

Sustainable Market Share Index™

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Sustainable Market Share Index™: Research Questions

Consumer packaged goods (CPG) companies are responding to changing consumer expectations, including for more sustainable products. NYU Stern CSB, in partnership with Circana, conducts the only annual analysis of CPG purchasing data in the US to assess the performance of sustainable products in the evolving market.

NYU Stern Center for Sustainable Business partnered with Circana (formerly IRI), to assess the following:

1. How have sustainable products fared over time and in the face of inflation?
2. Are there specific product categories for which the purchases of more sustainable product options out- or under-perform less sustainable alternatives?
3. What is the price premium of sustainable products?
4. How important has sustainability become in new product development? (2021 report)
5. How have sustainable products fared in e-commerce? (2020 report)
6. What is the demographic profile of the sustainable purchaser? (2019 report)
7. What is the impact of product availability on share? (2021 report)

Note: This study represents an updated and significantly expanded review of consumer purchasing first presented in March 2019.

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-Marketed Products Share Performance

- Products marketed as sustainable now hold a **17.3%** market share, **up +3.6 ppts** vs 2015, and **up 0.3 ppts** vs. prior year **despite high 2022 inflation** driving **strong store brand** performance (Pgs. 6-7)
- Products marketed as sustainable **grew ~2x faster** than products not marketed as sustainable and achieved a **5-YR CAGR of 9.43%** vs. 4.98% for its conventional counterparts (Pg. 8)
- Sustainability-marketed products delivered approximately **one third of all CPG growth**, despite representing 17.3% share (Pg. 9)
- The market share of sustainability-marketed products roughly aligns along a **continuum**. Even in categories with low shares, shares of sustainability-marketed products have increased (Pg. 12)

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 **significantly outpaced** their sustainable counterparts (Pg.16)
- Sustainability-marketed products are largely less sensitive to price - 2019 (Pg. 17)

*Excluding alcohol and tobacco. **Weighted by \$ Sustainable Sales of categories examined

Sustainable Market Share Index™: Executive Summary (Page 2 of 2)

Carbon Labeling (2021 report)

- Carbon Labeled products now account for **\$3.4B in Sales**, up from \$1.7B in 2020 (Pg. 10)

Innovation (2021 report)

- The **percentage of new products** that incorporate sustainability benefits have **increased** every year since 2017 (Pg. 19)

E-Commerce (2020 report)

- Sustainability marketed products enjoy **stronger shares online** vs. in-store (Pgs. 21-22)

Demographics (2019 report)

- **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. 24-27)

Availability (2021 report)

- **Availability** of sustainability marketed products strongly **correlates with share** performance (Pg. 29)

Sustainable Market Share Index™: Research Question 1

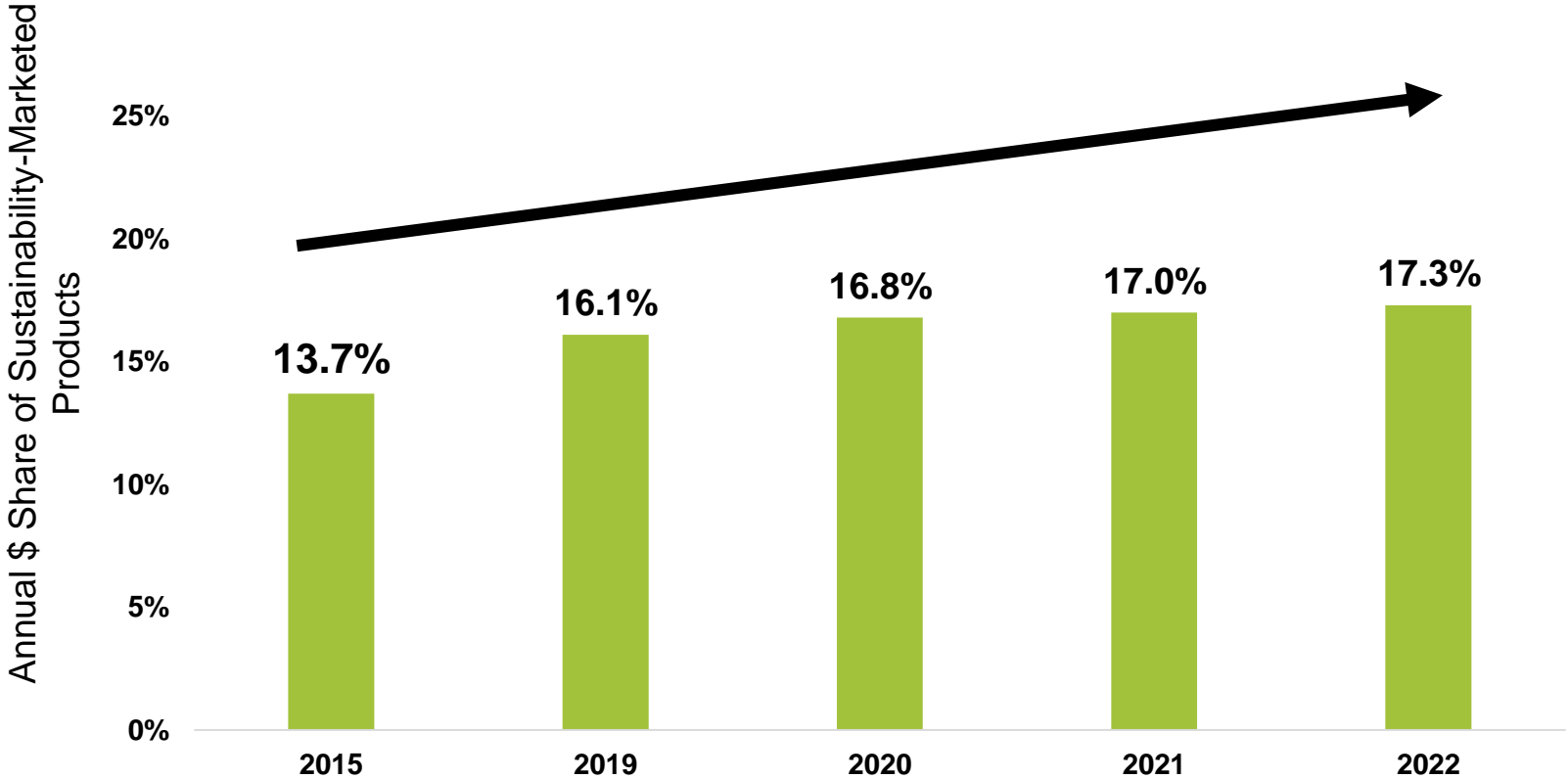
Research Question: How have sustainable products fared over time and in the face of inflation?

Research Result: Sustainability-marketed products have grown every year since 2015, with a significant share increase during the pandemic and 2022 inflation. Moreover, they are contributing to a disproportionate share of the CPG category growth.



Sustainable Market Share Index™: 2022 Market Share

Sustainability-marketed products continues to **grow share despite high inflation**

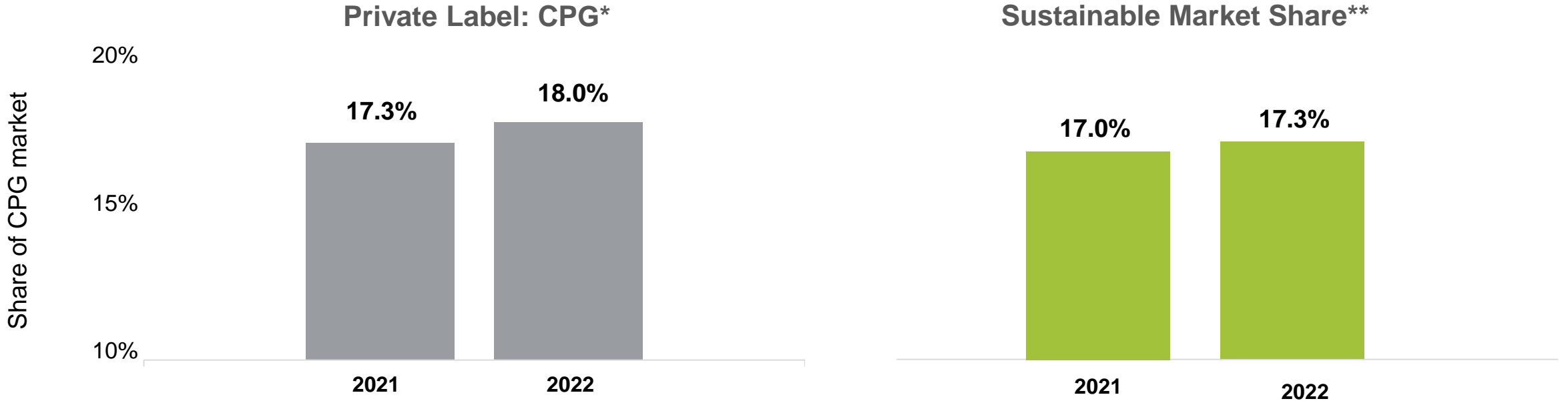


36 categories examined



Sustainable Market Share Index™: Store Brands

Store Brand share of market was 18%, up +0.7ppts from 2021 to 2022 suggesting that branded **sustainable products** are **more insulated** from inflation-driven moves to store brands



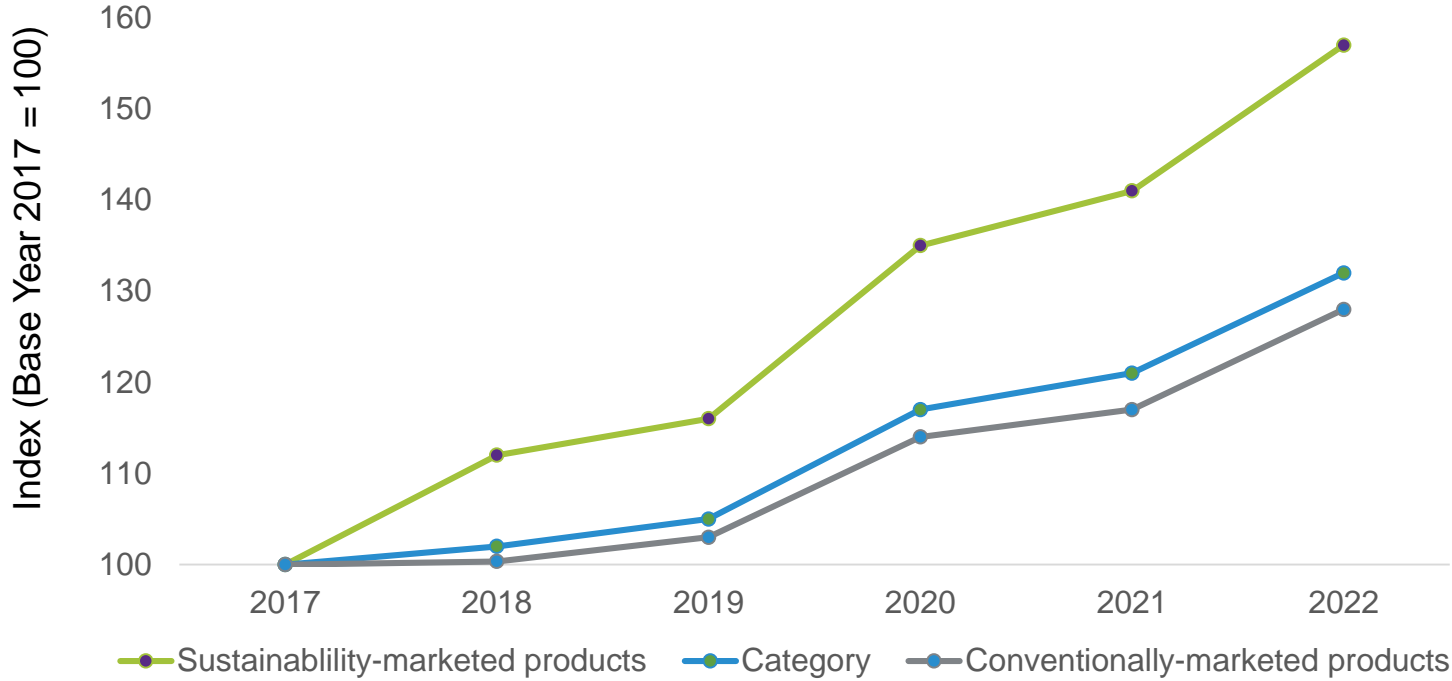
* From IRI private label report

** 36 categories examined



Sustainable Market Share Index™: Growth Rate

Sustainability-marketed products grew **~2x faster** than conventionally marketed products



Sustainability-marketed
5-YR CAGR:
9.43%

Total Market 5-YR CAGR:
5.68%

Conventionally marketed
5-YR CAGR:
4.98%

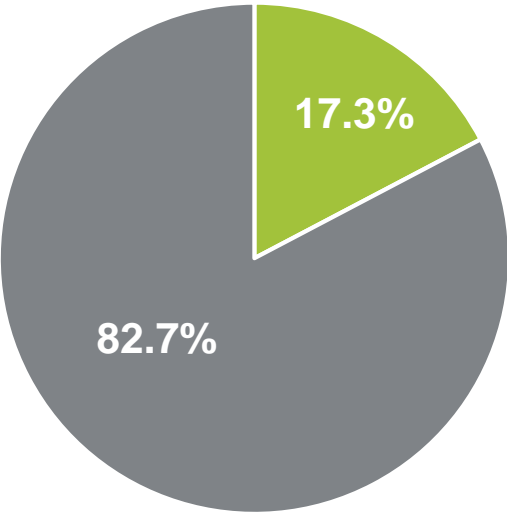
Note: Based on 36 categories examined



Sustainable Market Share Index™: Contribution to Growth

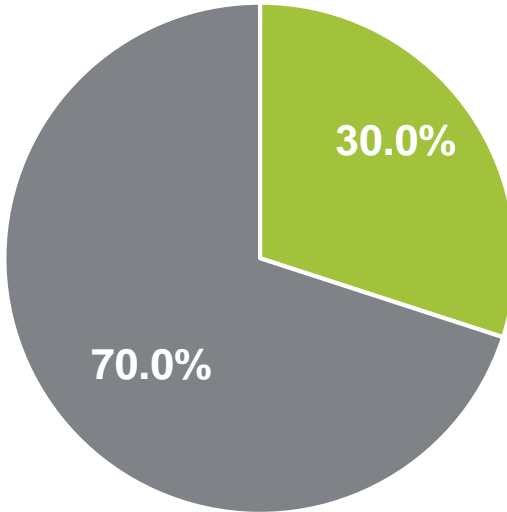
Despite sustainability-marketed products being less than one-fifth of the market share, they delivered ~**one-third** of the growth since 2013

\$ Share of Market
(2022)



- Sustainability-marketed products
- Conventionally-marketed products

\$ Share of Market Growth
(2013-2022)

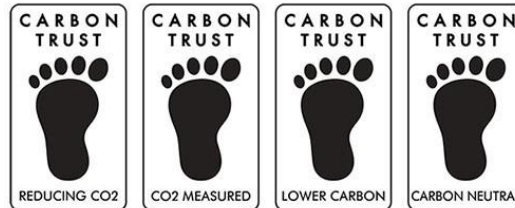


- Sustainability-marketed products
- Conventionally-marketed products



Sustainable Market Share Index™: Carbon Labeling (2021)

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



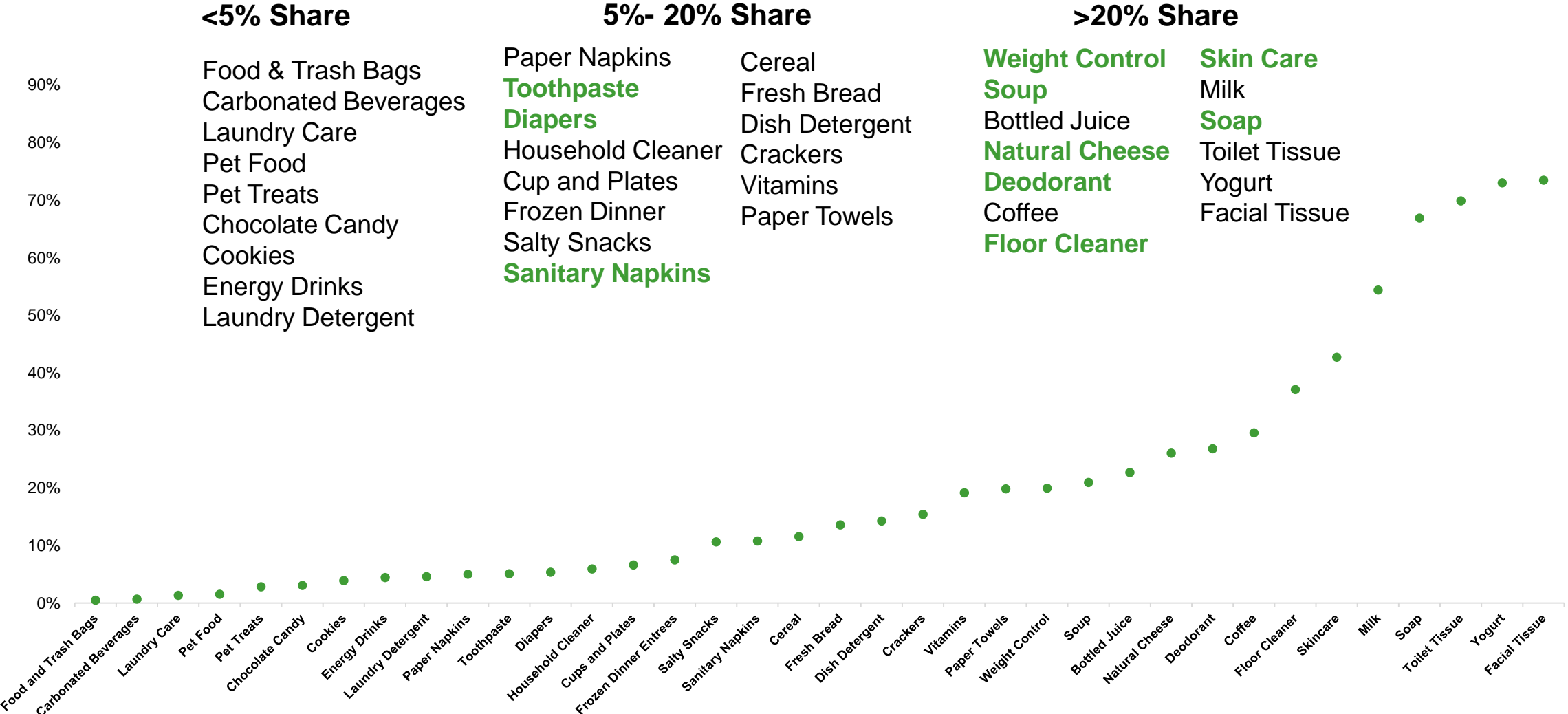
+\$3.4B

Sustainable Market Share Index™: Research Question 2

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. Categories are in different stages of development. Almost all categories are seeing sustainable share increases from innovation with sustainable benefits and greater adoption of sustainable benefits, often by category leaders, making sustainability table stakes.

Sustainable Market Share Index™ : Category performance



Categories highlighted in green text indicate share growth in 2022 vs. 2015 that resulted in the category moving to a higher share cluster

Sustainable Market Share Index™: Research Question 3

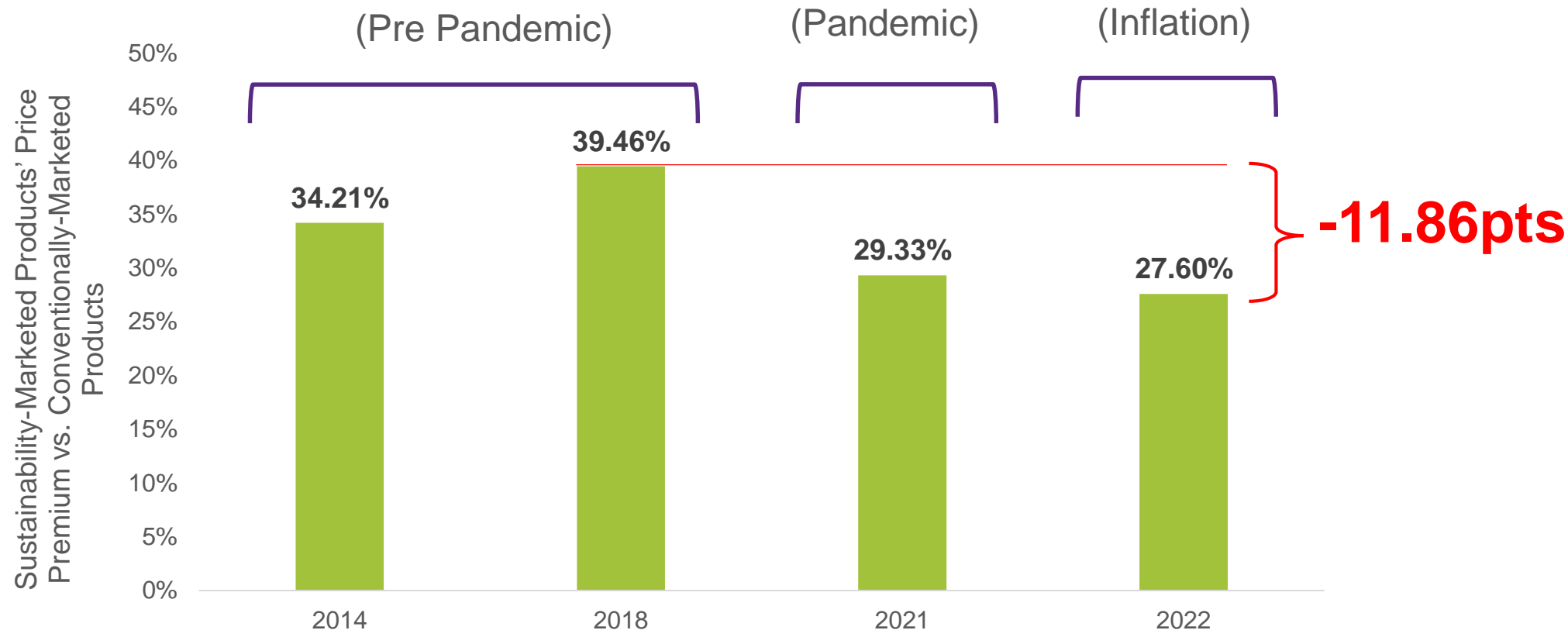
Research Question: What is the price premium of sustainable products?

Research Result: Sustainability-marketed products still enjoy a sizeable premium vs. their conventional counterparts but that gap has shrunk substantially in recent years, as conventional product price increases significantly outpaced their sustainable counterparts and historically conventional products adopt sustainable benefits without taking a commensurate price increase.

Analysis conducted was among branded players and excluded store brand/private label; based on 36 categories examined

Sustainable Market Share Index™: Price Premiums over Time

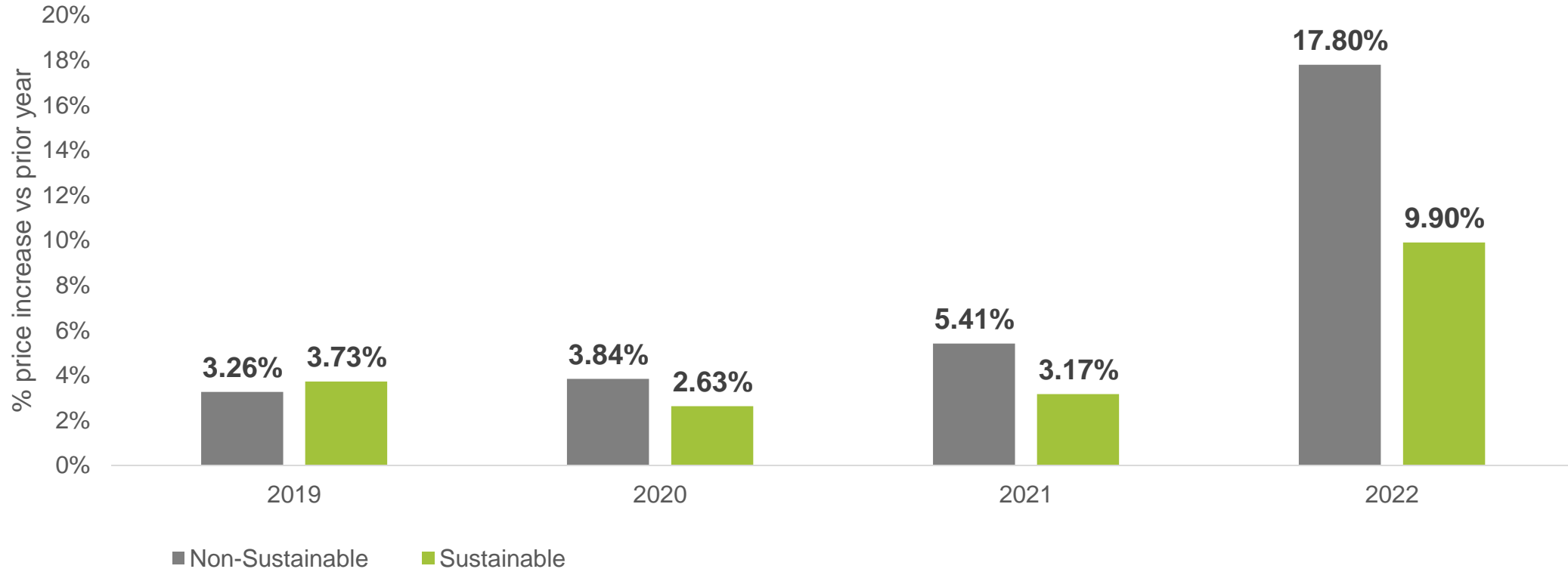
Recent price increases on conventionally marketed products **reduced the price premium** between sustainability-marketed products and their conventional counterparts



*Weighted by \$ Sustainable Sales of categories examined; analysis excluded store brand/private label

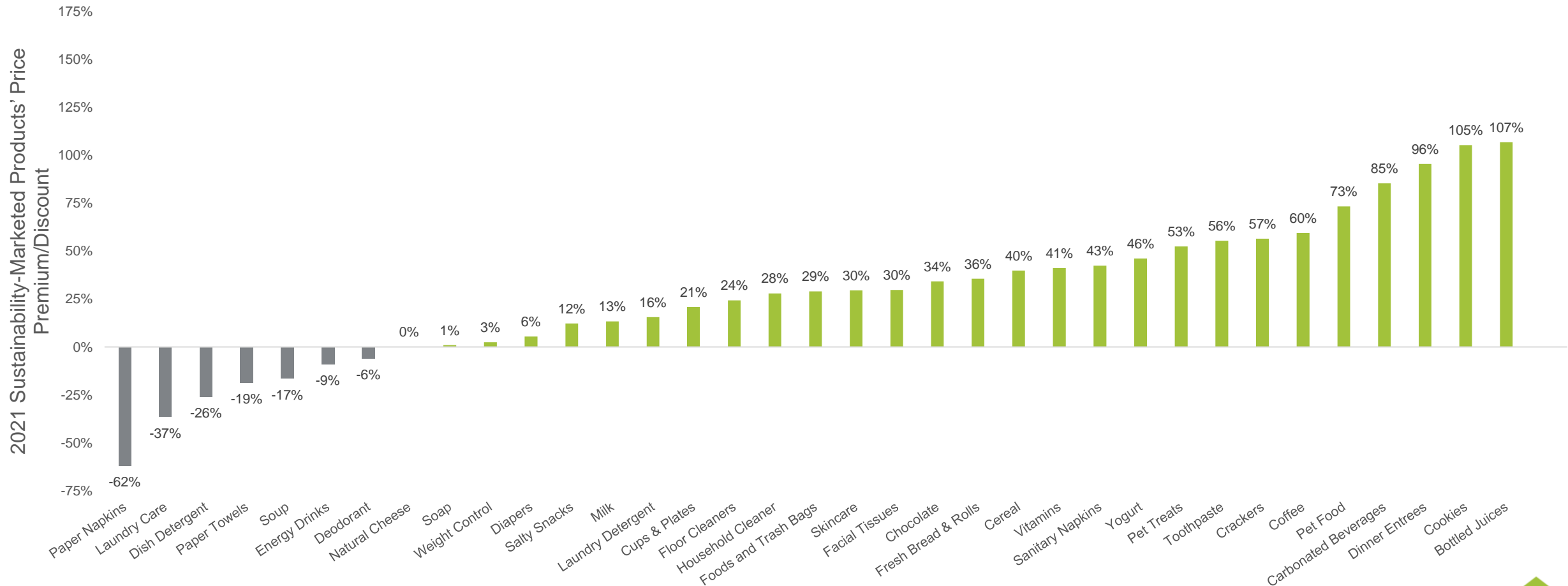
Sustainable Market Share Index™: Year over Year Price Premiums

Given recent inflationary pressures, conventionally marketed products took **higher price increases than sustainability-marketed products**



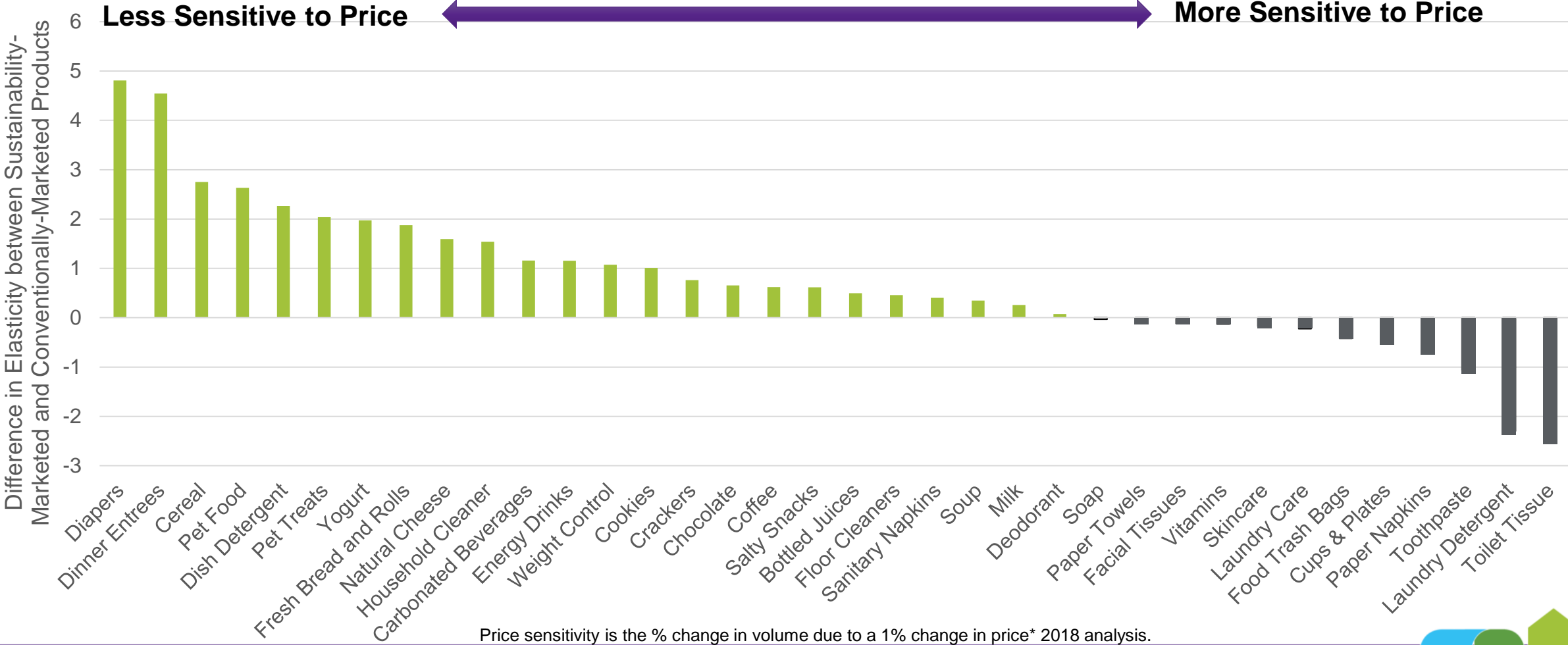
Sustainable Market Share Index™: 2022 Price Premium by Category

In a majority of categories, sustainability-marketed products **still command price premiums**, ranging from **1% to over 107%**. A few categories had price discounts vs. conventionally marketed products.



Sustainable Market Share Index™: Price Sensitivity (2019)

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.

Sustainable Market Share Index™: Research Question 4

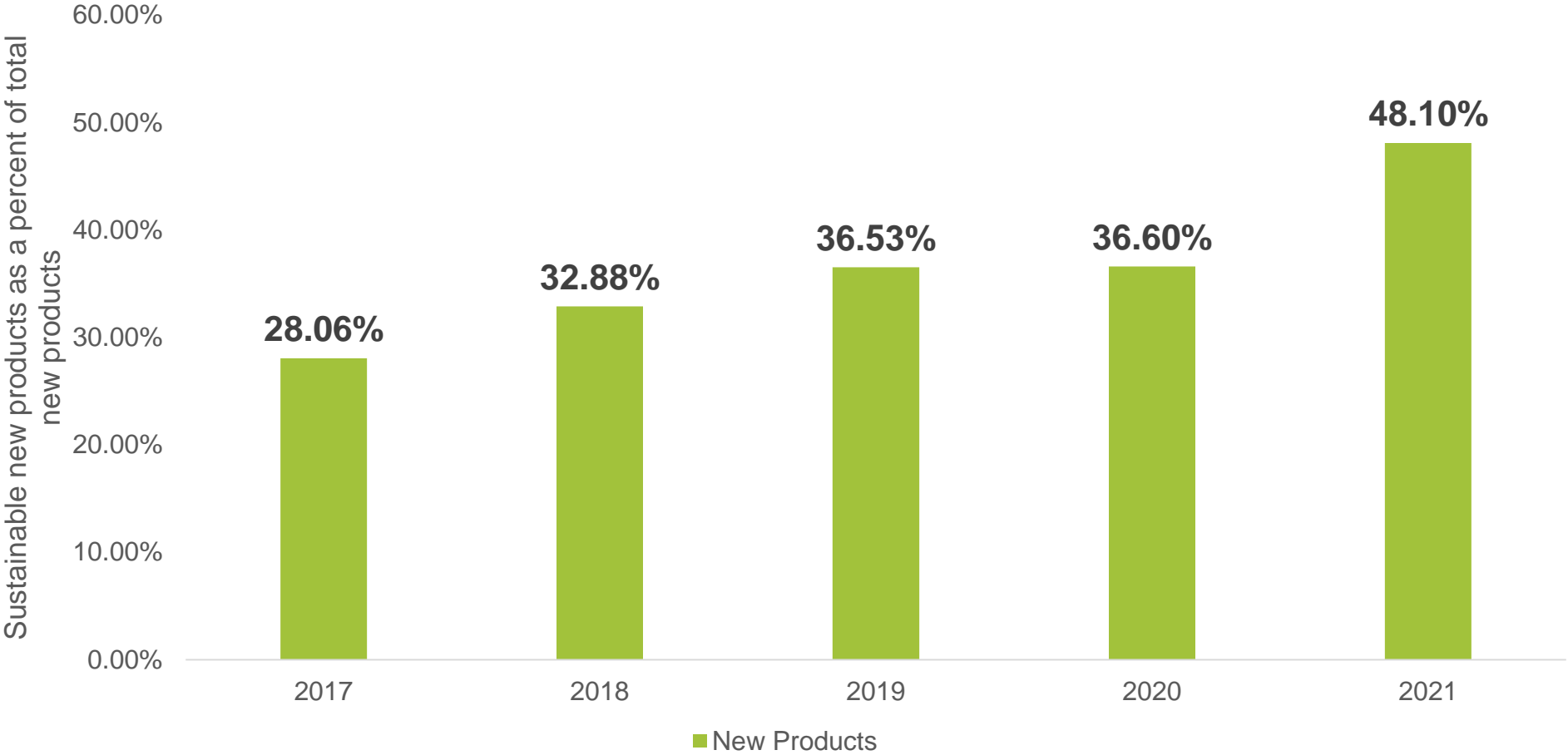
Research Question: How important has sustainability become in new product development?

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** from 2017 to 2021



Note: Based on 32 categories examined

Sustainable Market Share Index™: Research Question 5

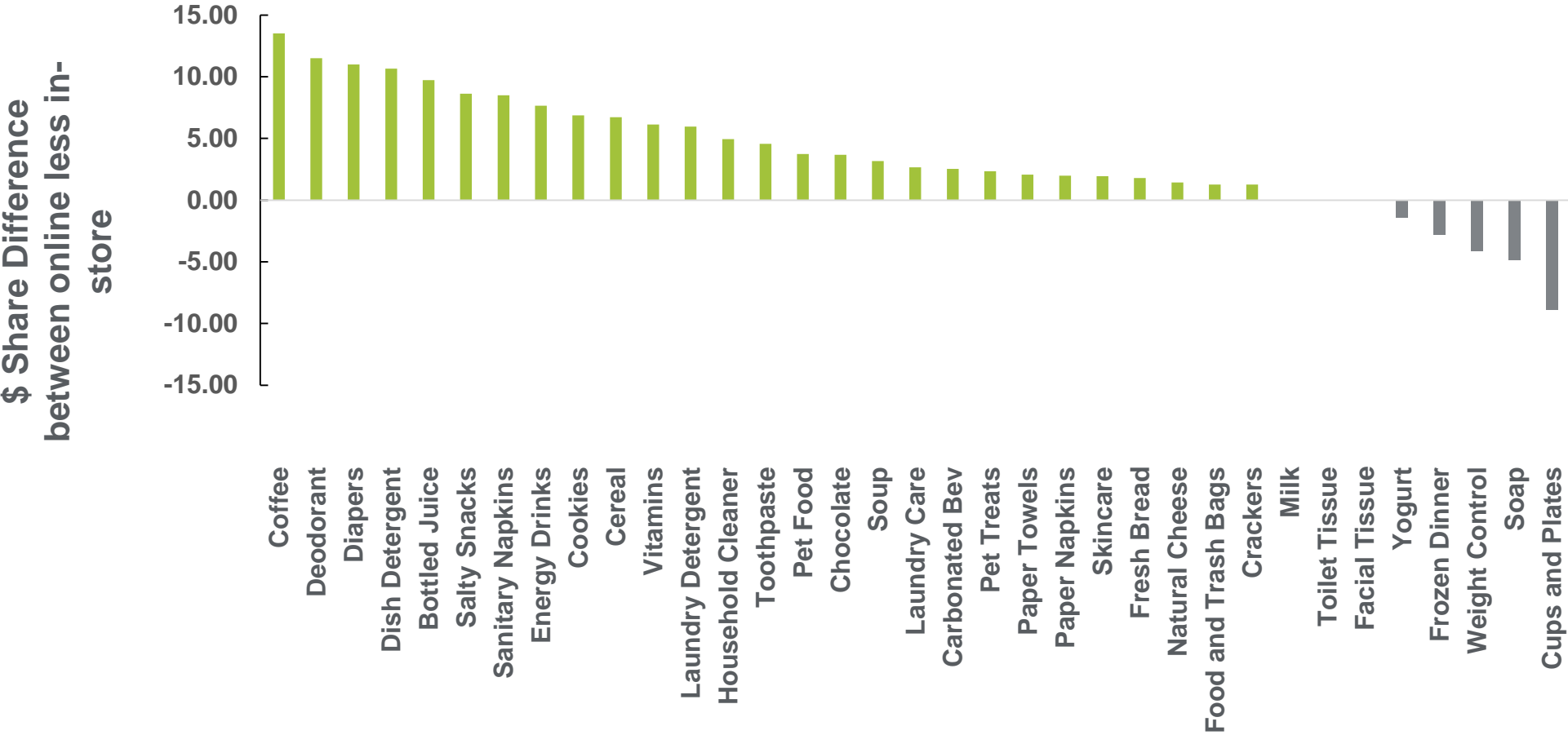
Research Question: How have sustainable products fared in e-commerce?

Research Result: Products marketed as sustainable have outperformed conventionally marketed products in e-commerce. Moreover, sustainability-marketed products perform better online vs. in store.



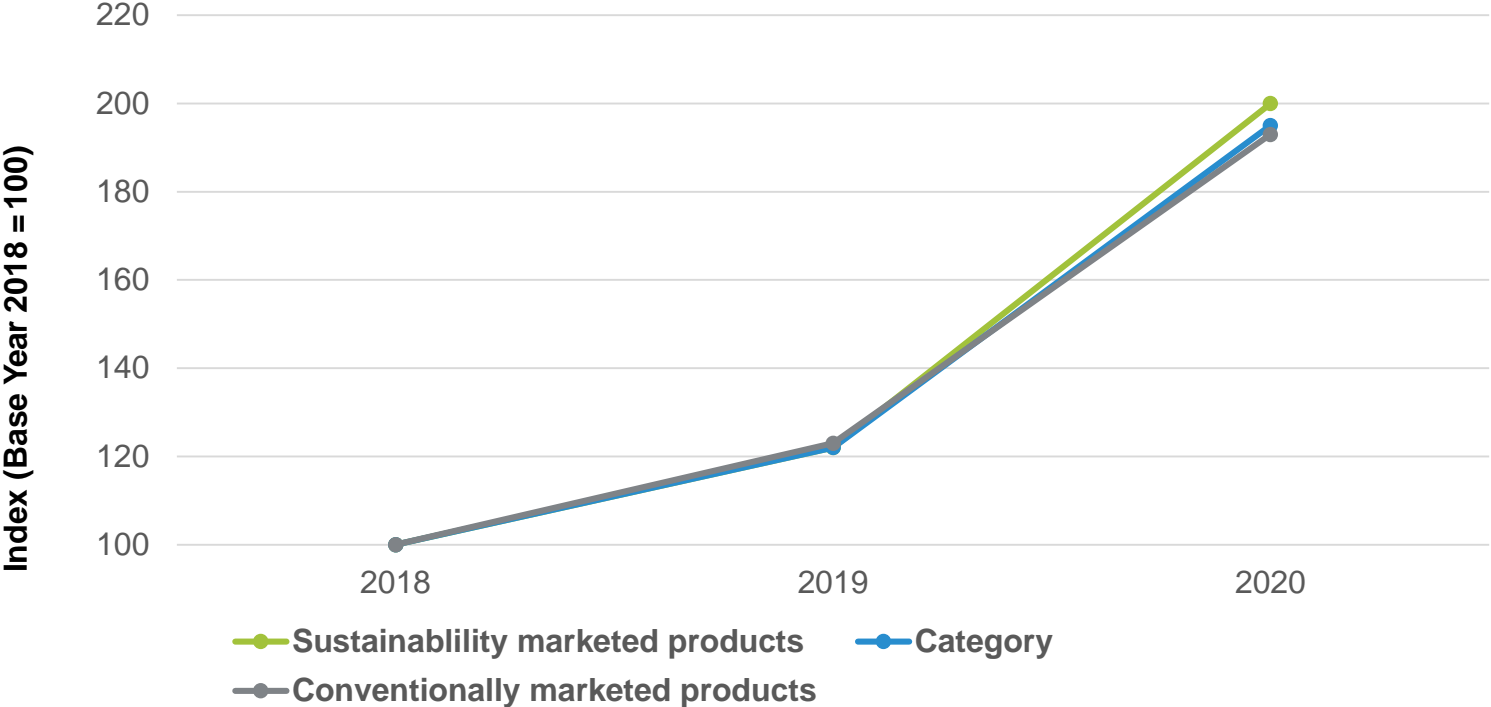
Sustainable Market Share Index™: Shares Online vs. In store (2020)

In 3/4ths of the categories examined, shares of sustainable products are **stronger online than 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™: Research Question 6

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.

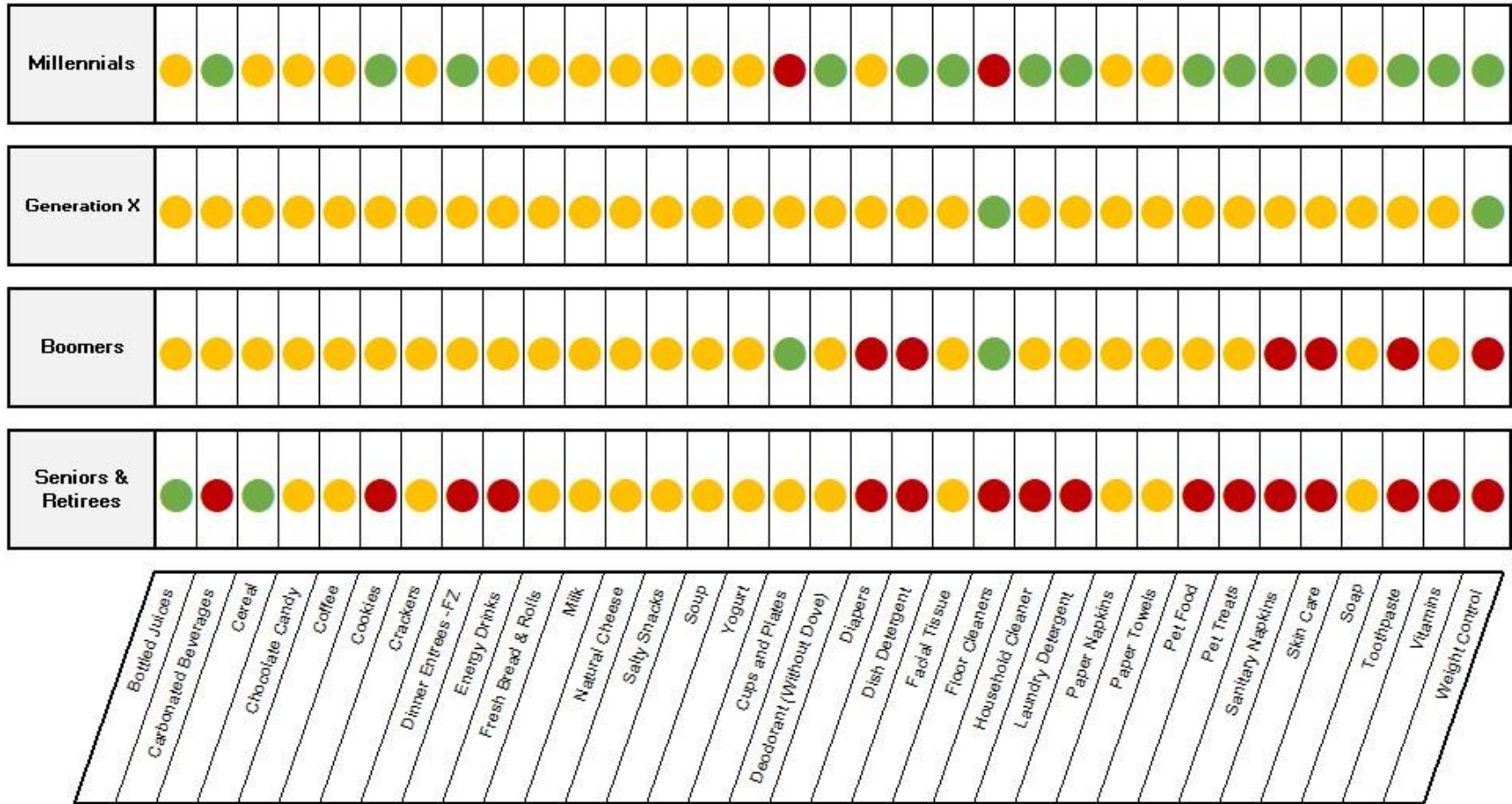
Baby Boomers, Gen Xers, upper and middle income, college educated and urban cohorts account for the bulk of the sustainable dollars spent.



* Analysis conducted using IRI HH panel data; based on 35 categories examined

Sustainable Market Share Index™: Generational Cohorts (2019)

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**.



Total CPG Sustainable Sales Composition	
Millennials	25%
Generation X	32%
Boomers	33%
Seniors & Retirees	10%

● Index 120+
● Index 80-120
● Index <80

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 (2019)

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.



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 (2019)

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.



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 (2019)

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.

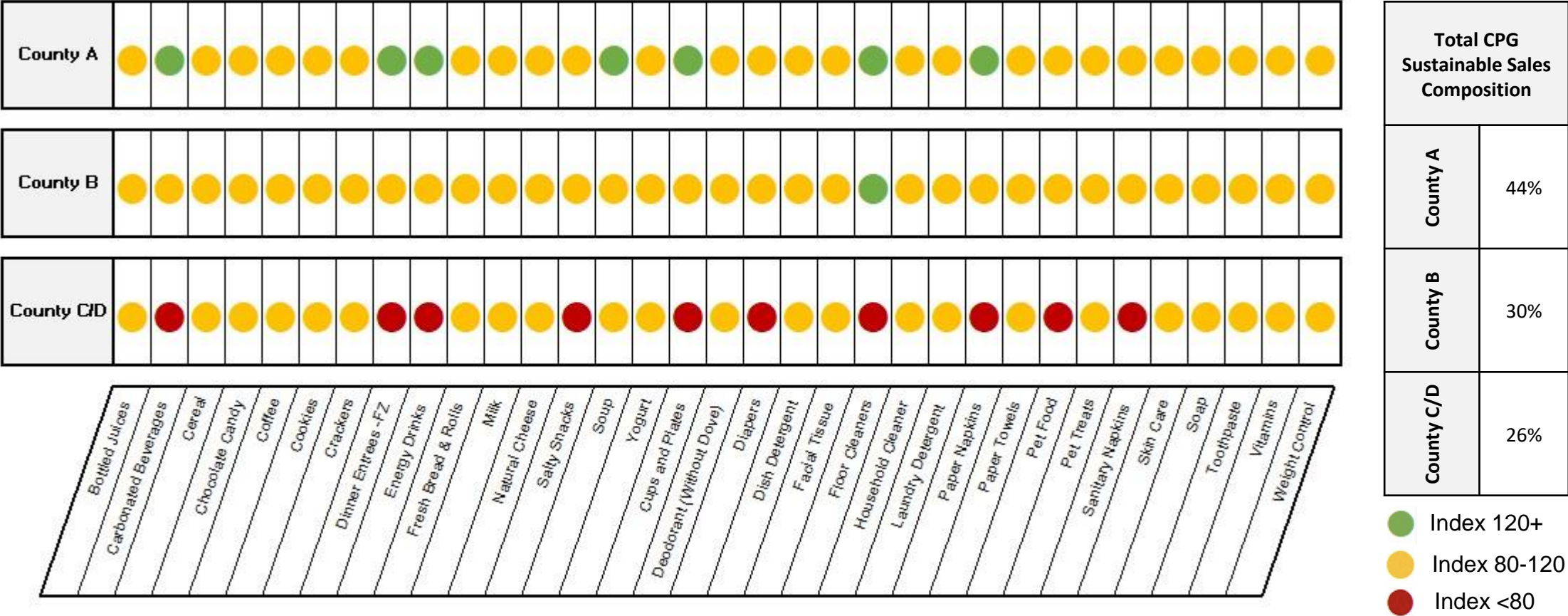


Chart read as: County A purchased a significantly higher percent (>1.2x) of their Carbonated Beverage purchases on sustainability-marketed products, than did Average HH's.

Sustainable Market Share Index™: Research Question 7

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 (2019)

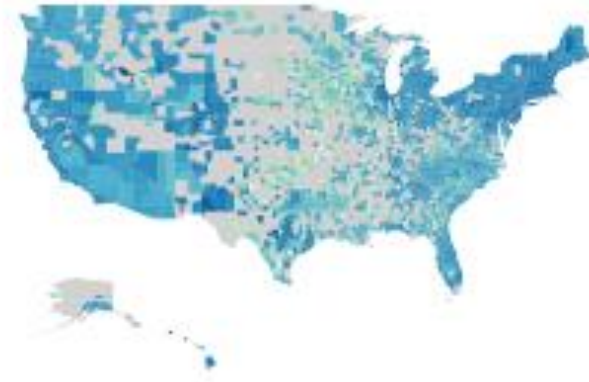
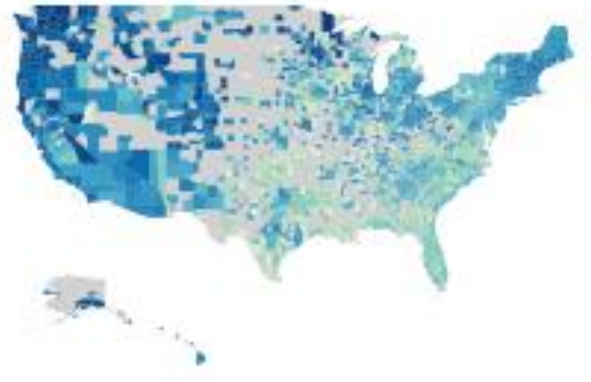
High correlation between availability and share ranging from .79 to 1.0

Detergent: 2%

Coffee: 23%

Yogurt: 60%

2015

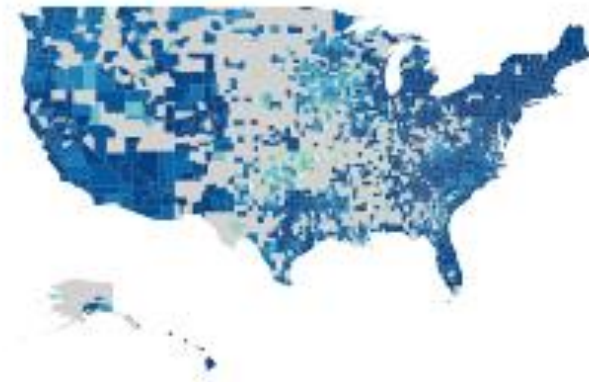
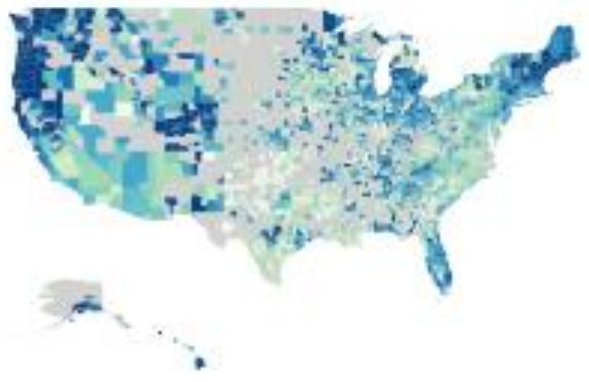


Detergent: 4%

Coffee: 26%

Yogurt: 72%

2019



Note: The darker the blue, the greater the availability; Share of sustainability marketed products are the percentages listed

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

- Circana (formerly 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.

All estimates and analysis in this paper based on Circana data are by the authors and not by Circana, formerly Information Resources, Inc.