustainability benefits have increased every year since 2017 (Pgs. 10,11).

Demographics

- Upper income, millennials, college-educated and urban consumers are more likely to buy sustainability-marketed products. In addition, middle income, Baby Boomers and Gen Xers contribute a significant percent of sustainable sales (Pgs. 22-26).

Green Chemistry

- Green Chemistry formulations are growing share and contributing differentially to category growth (Pgs. 29-34).

*Excluding alcohol and tobacco. **Weighted by $ Sustainable Sales of categories examined
Sustainable Market Share Index™: Research Questions

Consumer packaged goods (CPG) companies are responding to changing consumer expectations, including for more sustainable product offerings, yet understanding of sustainable purchasing trends had been limited.

NYU Stern Center for Sustainable Business partnered with IRI, to assess the following:

1. Have purchases of sustainable products increased over time?
2. How important has sustainability become in new product development?
3. Are there specific product categories for which the purchases of more sustainable product options out- or under-perform less sustainable alternatives?
4. What is the price premium of sustainable products?
5. How have sustainable products fared in e-commerce?
6. What is the demographic profile of the sustainable purchaser?
7. What is the impact of product availability on share?
8. Are green chemistry products outperforming conventional formulations?

Note: This study represents an updated and significantly expanded review of consumer purchasing first presented in March 2019.
Research Question: Have purchases of sustainable products increased over time?

Research Result: Sustainability marketed products have grown every year since 2015 with a significant share increase during the pandemic. Moreover, they are contributing to a disproportionate share of the CPG category growth.
Sustainable Market Share Index™: Background 2021 Market Share

Sustainability-marketed products continues to grow share every year, with a marked increase during the pandemic.

Annual $ Share of Sustainability-Marked Products

- 2015: 13.7%
- 2019: 16.1%
- 2020: 16.8%
- 2021: 17.0%

36 categories examined
Sustainable Market Share Index™: Contribution to Growth

Despite the fact that sustainability-marketed products are less than one-fifth of the market share, they delivered one-third of the growth.

- **$ Share of Market (2021)**
  - Sustainability-marketed products: 17.0%
  - Conventionally-marketed products: 83.1%

- **$ Share of Market Growth (2015-2021)**
  - Sustainability-marketed products: 32.1%
  - Conventionally-marketed products: 67.9%

* Note: Based on 36 categories examined
Sustainable Market Share Index™: Growth Rate

Sustainability-marketed products grew 2.7x faster than conventionally-marketed products, and 2.1x faster than the CPG market.

Note: Based on 36 categories examined
Sustainable Market Share Index™: 2021 Carbon Labeling

Carbon-labeled products delivered Sales of +$3.4B in Sales in 2021, up from $1.7B in 2020

+$3.4B
Research Question: How important has sustainability become in new product development?

Research Result: The percentage of new products with sustainable attributes have increased every year since 2017. In 2021, approximately one out of every two new products introduced had a sustainable benefit.
Sustainable Market Share Index: New Products

The percentage of new products that incorporate and communicate sustainability benefits have increased every year since 2017.

Note: Based on 32 categories examined
Research Question: Are there specific product categories where the purchases of more sustainable product options out- or under-perform less sustainable alternatives?

Research Result: Yes. In general, categories that demand high functional performance (e.g., detergent) do not have a large percentage of sustainable purchases, but nevertheless experienced share growth. Conversely, categories with low functionality demands (e.g., dairy) have higher category consumption.

However, exceptions exist as large players in functional categories become more sustainable and sustainable transformation is introduced.
CSB Sustainable Market Share Index™: Category performance

- **<5% Share**
  - Diapers
  - Cookies
  - Chocolate
  - Laundry Care
  - Laundry Detergent
  - Pet Treats
  - Pet Food
  - Energy Drinks
  - Carbonated Beverages
  - Trash Bags

- **5%–20% Share**
  - Cereal
  - Crackers
  - Fresh Bread
  - Soup
  - Paper Towels
  - Salty Snacks
  - Toothpaste
  - Vitamins
  - Cups and Plates
  - Paper Napkins
  - Frozen Dinner
  - Dish Detergent
  - Household
  - Cleaner
  - Deodorant
  - Cups and Plates
  - Paper Napkins
  - Sanitary Napkins

- **>20% Share**
  - Toilet Tissue
  - Yogurt
  - Facial Tissue
  - Milk
  - Bottled Juice
  - Floor Cleaner
  - Soap
  - Coffee
  - Natural Cheese
  - Skin Care
  - Weight Control

Sustainability-marketed products & share of category

NYU STERN Center for Sustainable Business
Research Question: What is the price premium of sustainable products?

Research Result: Sustainability marketed products still enjoy a sizeable premium vs. their conventional counterparts but that gap has shrunk in recent years. Sustainability marketed products had lower price sensitivity in 2/3rds of the categories examined.

Analysis conducted was among branded players and excluded store brand/private label; based on 36 categories examined.
Sustainable Market Share Index™: Price Premium

Sustainability marketed products enjoy a sizeable price premium of 28% over conventionally marketed products, but the price differential has decreased since 2018.

*Weighted by $ Sustainable Sales of categories examined; analysis excluded store brand/private label
Sustainable Market Share Index: Year over Year Price Increases

Conventionally marketed products have increased prices at a higher rate than sustainability marketed products reportedly due to inflationary pressures and supply chain disruptions.

- 2019: Sustainable 3.73%, Non Sustainable 3.26%
- 2020: Sustainable 2.63%, Non Sustainable 3.84%
- 2021: Sustainable 3.17%, Non Sustainable 5.41%
- 26 Weeks (Feb 2022 vs. 2020): Sustainable 5.47%, Non Sustainable 8.99%

Weighted by $ Sustainable Sales of categories examined; analysis excluded store brand/private label.
Sustainable Market Share Index™: 2021 Price Premium by Category

Sustainability marketed products still command price premiums, ranging from 8% to over 130%

Only a few categories had price discounts vs. conventionally-marketed products

Sustainability marketed products had lower price sensitivity in most categories studied: Food categories had the greatest price leverage.

Price sensitivity is the % change in volume due to a 1% change in price* 2018 analysis.
Research Question: How have sustainable products fared in e-commerce?

Research Result: Products marketed as sustainable have outperformed conventionally marketed products in e-commerce. Moreover, sustainability marketed products perform better online vs. in store.
Sustainable Market Share Index™: E-commerce Performance

Sustainability marketed products grew slightly faster than both the category and conventional products

- **Sustainability-marketed**
  - 2-YR CAGR: 42%
  - 2020 vs 2019: +65%

- **Total Market**
  - 2-YR CAGR: 40%
  - 2020 vs 2019: 59%

- **Conventionally marketed**
  - 2-YR CAGR: 39%
  - 2020 vs. 2019: 57%
Sustainable Market Share Index™: Share Differences Online vs. In store

In 3/4ths of the categories examined, shares of sustainable products are stronger online than in-store.
Research Question: What is the demographic profile of the sustainable purchaser?

Research Result:
Millennials, upper income, college-educated and more urban cohorts are more likely to buy sustainability-marketed products. Baby Boomers, Gen Xers, upper and middle income, college educated and urban cohorts account for the bulk of the sustainable dollars spent.

Analysis conducted using IRI HH panel data; based on 35 categories examined
The younger the household, the more likely they were to buy sustainability-marketed products. However, most sustainability-marketed product purchases came from Gen X and Boomers.

Sustainable Market Share Index™: Generational Cohorts

Chart read as: Millennials purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HHs.
Sustainable Market Share Index™: Household Education

The higher the education, the more likely they were to buy sustainability-marketed products. Most of the sustainability-marketed product sales came from college graduates or those with some college education.

* 7% had no female present

Total CPG Sustainable Sales Composition

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Graduate School</td>
<td>17%</td>
</tr>
<tr>
<td>Graduated College</td>
<td>33%</td>
</tr>
<tr>
<td>Some College</td>
<td>25%</td>
</tr>
<tr>
<td>Graduated High School</td>
<td>16%</td>
</tr>
<tr>
<td>Some High School or Less</td>
<td>2%</td>
</tr>
</tbody>
</table>

**Sustainable Market Share Index™:** Household Education

Chart read as: Female HH who attended Post Graduate School purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HHs.
Sustainable Market Share Index™: Income Tiers

The higher the household income, the more likely they were to buy sustainability-marketed products. Upper/middle income made up the highest percent of sustainability-marketed product dollars spent.

Total CPG Sustainable Sales Composition

<table>
<thead>
<tr>
<th></th>
<th>Upper</th>
<th>Middle</th>
<th>Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper</td>
<td>38%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>39%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>22%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chart read as: Upper Income Households purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HHs.
Sustainable Market Share Index™: Urbanicity

The more urban the residence, the more likely the purchases of sustainability-marketed products. County A accounted for just under half of the total CPG sustainability-marketed dollars spent.

<table>
<thead>
<tr>
<th>County</th>
<th>Total CPG Sustainable Sales Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>County A</td>
<td>44%</td>
</tr>
<tr>
<td>County B</td>
<td>30%</td>
</tr>
<tr>
<td>County C/D</td>
<td>26%</td>
</tr>
</tbody>
</table>

Chart read as: County A purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HH’s.
Research Question: What is the impact of product availability on share?

Research Result: Sustainability marketed product share highly correlates with product availability.
Sustainable Market Share Index™: Impact of Availability

High correlation between availability and share ranging from .79 to 1.0

<table>
<thead>
<tr>
<th>2015</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Detergent:</strong> 2%</td>
<td><strong>Detergent:</strong> 4%</td>
</tr>
<tr>
<td><strong>Coffee:</strong> 23%</td>
<td><strong>Coffee:</strong> 26%</td>
</tr>
<tr>
<td><strong>Yogurt:</strong> 60%</td>
<td><strong>Yogurt:</strong> 72%</td>
</tr>
</tbody>
</table>

Note: The darker the blue, the greater the availability; Share of sustainability marketed products are the percentages listed.
Research Question: Are green chemistry products outperforming conventional formulations?

Research Result: Not only are green chemistry products growing but they also are contributing to a disproportionate share of the category growth.
Prior to the pandemic, green chemistry-marketed products accounted for 14.3% share of market ($) in 2019, up from 10.1% in 2015.

Based on 10 categories that include green chemistry formulated products.
Green Chemistry Council: Pre-Pandemic Contribution to Growth

Green Chemistry-marketed products are 14.3% of the market and delivered 62% of the categories market growth.

- **$ Share of Market (2019):**
  - Sustainability marketed products: 14.3%
  - Conventionally marketed products: 85.7%

- **$ Share of Market Growth (2015-2019):**
  - Sustainability marketed products: 38.2%
  - Conventionally marketed products: 61.8%
From 2015-2019, Green Chemistry-marketed products grew 12.6 times faster than their conventional counterparts, and 5.4 times faster than the market.

- Sustainability marketed 4-YR CAGR: 11.3%
- Total Market 4-YR CAGR: 2.1%
- Conventionally marketed 4-YR CAGR: 0.9%
Green Chemistry Council: Pandemic Market Share 2020

Green Chemistry-marketed products continue to climb in 2020, despite the pandemic.
## Green Chemistry Council: Top Sustainable Messages by Category

<table>
<thead>
<tr>
<th>Claim</th>
<th>Share of Average Annual Dollar Sales of Sustainability-Marketed Products 2015-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pool Chemicals</strong></td>
<td></td>
</tr>
<tr>
<td>Organic</td>
<td>55%</td>
</tr>
<tr>
<td>Non-Toxic</td>
<td>55%</td>
</tr>
<tr>
<td><strong>Soap</strong></td>
<td></td>
</tr>
<tr>
<td>Phthalate Free</td>
<td>68%</td>
</tr>
<tr>
<td>Paraben Free</td>
<td>63%</td>
</tr>
<tr>
<td><strong>Skincare</strong></td>
<td></td>
</tr>
<tr>
<td>Paraben Free</td>
<td>61%</td>
</tr>
<tr>
<td>Phthalate Free</td>
<td>54%</td>
</tr>
<tr>
<td><strong>Household Cleaner</strong></td>
<td></td>
</tr>
<tr>
<td>Plant Based</td>
<td>29%</td>
</tr>
<tr>
<td>Biodegradable</td>
<td>23%</td>
</tr>
<tr>
<td><strong>Floor Cleaner</strong></td>
<td></td>
</tr>
<tr>
<td>Plant Based</td>
<td>22%</td>
</tr>
<tr>
<td>Natural</td>
<td>22%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Claim</th>
<th>Share of Average Annual Dollar Sales of Sustainability-Marketed Products 2015-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dish Detergent</strong></td>
<td></td>
</tr>
<tr>
<td>USDA Bio Based</td>
<td>31%</td>
</tr>
<tr>
<td>Biodegradable</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Laundry Detergent</strong></td>
<td></td>
</tr>
<tr>
<td>Plant Based</td>
<td>86%</td>
</tr>
<tr>
<td>USDA Bio Based</td>
<td>44%</td>
</tr>
<tr>
<td><strong>Suntan</strong></td>
<td></td>
</tr>
<tr>
<td>PABA Free</td>
<td>46%</td>
</tr>
<tr>
<td>Reef Friendly &amp; Safe</td>
<td></td>
</tr>
<tr>
<td><strong>Auto Wax</strong></td>
<td></td>
</tr>
<tr>
<td>Silicone Free</td>
<td>97%</td>
</tr>
<tr>
<td>Petroleum Distillates</td>
<td></td>
</tr>
<tr>
<td><strong>Pavement Deicing</strong></td>
<td></td>
</tr>
<tr>
<td>Salt</td>
<td>81%</td>
</tr>
<tr>
<td>Natural</td>
<td>36%</td>
</tr>
</tbody>
</table>
About the NYU Stern Center for Sustainable Business

The NYU Stern Center for Sustainable Business was founded on the principle that sustainable business is good business; delivering better financial results while protecting the planet and its people. We aim to help current and future business leaders embed social and environmental sustainability into core business strategy, resulting in competitive advantage and resiliency for their companies as well as a positive impact for society.

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Appendix
Methodology

Data
• IRI Point of Sale, HH panel, and e-market insights data in all measured channels in U.S.

Selection Criteria
• 36 categories examined held the largest dollar volume; in a few cases, smaller categories were included to ensure fair representation of all major CPG segments
• Over 250,000 products reviewed; products with 0.00 dollar share of category were not considered unless identified as organic.
• Due to lack of visibility into private label product claims, private label was not included as sustainability-marketed, with the exception of organic private label in the food categories.

Sustainability-Marketed Products Determination
• Identified all skus for each category marketed as sustainable with on-package communication, e.g. 3rd party certification (e.g. USDA Organic), containing organic ingredients, no phosphates, no phthalates, etc.
• Sustainability determination focused on the product itself, not the recyclability of the package.
• A very conservative approach was adopted. For example, the following was not considered sustainable:
  • Natural with no other sustainable identification
  • Recyclable packaging

Other Assumptions/Information
• Products that were deemed sustainability-marketed in 2018 were considered sustainability-marketed in 2015. This likely depressed the growth numbers in the earlier years.
• We made no attempt to assess if products marketed as sustainable were, in fact, sustainable. Instead, we focused on whether the marketing of a product as sustainable would drive purchase.

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