

## Original Paper

# The U.S. Heavy-Duty Liquid Laundry Detergent Market: A Competitive Profile

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### Abstract

*This is the twentieth paper—and the 21<sup>st</sup> study--that follows the footsteps of twenty studies that have tried to analyze the competitive profiles of U.S. consumer markets: Men's Shaving Cream, Beer, Shampoo, Shredded/Grated Cheese, Refrigerated Orange Juice, Men's Razor-Blades, Women's Razor-Blades, Toothpaste, Canned Soup, Coffee, Potato Chips, Alkaline AA Battery, Facial Tissue, Toilet Paper, Paper Towel, Disposable Diapers, Sanitary Pads, Automatic-Dishwasher Detergent, Hand-Dishwashing Detergent, and Household Liquid Non-Disinfectant Cleaner.*

*Michael Porter associates high market share with cost leadership strategy, which is based on the idea of competing on a price that is lower than that of the competition.*

*However, customer-perceived quality—not low cost—should be the underpinning of competitive strategy, because it is far more vital to long-term competitive position and profitability than any other factor. So, a superior alternative is to offer better quality vs. the competition.*

*In most consumer markets, a business seeking market share leadership should try to serve the middle class by competing in the mid-price segment; and offering quality better than that of the competition: at a price somewhat higher to signify an image of quality, and to ensure that the strategy is both profitable and sustainable in the long run.*

*The middle class is the socio-economic segment that represents about 40% of households in America.*

*Quality, however, is a complex concept, consumers generally find difficult to understand. So, they often use relative price, and a brand's reputation, as a symbol of quality.*

*The U.S. Heavy-Duty Liquid Laundry Detergent Market had retail sales of \$3,034 million in 2008. We have focused our attention on the 100-128 Oz size because it was by far the most popular, with sales of 1,158 million, constituting 38.2% sales of that market.*

*By far the most dominant player in this market was the mega multi-brand Tide with an overall brand market share of 45.2%. Yet, the market was highly competitive with 39 brands: each with 2008 brand sales over \$1 million.*

*Using Hierarchical Cluster Analysis, we tested two hypotheses: (I) That the market leader is likely to*

compete in the mid-price segment, and that (II) Its unit price is likely to be higher than that of the nearest competition.

For 2008—and 2007--the data did not support Hypothesis I, because Tide (100 Oz), the market leader, was a member of the premium segment.

Yet, for 2008, the data did support Hypothesis II because, Gain (100 Oz), the runner-up, was a member of the mid-price segment, with a unit price lower than that of Tide (100 Oz), the market leader.

For 2007, technically, the runner-up was Purex (100 Oz.) with sales of \$169 million in the 100-128 size. However, the real runner-up was Gain which had 100-128 Oz 2007 sales of \$153 million—not very far from Purex. But this distinction appears to be random, and not long-term. This is because the sales of Purex dived precipitously in 2008, from \$169 million in 2007, to \$53 million in 2008, compared to Gain's 2008 sales of \$137 million.

So, based on the above argument, we have determined that—for all practical purposes--Gain was the runner-up in 2007 as well.

We found that relative price was a strategic variable, as we have hypothesized.

We also discovered three strategic groups in this market.

A pattern is emerging in price-quality segmentation analysis. In thirteen of twenty-one studies—that exclude Men's Razor-Blades, Women's Razor-Blades, Coffee, Toilet Paper, Paper Towels, Disposable Diapers, Sanitary Pads, and Liquid Heavy-Duty Laundry Detergent—the market leader was found to be a member of the mid-price segment, as we have hypothesized.

Also, results in ten markets supported Hypothesis II.

### **Keywords**

U.S. Liquid Heavy-Duty Laundry Detergent market, market segmentation, cost leadership strategy, price-quality segmentation, market-share leadership, relative price a strategic variable, strategic groups.

## **1. Introduction**

This is the *twentieth* paper—and the 21<sup>st</sup> study--that follows the footsteps of *twenty* studies (Note 1) that have tried to analyze the competitive profiles of U.S. consumer markets: Men's Shaving Cream, Beer, Shampoo, Shredded/Grated Cheese, Refrigerated Orange Juice, Men's Razor-Blades, Women's Razor-Blades, Toothpaste, Canned Soup, Coffee, Potato Chips, Alkaline AA Battery, Facial Tissue, Toilet Paper, Paper Towel, Disposable Diapers, Sanitary Pads, Automatic-Dishwasher Detergent, Hand-Dishwashing Detergent, and Household Liquid Non-Disinfectant Cleaner (Datta, 2012, 2017, 2018a, 2018b, 2018c, 2019a, 2019b, 2020a, 2020b, 2020c, 2020d, 2021, 2023a, 2023b, 2023c, 2023d, 2024a, 2024b, 2024c).

This research relies on a broader, *integrated* framework of market segmentation which includes *both* the demand *and* supply sides of the competitive equation. This approach is based on the idea that, *starting* with 'product' characteristics is both an *easier* and more *actionable* way of segmenting

markets, than the *traditional* marketing approach that typically begins with the customer or ‘*people*’ characteristics (Datta, 1996).

This analysis is based on the notion that the path to market share leadership does *not* lie in lower price founded in *cost leadership* strategy, as Michael Porter (1980) suggests. Rather, it is based on the premise—according to the PIMS (Note 2) database research—that it is *customer*-perceived quality that is crucial to long-term competitive position and profitability. So, the answer to market share leadership for a business is to *differentiate* itself by offering quality *better* than that of the nearest competition (Datta, 2010a, 2010b).

To make this idea *operational* requires *two* steps. The *first* is to determine *which* price-quality segment to compete in? Most consumer markets can be divided in three *basic* price-quality segments: *premium*, *mid-price*, and *economy*. These can be extended to *five* by adding two more: *ultra-premium* and *ultra-economy* (Datta, 1996).

The answer lies in serving the *middle* class by competing in the *mid-price* segment. This is the socio-economic segment that represents about 40% of households in America (Datta, 2011). It is also the segment that Procter & Gamble (P&G), the largest American multinational corporation, has successfully served in the past (Datta, 2010b).

## 2. The Strategic Importance of Price Positioning

The *second* step for a business seeking market share leadership is to *position* itself at a price that is *somewhat* higher than that of the nearest competition. This is in accord with P&G’s practice based on the idea that although higher quality does deserve a “price premium,” it should *not* be excessive (Datta, 2010b). A higher price offers *two* advantages: (1) It promotes an *image* of quality, and (2) It ensures that the strategy is both profitable and sustainable in the long run (*ibid*).

As mentioned above, the *middle* class constitutes about 40% of households in America. So, in a *competitive* market one would normally expect more than one major brand competing in the *mid-price* segment.

A classic example of price positioning is provided by General Motors (GM). In 1921 GM rationalized its product line by offering “a car for every purse and purpose”—from Chevrolet to Pontiac, to Oldsmobile, to Buick, to Cadillac. More importantly, GM positioned each car line at the *top* of its segment (Datta, 1996, 2010a).

A more recent and familiar example is the *economy* chain, Motel 6, which has positioned itself as “offering the *lowest* price of any national chain”. Another example is the Fairfield Inn. When Marriott introduced this chain, it targeted it at the *economy* segment. And then it positioned Fairfield at the *top* of that segment (Datta, 1996).

### 2.1 Close Link between Quality and Price

As mentioned above, *customer*-perceived quality is the most important factor contributing to the long-term success of a business. However, quality cannot really be separated from price (Datta, 1996).

Quality, in general, is an intricate, multi-dimensional concept that is difficult to comprehend. So, consumers often use *relative price*—and a brand's *reputation*—as a symbol of quality (Datta, 1996, 2010b).

### 3. Major Players in the U.S. Household Liquid Heavy-Duty Laundry Detergent Market

There were *three* major corporate players in this market: Procter & Gamble (P&G), Henkel A.G. & Co, and Church & Dwight.

The *market leader* was the *mega* multi-brand Tide, followed by Gain, the *runner-up*.

### 4. Tide

According to Google, Tide was launched in U.S. test markets in 1946 as the world's *first* heavy-duty detergent, with nationwide distribution in 1949. Tide claimed it was "America's Washday Favorite" (Note 3).

Tide is the top-selling laundry detergent brand in the world with about 14.3% market share (Note 4).

### 5. Gain

According to Google, Gain is a brand of laundry detergent made by P&G. Gain was introduced to the market in 1969 as a *stain*-removing detergent. In 1981, P&G was able to expand its product-line with its first *scent*. The company has been able to develop *great* products with their scent trademark (Note 5).

### 6. all®

all® laundry detergent was introduced in 1959 (Note 6). all® laundry detergent is currently owned by the Henkel Corporation. Henkel acquired the brand from Unilever in 2016 (Note 7).

### 7. Purex

Purex is a laundry detergent manufactured by Henkel North American Consumer Goods and marketed in the United States and Canada. It is a division of Henkel AG & Co. KGaA, generally known as Henkel, a German multinational chemical and consumer goods corporation (Note 8).

### 8. Arm & Hammer

Arm & Hammer is a brand of Church & Dwight Co, Inc., originally known for its baking soda. It is an American consumer goods company focusing on personal care, household products, and specialty products. The company was founded in 1847 (Note 9).

In the 1970s the company began to expand its product line by using *baking soda* as a deodorizing agent. The new products included toothpaste, laundry detergent, underarm deodorant, and cat litter (Note 10).

The company introduced phosphate-free *powder* laundry detergent in the 1970s. Between 1980s and 1980s the company added *liquid* laundry detergent to its product line (Note 10).

## 9. How Do Detergents Work?

All detergents—for hands, hair, clothes or dishes—work on the same principle: To *break up* oils and dirt, and wash them away. However, detergents made for different uses are formulated for specific conditions and, therefore, are *not* interchangeable. The main differences are in the pH, presence or absence of bleach, and the types of *surfactants* (Note 22).

A surfactant is an organic compound with a *long* molecule: each end of which has different properties. One end of this molecule, the “tail,” is “hydrophobic” (“water hating”), and the other end, the “head,” is “hydrophilic” (“water loving”). While the hydrophobic end is attracted to dirt and grease, the hydrophilic side attracts water. Thus, the surfactant *grabs* the dirt and grease and *dissolves* it in water (Datta, 2012). A liquid (or gel) detergent for *hand-dishwashing* contains an alkyl ethoxy carboxylate *surfactant*, and little or no alcohol ethoxylate and soap by-product contaminants. The compositions result in good *grease removal*. At the same time, they are *mild* to the skin (Datta, 2024b).

In *contrast*, a detergent for a *dishwasher* is much *harsher*, intended to work only at much *higher* temperatures, and therefore, *not* safe for handwashing (*ibid*).

Laundry products are somewhere *in between*—*harsher* than hand dishwashing products, but *gentle* enough for fabrics and dyes (Note 22).

## 10. The U.S. Household Liquid Heavy-Duty Laundry Detergent Market —Price-Quality Segmentation Profile

This study is based on U.S. retail sales of this market for 2008 and 2007 (Note 11). The data includes total dollar and unit sales, no-promotion dollar and unit sales, and promotion dollar and unit sales (Note 12).

For 2008, this market had U.S. retail sales of \$ 3,034 million. We have focused our attention on the 100-128 Oz size because it was the *most* popular, constituting 38.2% sales of that market, with sales of \$1,158 million (Table 1).

## 11. Hierarchical Clustering as the Primary Instrument of Statistical Analysis

We have used cluster analysis as the *primary* statistical tool in this study. As suggested by Ketchen and Shook (1996), we have taken several steps to make this effort as *objective* as possible:

- First, this study is *not* ad-hoc, but is grounded in a *theoretical* framework, as laid out below.
- Second, we are fortunate that we were able to get *national* U.S. sales data for our study for *two* years.
- Thus, this data provided a *robust* vehicle for subjecting cluster consistency and reliability to an *additional* test.
- Third, we wanted to use two different techniques—KMeans and Hierarchical—to add another layer of cluster consistency and reliability. However, we found Hierarchical cluster

analysis to be *superior* in meeting that test. So, we did *not* consider it necessary to use the KMeans technique.

## 12. Theoretical Foundation for Determining Number of Clusters—and Their Meaning

As already stated, a major purpose of this paper is to identify the market share *leader* and determine the price-quality segment—based on unit *price*—it was competing in.

An important question in performing cluster analysis is to figure out the *number* of clusters based on an *a priori* theory. Most consumer markets can be divided in three *basic* price-quality segments: *premium*, *mid-price*, and *economy*. These three basic segments can be extended to *five*: with the addition of *super-premium* and *ultra-economy* segments (Datta, 1996).

Therefore, *three* represents the *minimum* and *five* the *maximum* number of clusters (Datta, 2012, 2017, 2018a, 2018b, 2018c, 2019a, 2019b, 2020a, 2020b, 2020c, 2020d, 2021, 2023a, 2023b, 2023c, 2023d, 2024a, 2024b).

An equally crucial issue is to find out what each cluster (e.g., *economy*, *mid-price*, and *premium*) really *means*.

Perhaps a good way to understand what each price-quality segment stands for in *real* life is to look at a socio-economic *lifestyle* profile of America. It reveals *six* classes (Note 21). (Each class is associated with a price-quality segment typified by the retail stores where they generally shop: each a symbol of their *lifestyle* (Datta, 2011).

### 12.1 Guidelines for Cluster Consistency and Reliability

In addition to laying a theoretical foundation for the *number* of clusters, we set up the following guidelines to *enhance* cluster consistency and reliability (Datta, 2012, 2017, 2018a, 2018b, 2018c, 2019a, 2019b, 2020a, 2020b, 2020c, 2020d, 2021, 2023a, 2023b, 2023c, 2023d, 2024a, 2024b):

- In general, there should be a *clean break* between *contiguous* clusters.
- The *anchor* clusters—the top and the bottom—should be *robust*. In a cluster-analysis project limited to a range of three to five clusters, a robust cluster is one whose membership remains *constant* from three- to four-, or four- to five-cluster solutions.
- Finally, we followed a step-by-step procedure to determine the optimal solution. First, we start with *three* clusters. Thus, the bottom cluster obviously becomes the *economy* segment, and the top cluster the *premium* segment. Next, we go to *four* clusters, and *tentatively* call them: *economy*, *mid-price*, *premium*, and *super-premium*. Then we go to *five* clusters. If the membership of the *bottom* cluster remains unchanged from what it was in the four-cluster result, it clearly implies that the *ultra-economy* segment does *not* exist. Then, if the membership of the *top* cluster also remains the same from a four- to a five-cluster solution, then the *top* cluster becomes the *super-premium* segment.
- This signifies that even in a five-cluster solution we have only *four* price-quality segments: *economy*, *mid-price*, *premium*, and *super-premium*.

- It means that either the *premium* or the *mid-price* segment consists of *two sub-segments*.

### 12.2 External Evidence to Validate Results of Cluster Analysis

Whenever possible, we have tried to seek *external* evidence to validate the results of cluster analysis. For example, many companies identify on their websites a certain brand(s) as a *premium* or luxury brand. A case in point is that of P&G which says that its plan is to compete in all “price points”: *super-premium*, *premium*, and *mid-price: except the economy* segment (Datta, 2010b).

## 13. Testing Hypotheses

- I—That the market share leader would be a member of the *mid-price* segment.
- II—That the market share leader would carry a price tag that is *higher* than that of the nearest competition.

### 13.1 Results of Hierarchical Cluster Analysis

The U.S. Liquid Heavy-Duty Laundry Detergent Market had retail sales of \$3,034 million in 2008. In Table 1 we present the 2008 cluster analysis results for this market. We have focused our attention on the 100-128 Oz size because it was the *most* popular, with sales of \$1,158 million, constituting 38.2% sales of that market.

By far the most dominant player in this market was the mega multi-brand Tide with an *overall* brand market share of 45.2%. Yet, the market was highly competitive with 39 brands: each with 2008 brand sales over \$1 million.

For 2008—and 2007--the data did *not* support Hypothesis I, because Tide (100 Oz), the market *leader*, was a member of the *premium* segment.

Yet, for 2008, the data *did* support Hypothesis II because, Gain (100 Oz), the *runner-up*, was a member of the *mid-price* segment, with a unit price *lower* than that of Tide, the market leader.

For 2007, *technically*, the runner-up was Purex (100 Oz.) with sales of \$169 million in the 100-128 size. However, the *real* runner-up was Gain which had 100-128 Oz 2007 sales of \$154 million—not very far from Purex. But this distinction appears to be random, and *not* long-term. This is because the sales of Purex (100 Oz) *dived* precipitously in 2008, from \$169 million in 2007, to \$53 million in 2008, compared to Gain’s 2008 sales of \$137 million.

So, based on the above argument, we have *determined* that—for all *practical* purposes--Gain was the runner-up for 2007 *as well*.

## 14. Relative Price a Strategic Variable

Finally, we performed one more test to determine the consistency and reliability of the results of cluster analysis in this study. So, we *ranked* the unit price of each brand for 2008 and 2007. All *three* measures of *bivariate* correlation—Pearson, and non-parametric measures Kendall’s tau\_b, and Spearman’s rho—were found to be *significant* at an amazing 0.01 level!

We believe these surprising results became possible only, because management in the U.S. Liquid

Heavy-Duty Laundry Detergent Market must have been treating *relative* price as a strategic variable, as we have hypothesized.

### 15. The Role of Promotion

We performed *bivariate* correlation between total retail sales vs. promotional (PROMO) sales. The results were significant for *all* three measures—Pearson, Kendall, and Spearman—at an amazing 0.01 level!

For 2008 the promotional sales of the U.S. Liquid Heavy-Duty Laundry Detergent Market averaged 49.1% of total retail sales (Table 2). Its highlights are presented below:

Generally, brands with high market share tend to rely *more* on promotion to support their market share. This is reflected by the promo score of 56.2% for Tide 100 Oz, the *market leader*, that is *higher* than the average score of 49.1%.

Brands competing in the *super-premium* or *premium* segment have *two* choices. One is to rely *more* on promotion to protect their *premium* prices. The other is to follow the *opposite* approach. The *low* promo score of 17.1% and 16.8%, respectively, for Seventh Generation and Dreft, is an indication of their attempt to *bolster* their image as a *premium* brand.

### 16. A Pattern Emerging in Price-Quality Segmentation Analysis

This is the *twentieth* paper--and the 21<sup>st</sup> study--that encompasses analysis of competitive profiles of U.S. consumer markets. In each study we have tested two hypotheses:

- I—That the market-share leader would be a member of the *mid-price* segment.
- II—That the market-share leader would carry a price tag that is *higher* than that of the nearest competition.

### 17. Men's and Women's Razor-Blade Markets Did Not Support Hypothesis I

In the Men's Razor-Blade market for 2008, the *market leader* was Gillett Mach 3 in the *premium* segment, and Gillette Fusion, the *runner-up*, was in the *super-premium* segment (Datta, 2019a)

In the Women's Razor-Blade market for 2008, the market leader Gillett Venus, the *market leader*, and Schick Intuition Plus, the *runner-up*, were *both* members of the *premium* segment (Datta, 2019b).

So, what are the factors that these two markets have deviated from our theory? (Datta, 2019a, 2019b):

- The technology for making Men's and Women's Razors and Blades has now become quite *intricate*, based as it is on *three* fields: metallurgy, chemistry, and electronics, which, in turn, raises the *cost* of production.
- Gillette has been pursuing a strategy of *innovation* and constant improvement, offering new features—and benefits—than ever before, which has consequently made it possible for it to charge *premium* prices.



- Gillette's virtual *monopoly* of the industry is another factor, that has enabled it to position itself in the *premium* and *super-premium* segments: rather than the *mid-price* segment.
- Many men—and women--consider shaving an important part of *personal grooming*, for which they are willing to pay *premium* prices: because they regard it an “affordable luxury.”

### 18. Six more Markets--Coffee, Toilet Paper, Paper Towel, Disposable Diapers, Sanitary Pads, and Liquid Heavy-Duty Laundry Detergent Also Did Not Support Hypothesis I

In the *Coffee* market, the *market leader*, Folgers, and the *runner-up* Maxwell House, were *both* members of the *economy* segment, although Folgers' unit price was *higher* than that of Maxwell House, as we have hypothesized (Datta, 2020c).

This is truly an *astonishing* result! In all the remaining *twenty* markets, *not* a single market leader competed in the *economy* segment.

This implies that both Folgers and Maxwell House were following the *cost leadership* strategy based on *lower* price, rather than better quality, and treated coffee as a *commodity* to gain market share. So, it is not unreasonable to conjecture that such a strategy is not likely to have been very profitable (*ibid*).

The results in the Toilet Paper study also did *not* support Hypothesis I, because *both* Charmin, the *market leader*, and Cottonelle, the *runner-up*, were members of the *premium* segment (Datta, 2023b).

Toilet activity is quite complex, in which personal *hygiene* plays a vital role. Although a *bidet* is quite popular in Europe, very few people in America use it (*ibid*).

So, in the *absence* of a substitute, Americans are willing to pay *premium* prices for toilet paper, because it serves an *important* need: an *antidote* to germs and disease (*ibid*).

In the Paper Towel market, the *market leader*, Bounty was a member of the *super-premium* segment (Datta, 2023c)!

So, *what* made this extraordinary result possible?

P&G *revolutionized* the industry with a 2-ply paper towel, Bounty, that was not only *soft* and *strong*, but was *unmatched* in being *quick* and *absorbent* on spills (*ibid*).

Whereas most paper towel makers were marketing *strength* or *softness*, P&G discovered that consumers generally *preferred* something else: *absorbency*: for which 39% of American customers paid *super-premium* prices for Bounty paper towel in 2008 (*ibid*).

And that is why P&G uses the slogan “*The Quicker Picker Upper*” in its advertisements for Bounty (*ibid*).

Similarly, Americans do *not* mind paying *super-premium* prices for Disposable Diapers as well (Datta, 2023d). In the words of Peter Drucker, Pampers disposable baby diapers “*created* customers” and served them *better* than the competition (*ibid*).

Another reason, according to P&G, is the rising cost of *pulp*--a raw material used to make Disposable Diapers--and higher transportation and freight costs (*ibid*).

Another example is the Sanitary Pads market. *Menstruation* is an activity that is so *complex* that it is

synonymous with *femininity* itself. So, it is not surprising that many women are willing to pay *premium* prices for such a fundamental need (Datta, 2024).

Finally, the Liquid Heavy-Duty Laundry Detergent market also did not support Hypothesis I because the market leader, Tide (100 Oz), was a member of the *premium* segment. The primary argument is that Tide was such a *dominant* player in the market, that allowed P&G to *place* Tide in the *premium* segment.

Yet, we offer one more argument. Let us compare Liquid *Laundry* detergent market with Liquid *Dishwasher* detergent market. In the latter, the market leader was P&G's Cascade which was a member of the *mid-price* segment. In both markets clean dishes and clean clothes are important. Nevertheless, there is an important *distinction* between the two. Clean dishes are normally *not* on public display (except when one has guests). However, clothes are on normally on *public* display. So, many customers are willing to pay *premium* prices for a laundry brand such as Tide.

### 19. Results in Thirteen Markets Supported Hypothesis I

In thirteen of the twenty-one markets—that *exclude* Men's and Women's Razor-Blades, Coffee, Toilet Paper, Paper Towel, Disposable Diapers, Sanitary Pads, and Liquid Heavy-Duty Laundry Detergent—the market leader was found to be a member of the *mid-price* segment for *both* 2008 and 2007 (see Note 12), as we have hypothesized. Those market leaders are:

- Edge Men's Shaving Gel, (2) Bud Light Lager Beer, (3) Pantene Shampoo, (4) Kraft Shredded/Grated Cheese, (5) Tropicana Refrigerated Orange Juice, (6) Crest Toothpaste, (7) Campbell Chicken Broth, and Campbell Chicken Noodle Soup, (8) Lay's Potato Chips, (9) Energizer Alkaline AA Battery (Note 13), (10) Kleenex Facial Tissue, (11) Cascade Automatic-Dishwasher Detergent, (12) Palmolive Hand-Dishwashing Detergent, and (13) Formula 409 Household Liquid Non-Disinfectant Cleaner.

### 20. Results in Ten Markets Supported Hypothesis II

Although technically, in three of the thirteen markets mentioned above, the results did *not* support Hypothesis II, in reality, only *two*—Chicken Noodle Soup, and Facial Tissue--did not.

In the Chicken Noodle Soup market, the *runner-up* Progresso, was a member of the *premium* segment. The results in the Facial Tissue market also did *not* support Hypothesis II, because the *runner-up* Puffs, was a member of the *premium* segment with a clearly *superior* quality, and a price tag *higher* than that of the market leader Kleenex: a member of the *mid-price* segment (Datta, 2023a).

In the Shampoo market, the *runner-up*, Head & Shoulders was a member of the *mid-price* segment. Yet, its price was *higher* than that of the *market leader*, Pantene. However, this result did *not* negate Hypothesis II, because it was due to the fact that the former was a *specialty* shampoo, which always sells at a *higher* price (2018a).

That leaves us with the following remaining *ten* markets that supported Hypothesis II:

- (1) Men's Shaving Gel, (2) Lager Beer, (3) Shampoo, (4) Shredded-Grated Cheese, (5) Refrigerated Orange Juice, (6) Toothpaste, (7) Potato Chips, (8) AA Alkaline Battery (9) Automatic-Dishwasher Detergent (Note 14), and (10) Hand-Dishwashing Detergent (Note 15).

In the above *ten* markets the *runner-up* had a price tag that was *lower* than that of the market leader (see Notes 14 and 15).

## 21. Strategic Groups in the U.S. Household Liquid Non-Disinfectant Market, 2008

We found *three* strategic groups in this market. Their 2008 overall *brand* market shares are as follows (Table 1):

1. Procter & Gamble:
  - a. Tide—*Market Leader* 45.2% (6 brands; Note 16)
    - Gain—*Runner-up* 8.4%
  - b. Cheer 3.1% (3 brands)
  - c. Era 1.7%
  - d. Dreft 1.4% (Note 17)
2. Henkel A.G. & Co.:
  - **all@** 7.7 % (3 brands)
  - *Purex* 7.5%
3. Church & Dwight
  - Arm & Hammer 6.1%

### 21.1 Procter & Gamble (P&G)

P&G is the largest American multinational corporation, which was created back in 1837.

For 2023 P&G has reported worldwide net sales of \$82 billion (Note 18).

### 21.2 Henkel A.G. & Co.

Henkel AG & Co. KGaA, generally known as Henkel, is a German multinational chemical and consumer goods corporation, headquartered in Düsseldorf, Germany.

For 2023 Henkel's worldwide sales were \$23 billion (Note 19).

### 21.3 Church & Dwight Co.

For 2023, the company's worldwide sales were \$5.9 billion (Note 20).

## 21. Conclusion

The path to market share leadership does *not* lie in *cost leadership* strategy: a path that is grounded in a *price that is lower* than that of the competition, as Michael Porter has suggested. Rather, a business in pursuit of market-share leadership should try to serve the *middle* class by competing in the *mid-price* segment; and offering quality *superior* to that of the competition: at a somewhat *higher* price to connote an image of quality, and to ensure that the strategy is both profitable and sustainable in the long

run.

The *middle* class is the socio-economic segment that represents about 40% of households in America. Quality, however, is a complex concept that consumers generally find difficult to understand. So, they often employ *relative* price and a brand's *reputation* as a symbol of quality.

For 2008 the total U.S. retail sales of the Liquid Heavy-Duty Laundry Detergent Market were \$3,034 million (Table 1). By far the *most* popular was the 100-128 Oz size, which constituted 38.2% of the total sales. So, we have focused cluster analysis on this size.

We tested two hypotheses. (I) That the market leader would be a member of the *mid-price* segment, and (II) That the market leader would carry a price tag that is *higher* than that of the nearest competition.

For 2008—and 2007--the data did not support Hypothesis I, because Tide (100 Oz), the *market leader*, was a member of the *premium* segment.

Yet, for 2008, the data *did* support Hypothesis II because, Gain (100 Oz), the *runner-up*, was a member of the *mid-price* segment, with a unit price *lower* than that of Tide (100 Oz), the market leader.

We have *determined* that—for all *practical* purposes--Gain was the runner-up in 2007 *as well*.

We also found that *relative* price was a strategic variable, as we have hypothesized.

We found *three* strategic groups in this market.

A *pattern* is emerging in price-quality segmentation analysis. In *thirteen* of twenty-one markets—that *exclude* Men's Razor-Blades, Women's Razor-Blades, Coffee, Toilet Paper, Paper Towel, Disposable Diapers, Sanitary Pads, Liquid Heavy-Duty Laundry Detergent—the results *supported* Hypothesis I: that the *market leader* was going to be to be a member of the *mid-price* segment. Those market leaders are:

- Edge Men's Shaving Gel, (2) Bud Light Lager Beer, (3) Pantene Shampoo, (4) Kraft Shredded/Grated Cheese, (5) Tropicana Refrigerated Orange Juice, (6) Crest Toothpaste, (7) Campbell Chicken Broth, and Campbell Chicken Noodle Soup, (8) Lay's Potato Chips, (9) Energizer Alkaline AA Battery (Note 13), (10) Kleenex Facial Tissue, (11) Cascade Automatic-Dishwasher Detergent, (12) Palmolive Hand-Dishwashing Detergent, and (13) Formula 409 Household Liquid Non-Disinfectant Cleaner.

Also, results in *ten* markets supported Hypothesis II.

Finally, we discovered *three* strategic groups in this market.

**Table 1. Hierarchical Cluster Analysis: The U.S. Heavy-Duty Laundry Detergent Market, 2008**

PQ Segment	Brands 100-128 Oz	Upr.	ClusCtr	MktSh%	MktSh%	Sales\$M	Sales\$M
				100-128 Oz	Brand	100-128 Oz	Brand
<i>Super-Premium</i>	SEVENTH GENERATION 100 Oz	\$14.03	<b>\$14.03</b>	0.8%	0.7%	\$8.7	\$21.3
<i>Premium</i>	TIDE TOTAL CARE 100 Oz	\$11.90	<b>\$10.97</b>	1.5%	1.0%	\$17.4	\$29.6
	DREFT 100 Oz	\$11.55		1.0%	1.4%	\$11.6	\$41.8
	CHEER 100 Oz	\$11.28		4.0%	2.9%	\$46.2	\$89.5
	TIDE FREE 100 Oz	\$11.17		6.6%	3.8%	\$75.9	\$115.1
	EARTH FRNDLY PROD ECOS 100 Oz	\$11.10		0.2%	0.1%	\$2.2	\$3.1
	<b>TIDE 100 Oz Market Leader</b>	<b>\$10.89</b>		<b>45.2%</b>	<b>35.8%</b>	<b>\$524.0</b>	<b>\$1,085.0</b>
	TIDE PURE ESSENTIALS 100 Oz	\$10.61		1.7%	1.3%	\$19.8	\$40.6
	PLANET 100 Oz	\$10.29		0.1%	0.1%	\$0.8	\$3.0
	TIDE COLDWATER 100 Oz	\$10.01		2.1%	1.7%	\$23.8	\$50.9
<i>Mid-Price</i>	<b>GAIN 100 Oz</b>	<b>\$9.05</b>	<b>\$8.51</b>	<b>11.8%</b>	<b>8.4%</b>	<b>\$137.0</b>	<b>\$254.9</b>
	SUN & EARTH 100 Oz	\$7.97		0.1%	0.0%	\$0.9	\$1.4
<i>Economy</i>	CHEER DARK 100 Oz	\$6.64	<b>\$5.13</b>	0.1%	0.2%	\$0.6	\$6.8
	ALL F-C 100 Oz	\$6.44		2.3%	3.1%	\$26.3	\$94.6
	ERA 100 Oz	\$6.24		1.1%	1.5%	\$12.9	\$46.7
	ALL 100 Oz	\$6.14		3.1%	4.4%	\$36.5	\$133.1
	WISK 100 Oz	\$5.49		2.0%	2.4%	\$23.1	\$72.3
	CHEERFREE 100 Oz	\$4.99		0.0%	0.1%	\$0.1	\$3.5
	XTRA 120 Oz	\$4.92		0.2%	2.9%	\$2.0	\$88.9
	WISK FREE CLEAR 100 Oz	\$4.48		0.1%	0.0%	\$1.3	\$1.3
	SUN BURST 117 Oz	\$4.45		1.0%	1.7%	\$11.4	\$50.5
	ALL BRILLIANT 100 Oz	\$4.33		0.5%	0.2%	\$5.4	\$6.4
	PRIVATE BRANDS 100 Oz	\$4.25		3.3%	3.8%	\$38.2	\$114.9
	ERA FREE 100 Oz	\$4.16		0.0%	0.1%	\$0.4	\$2.4
	ERA WITH BLEACH 100 Oz	\$4.10		0.2%	0.1%	\$2.3	\$2.6
<i>Ultra-Economy</i>	PUREX 100 Oz	\$3.70	<b>\$2.54</b>	4.6%	7.5%	\$53.4	\$227.5
	ARM & HAMMER D 100 Oz	\$3.29		2.3%	6.1%	\$26.7	\$184.0
	DYNAMO LI 100 Oz	\$3.26		1.2%	0.9%	\$14.3	\$28.5
	XTRA LASTING SCT STS 128 Oz	\$2.82		0.2%	0.8%	\$2.9	\$24.6
	CLASSIC XTRA D 128 Oz	\$2.79		0.9%	0.3%	\$10.1	\$10.1
	FAB 100 Oz	\$2.71		0.3%	0.5%	\$4.0	\$15.3
	OXYDOL EXTREME CLEAN 100 Oz	\$2.60		0.4%	0.1%	\$4.3	\$4.5
	SOLO 128 Oz	\$2.59		0.1%	0.1%	\$1.2	\$2.3
	SUN 100 Oz	\$2.40		0.2%	0.2%	\$2.6	\$5.0
	DASH 128 Oz	\$2.11		0.1%	0.1%	\$1.7	\$1.7
	TREND 100 Oz	\$2.02		0.1%	0.2%	\$1.5	\$4.9
	AJAX WITH BLEACH ALT. 128 Oz	\$1.98		0.2%	0.1%	\$2.0	\$2.0
	AJAX 100 Oz	\$1.74		0.0%	0.1%	\$2.0	\$2.0
	AJAX FRESH 100 Oz	\$1.61		0.2%	0.1%	\$2.6	\$2.6
				<b>100.0%</b>	<b>94.8%</b>	<b>\$1,158.2</b>	<b>\$2,875.3</b>
	<b>Total Brand</b>				<b>100.0%</b>	<b>38.2%</b>	<b>\$3,034</b>

**Table 2. Percentage of Promo Sales to Total Sales: The U.S. Liquid Heavy-Duty Laundry Detergent Market, 2008**

**Brands with Sales over \$10 Million (100-128 Oz)**

BRANDS	PQSegment	Promo %	Promotional Intensity	Brand MkSh %
XTRA LASTING SCT STS 128 Oz	<i>Ultra-Economy</i>	87.3%	<b>Extremely Heavy</b>	0.8%
WISK FREE CLEAR 100 Oz	<i>Economy</i>	64.0%	<b>Heavy</b>	1.7%
ERA W/BLEACH 100 Oz	<i>Economy</i>	63.3%		7.5%
TIDE TOTAL CARE 100 Oz	<i>Premium</i>	61.3%		1.0%
CHEERFREE 100 Oz	<i>Economy</i>	61.2%		2.9%
ARM & HAMMER 100 Oz	<i>Ultra-Economy</i>	56.6%	<b>Moderate</b>	0.9%
<b>TIDE 100 Oz Market Leader</b>	<i>Premium</i>	<b>56.2%</b>		<b>35.8%</b>
PUREX LIQ 100 Oz	<i>Ultra-Economy</i>	54.5%		6.1%
ALL BRILLIANT 100 Oz	<i>Economy</i>	54.0%		3.8%
CLASSIC XTRA D 128 Oz	<i>Ultra-Economy</i>	53.5%		0.5%
TIDE COLDWATER 100 Oz	<i>Premium</i>	51.4%		1.7%
WISK LIQU 100 Oz	<i>Economy</i>	51.3%		2.4%
TIDE PURE ESSENTIALS 100 Oz	<i>Premium</i>	50.7%		1.3%
ALL 100 Oz	<i>Economy</i>	50.1%		4.4%
TIDE FREE 100 Oz	<i>Premium</i>	49.2%		3.8%
XTRA LASTING SCT STS 128 Oz	<i>Ultra-Economy</i>	46.3%		0.3%
ALL F-C L 100 Oz	<i>Economy</i>	43.4%		3.1%
<b>GAIN 100 Oz Runner-up</b>	Mid-Price	<b>42.7%</b>		<b>8.4%</b>
ERA 100 Oz	<i>Economy</i>	38.7%	<b>Low-Moderate</b>	1.5%
CHEER 100 Oz	Mid-Price	34.3%		2.9%
SEVENTH GENERATION 100 Oz ▼	Super-Premium ▼	17.1% ▼	<b>Low</b> ▼	0.7% ▼
DREFT 100 Oz	<i>Premium</i>	16.8%		1.4%
<b>Average Promo Score</b>		<b>49.1%</b>		

## Acknowledgement

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## Notes

Note 1. The paper titled: The U.S. Automatic-Dishwasher and Hand-Dishwashing Detergent Markets involved *two* studies.

Note 2. Profit Impact of Market Strategies.

Note 3.

[https://www.google.com/search?q=history+of+tide+liquid+laundry+detergent&rlz=1C1RXQR\\_enUS1087US1087&oq=history+of+tide+liquid+laundry+detergent&gs\\_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRigATIHCAIQIRigATIHCAQMIRigATIHCAQQIRigATIHCAUQIRigATIHCA YQIRirAjlHCAcQIRirAjlHCAgQIRifBTIHCAkQIRifBdIBCjM4MzQ3ajBqMTWoAgiwAgE&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=history+of+tide+liquid+laundry+detergent&rlz=1C1RXQR_enUS1087US1087&oq=history+of+tide+liquid+laundry+detergent&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIHCAEQIRigATIHCAIQIRigATIHCAQMIRigATIHCAQQIRigATIHCAUQIRigATIHCA YQIRirAjlHCAcQIRirAjlHCAgQIRifBTIHCAkQIRifBdIBCjM4MzQ3ajBqMTWoAgiwAgE&sourceid=chrome&ie=UTF-8)

Note 4. [https://en.wikipedia.org/wiki/Tide\\_\(brand\)](https://en.wikipedia.org/wiki/Tide_(brand))

Note 5.

[https://www.google.com/search?q=gain+detergent+history&rlz=1C2RXQR\\_enUS1087US1087&sca\\_esv=13134d05f9161faa&sca\\_upv=1&ei=r3NXZvzAF7qWwbkPnr6wsAQ&oq=gain+detergent+wikipedia&gs\\_lp=Egxdn3Mtd2l6LXNlcnAiGGdhaW4gZGV0ZXJnZW50IHdp2lwZWWRpYSocCAEYCxAA](https://www.google.com/search?q=gain+detergent+history&rlz=1C2RXQR_enUS1087US1087&sca_esv=13134d05f9161faa&sca_upv=1&ei=r3NXZvzAF7qWwbkPnr6wsAQ&oq=gain+detergent+wikipedia&gs_lp=Egxdn3Mtd2l6LXNlcnAiGGdhaW4gZGV0ZXJnZW50IHdp2lwZWWRpYSocCAEYCxAA)



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z-serp

Note 6. <https://alldetergent.wordpress.com/about/>

Note 7.

[https://www.google.com/search?q=Who+owns+All+detergent+brand&sca\\_esv=4ce04de13f7e18f6&source=hp&ei=whhjZpy5HYWqwbkPkc-G0AM&iflsig=AL9hbdgAAAAZmMm0luf8tEnLFTwaXTtyPlxkkYiPrfe&ved=0ahUKEwicorbE2cmGAxUFVTABHZGnAToQ4dUDCA8&uact=5&oq=Who+owns+All+detergent+brand&gs\\_lp=Egndnd3Mtd2l6lhxXaG8gb3ducyBBbGwgZGV0ZXJnZW50IGJyYW5kMgUQIRigATIFECEY0AEyBRAhGKABMgUQIRirAkiXvAJQ4glYw7ACcAJ4AJABAJgBf6ABByBCqAQQyNy4xuAEDyAEA-AEBmAleoAKwEagCCsICEBAAGAMY5QIY6gIYjAMYjwHCAhAQLhgDGOUCGOoCGIwDGI8BwgIREC4YgAQYsQMY0QMYgwEYxwHCAgsQABiABBixAxiDacICCxAuGIAEGLEDGIMBwgIIEAAYgAQYsQPCAgQLhiABBjRAxjHAcICChAAGIAEGEYy-wHCAG4QABiABBixAxiDARIKBcICDhAuGIAEGLEDGNEDGMcBwgIIEAAYgAQYyQPCAgSABiABBiSAXiKBcICCxAuGIAEGMcBGK8BwgITEAAYgAQYsQMYgwEYigUYRhj7AcICBRAuGIAEwgIFEAAAYgATCAhAQABiABBixAxiDARhGGPsBwgIEEAAYA8ICBxAAGIAEGArCagYQABgWGB7CAGsQABiABBixAxiKBcICCBAAGBYyChgewgIIEAAYgAQYogTCaggQABiiBBiJBZgDBpiHBdi5LjGgB9W8AQ&scient=gws-wiz](https://www.google.com/search?q=Who+owns+All+detergent+brand&sca_esv=4ce04de13f7e18f6&source=hp&ei=whhjZpy5HYWqwbkPkc-G0AM&iflsig=AL9hbdgAAAAZmMm0luf8tEnLFTwaXTtyPlxkkYiPrfe&ved=0ahUKEwicorbE2cmGAxUFVTABHZGnAToQ4dUDCA8&uact=5&oq=Who+owns+All+detergent+brand&gs_lp=Egndnd3Mtd2l6lhxXaG8gb3ducyBBbGwgZGV0ZXJnZW50IGJyYW5kMgUQIRigATIFECEY0AEyBRAhGKABMgUQIRirAkiXvAJQ4glYw7ACcAJ4AJABAJgBf6ABByBCqAQQyNy4xuAEDyAEA-AEBmAleoAKwEagCCsICEBAAGAMY5QIY6gIYjAMYjwHCAhAQLhgDGOUCGOoCGIwDGI8BwgIREC4YgAQYsQMY0QMYgwEYxwHCAgsQABiABBixAxiDacICCxAuGIAEGLEDGIMBwgIIEAAYgAQYsQPCAgQLhiABBjRAxjHAcICChAAGIAEGEYy-wHCAG4QABiABBixAxiDARIKBcICDhAuGIAEGLEDGNEDGMcBwgIIEAAYgAQYyQPCAgSABiABBiSAXiKBcICCxAuGIAEGMcBGK8BwgITEAAYgAQYsQMYgwEYigUYRhj7AcICBRAuGIAEwgIFEAAAYgATCAhAQABiABBixAxiDARhGGPsBwgIEEAAYA8ICBxAAGIAEGArCagYQABgWGB7CAGsQABiABBixAxiKBcICCBAAGBYyChgewgIIEAAYgAQYogTCaggQABiiBBiJBZgDBpiHBdi5LjGgB9W8AQ&scient=gws-wiz)

Note 8.

[https://en.wikipedia.org/wiki/Purex\\_\(laundry\\_detergent\)#:~:text=4%20External%20links-,History,adopted%20for%20their%20bleach%20product.](https://en.wikipedia.org/wiki/Purex_(laundry_detergent)#:~:text=4%20External%20links-,History,adopted%20for%20their%20bleach%20product.)

Note 9. [https://en.wikipedia.org/wiki/Church\\_%26\\_Dwight](https://en.wikipedia.org/wiki/Church_%26_Dwight)

Note 10. when did ARM & Hammer introduce laundry detergent - Search (bing.com)

Note 11. This data is from food stores with sales of over \$2 million, and drug stores over \$ 1 million; it also includes discount stores, such as Target and K-Mart, but *excludes* Wal-Mart as well as warehouse clubs, e.g., Sam's Club, Costco, and BJ's. It also does not include the "dollar" stores, such as Dollar General, and others.

Note 12. For those stores for which, during a week, there were feature ads, coupon ads, display, or temporary price decrease of at least 5%.

Note 13. For 2007 the results did not support Hypothesis I, because the market leader, Energizer was found to be a member of the *premium* segment (Datta, 2021).

Note 14. In the Automatic Dishwasher Detergent market, the results for 2008 supported Hypothesis II, but *not* for 2007.

Note 15. In the Hand Dishwashing segment, the results for 2007 did support Hypothesis II, but *not* for 2008.

Note 16. Includes Tide Liquid Heavy-Duty Laundry Detergent with *Bleach*. This brand does not appear in Table 2 because it did not offer the size 100-128 Oz.

Note 17.

<https://www.dreft.com/en-us/shop-products/baby-detergents/newborn-hypoallergenic-detergent>

This detergent has been specifically formatted for clothes for newborn babies.

Note 18. <https://us.pg.com/annualreport2023/financial-highlights/>

Note 19. <https://en.wikipedia.org/wiki/Henkel>

Note 20. [https://www.annualreports.com/HostedData/AnnualReports/PDF/NYSE\\_CHD\\_2023.pdf](https://www.annualreports.com/HostedData/AnnualReports/PDF/NYSE_CHD_2023.pdf)

Note 21. The six classes are: “The Poor”, “The Near Poor”, “Traditional Middle Class”, “The Upper-Middle Class”, “The Very Rich/The Rich”, and “The Mega Rich—Masters of the Universe”.

Note 22.

[https://www.google.com/search?q=how+do+detergents+for+hands%2C+hair%2C+clothes+or+dishes+work&sca\\_esv=661b256b13fc34d5&source=hp&ei=HuN8ZvSJD\\_aCwbkPt9O6-AI&iflsig=AL9hbdgAAAAAZnzxLu2HXSSbcs0jiDRhrmsDF5QAk7hD&ved=0ahUKEwj0kLGE8vqGAxV2QTABHbepDi8Q4dUDCBA&uact=5&oq=how+do+detergents+for+hands%2C+hair%2C+clothes+or+dishes+work&gs\\_lp=Egdnd3Mtd2l6Ijlob3cgZG8gZGV0ZXJnZW50cyBmb3IgaGFuZHMzIGhhaXIsIGNsb3RoZXMgb3IgaGFuZGVzIHdvcmVzYBRAhGKABMgUQIRirAkiy\\_ANQthFYxewDcAF4AJABAJgBYaAB5AuqAQIyNbgBA8gBAPgBAfgBAPgCGqACvwyoAgrCAhAQABgDGOUCGOoCGIwDGI8BwgIQEC4YAxjlAhjqAhiMAxiPAcICDhAuGIAEGLEDGNEDGMcBwgIIEAAYgAQYsQPCAgUQABiABMICCxAuGIAEGNEDGMcBwgIOEC4YgAQYsQMYgwEYigXCAGsQABiABBixAxiDAcICDhAAGIAEGLEDGIMBGIoFwgILEC4YgAQYxwEYrwHCAhAQABiABBixAxiKBRhGGPkBwgILEC4YgAQYsQMYgwHCAgUQLhiABMICCBuGIAEGLEDwgILEAAYgAQYsQMYigXCAGgQABiABBiiBMICCBAAAGKIEGikFmAMFkgcEMjUuMaAH4KMB&sclient=gws-wiz](https://www.google.com/search?q=how+do+detergents+for+hands%2C+hair%2C+clothes+or+dishes+work&sca_esv=661b256b13fc34d5&source=hp&ei=HuN8ZvSJD_aCwbkPt9O6-AI&iflsig=AL9hbdgAAAAAZnzxLu2HXSSbcs0jiDRhrmsDF5QAk7hD&ved=0ahUKEwj0kLGE8vqGAxV2QTABHbepDi8Q4dUDCBA&uact=5&oq=how+do+detergents+for+hands%2C+hair%2C+clothes+or+dishes+work&gs_lp=Egdnd3Mtd2l6Ijlob3cgZG8gZGV0ZXJnZW50cyBmb3IgaGFuZHMzIGhhaXIsIGNsb3RoZXMgb3IgaGFuZGVzIHdvcmVzYBRAhGKABMgUQIRirAkiy_ANQthFYxewDcAF4AJABAJgBYaAB5AuqAQIyNbgBA8gBAPgBAfgBAPgCGqACvwyoAgrCAhAQABgDGOUCGOoCGIwDGI8BwgIQEC4YAxjlAhjqAhiMAxiPAcICDhAuGIAEGLEDGNEDGMcBwgIIEAAYgAQYsQPCAgUQABiABMICCxAuGIAEGNEDGMcBwgIOEC4YgAQYsQMYgwEYigXCAGsQABiABBixAxiDAcICDhAAGIAEGLEDGIMBGIoFwgILEC4YgAQYxwEYrwHCAhAQABiABBixAxiKBRhGGPkBwgILEC4YgAQYsQMYgwHCAgUQLhiABMICCBuGIAEGLEDwgILEAAYgAQYsQMYigXCAGgQABiABBiiBMICCBAAAGKIEGikFmAMFkgcEMjUuMaAH4KMB&sclient=gws-wiz)