

BOTTLED WATER



2017 STAYING STRONG

U.S. AND INTERNATIONAL DEVELOPMENTS & STATISTICS

By John G. Rodwan, Jr.

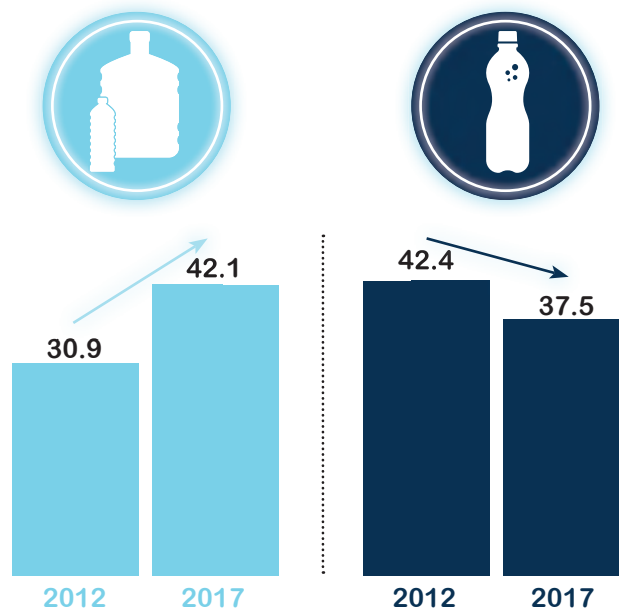
Having emerged as the No.1 U.S. beverage category by volume in 2016, bottled water solidified its preeminence in 2017, when strong growth put greater distance between it and the erstwhile leader, carbonated soft drinks, which again declined. Overall bottled water volume grew from 12.8 billion gallons in 2016 to 13.7 billion gallons in 2017, an increase of 7 percent. While this represented a slowdown from the rate of growth recorded the year before, it nevertheless remained remarkable for a beverage of such substantial size.

In fact, except for a couple of small reductions in 2008 and 2009—years when most other beverage categories declined—bottled water volume has grown every year since 1977. That span included 17 double-digit annual volume growth spurts. Since resuming growth in 2010, bottled water volume has consistently enlarged at solid single-digit percentage rates. As a result, per capita consumption exceeded 42 gallons in 2017, while average intake of carbonated soft drinks dipped to less than 38 gallons.

For 2017, total bottled water volume reached **13.7 BILLION GALLONS**, an increase of **7 percent** over 2016.

The contrast between the two biggest packaged beverages is striking. Bottled water's rocket-like rise coincided with, and contributed to, pronounced shifts in consumer preferences for refreshment and rehydration. As the quintessential portable and affordable beverage, bottled water introduced new usage occasions and habits. Suitable for consumption at any time of day or night, and not necessarily in need of being kept cold, bottled water simply became the preferred beverage not only for consumers aiming to reduce caloric intake or lessen artificial sweetener usage but also for consumers of all kinds.

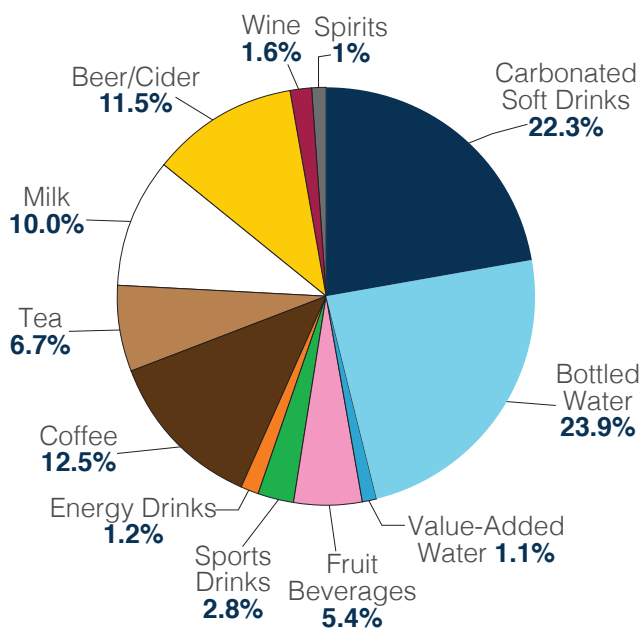
Per Capita Consumption (Gallons) Bottled Water and Soft Drink Trends



Source: Beverage Marketing Corporation

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2017 VOLUME SHARE OF STOMACH BY U.S. BEVERAGE SEGMENT (BILLIONS OF GALLONS)



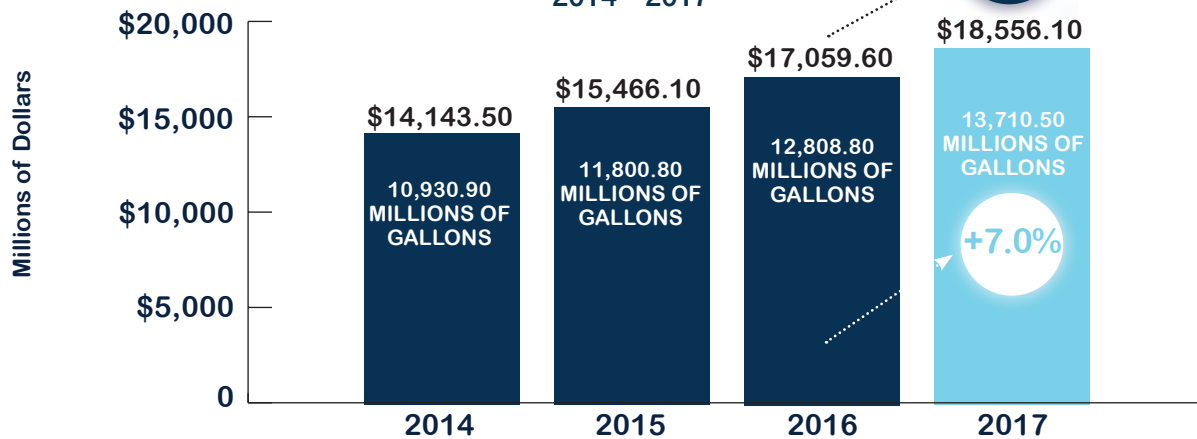
Source: Beverage Marketing Corporation

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Plastic bottles in single-serving sizes continue to be the most popular option, propelling overall growth of the category and holding the majority of its volume. Yet all other segments—including larger, multi-serving bottles as well as home and office delivery (HOD), sparkling water, and imports—also registered growth in 2017. Domestic sparkling advanced at a double-digit rate for the fourth year in a row, and imports moved in advance of the total bottled water market, though both grew from comparatively small bases.

Before the economic downturn at the end of the century's first decade, bottled water enjoyed a notable run of fast volume growth, as documented in *U.S. Bottled Water through 2022*, Beverage Marketing Corporation's latest yearly analysis of the market. During the 2000s, bottled water volume charted double-digit percentage growth rates in two years and advanced at rates close to that level in several others. Bottled water volume grew by close to 12 percent in 2002, and after growing by nearly 11 percent in 2005, it enlarged by 9.5 percent in 2006. Departing from the pattern of preceding years, bottled water volume declined by 1.0 percent in 2008 and then by 2.5 percent in 2009.

U.S. BOTTLED WATER MARKET Volume and Producer Revenues 2014 - 2017



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Domestic sparkling bottled water advanced at a **DOUBLE-DIGIT RATE** for the fourth year in a row.

Unlike carbonated soft drinks, which followed a number of years of slow growth with several volume reductions, bottled water showed that its two consecutive losses were exceptions rather than the start of a new stagnant phase. When bottled water volume resumed growth in 2010, it effectively restored volume to where it had been prior to the declines. Even stronger growth ensued in subsequent years. By 2017, volume reached a new volume record—almost 5 billion gallons higher than it had been in 2007. Soft drinks, on the other hand, underwent their thirteenth consecutive year of volume reduction in 2017.

Bottled water producers' revenues fell in both 2008 and 2009 as well, and did so more sharply than volume, but they also bounced back. Bottled water wholesale dollar sales first exceeded \$6 billion in 2000. By 2007, they neared \$12.2 billion. Category sales declined by more than 3 percent to \$11.8 billion the following year and then by 5 percent to \$11.2 billion in 2009. They inched upward in 2010 and 2011 and moved above \$12 billion again in 2012. Wholesale dollars topped \$13 billion in 2013 and exceeded \$14 billion in 2014. They neared \$15.5 billion in 2015, surpassed \$17 billion in 2016, and hit \$18.5 billion in 2017.

Upward movement in per capita consumption demonstrates definite, ongoing enthusiasm for a product that

consumers see as a healthy alternative to other beverages. U.S. residents increased their annual consumption by more than 13 gallons from 29 gallons per person in 2007 to 42.1 gallons a decade later. During the same period, per capita consumption of carbonated soft drinks dropped by about 11 gallons. Per capita consumption of major beverage categories like milk and fruit beverages also fell. Other types, including coffee and tea, were characterized by stability, though the ready-to-drink versions of both categories made gains. Those beverages associated with beneficial properties and functional benefits—a group that includes packaged water as well as energy drinks, sports beverages, and ready-to-drink tea—were the most resilient elements of the beverage market after 2009. Even so, average intake of ready-to-drink tea and sports beverages remained fractions of bottled water's per capita consumption level. Indeed, bottled water *added* more gallons to its per-person consumption rate in ten years than either ready-to-drink tea or sports beverages *reached* by the end of that period. (Ready-to-drink intake stood above 5 gallons per American in 2017, while sports beverages remained below that level.) Bottled water proved itself to be not only a key component of the U.S. liquid refreshment beverage market but also appeared to be on track for additional increases in per capita consumption in the future. Beverage Marketing predicts that it could climb higher than 50 gallons within just a few more years.

Multiple qualities contribute to bottled water's continuing attraction for U.S. consumers, including its associations with healthfulness, convenience, safety, and value. Various packaging types, ranging from bulk to single-serve, facilitate a broad array of uses. Among

U.S. BOTTLED WATER MARKET Per Capita Consumption 2007 – 2017		
Year	Gallons Per Capita	Annual % Change
2007	29.0	5.3%
2008	28.5	-1.8%
2009	27.6	-3.2%
2010	28.3	2.7%
2011	29.2	3.1%
2012	30.9	5.8%
2013	32.2	4.1%
2014	34.3	6.5%
2015	36.7	7.1%
2016	39.6	8.0%
2017	42.1	6.2%

Source: Beverage Marketing Corporation
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commercial ready-to-drink beverages, bottled water is fairly inexpensive, and aggressive pricing—especially in the retail PET segment (named for its bottles made from polyethylene terephthalate)—made it more and more affordable. Consumers’ interest in beverages that boast benefits beyond refreshment alone also played a part in the fundamental hydrating beverage’s rise in the beverage rankings. Bottled water’s lack of calories and artificial ingredients appeals to conscientious consumers. Even where tap water may be safe, many people prefer bottled water, which they deem as better tasting. The easy availability of packaged water wherever beverages are sold also meaningfully differentiates bottled water from tap.

Beverage Marketing predicts that the per-person consumption average of bottled water could climb HIGHER THAN 50 GALLONS within a few years.

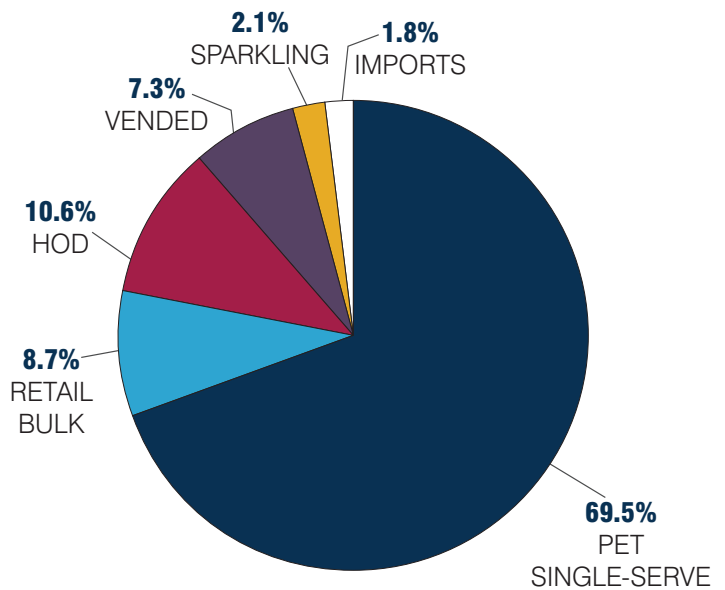
Though it has occasionally been compared with tap water, bottled water actually achieved its position by enticing consumers away from other packaged beverages. Some consumers may have shifted away from regular, full-calorie sodas in favor of their diet versions, but many others opted for bottled water instead. As some consumers became leery of artificial sweeteners, they foreswore diet sodas as well as regular counterparts.

Category Developments

Domestic non-sparkling water persists as the largest individual segment of the U.S. packaged water business. Domestic non-sparkling water’s 12.7 billion gallons represented 92.5 percent of total volume in 2017. In total, domestic non-sparkling saw slower volume reductions than the overall market in 2008 and 2009 and then outperformed it again in 2010. It moved very slightly slower than the total market in following years, including 2017.

The non-sparkling category includes diverse components that usually perform quite differently from one another. In 2017, for the seventh consecutive year, all four segments grew, but they did so at dissimilar rates. Throughout most of the 1990s and 2000s, the retail premium segment—consisting of still water in single-serve PET bottles—drove the overall category’s development. Indeed, the PET segment enlarged by a double-digit percentage

2017 VOLUME SHARE OF STOMACH BY WATER SEGMENT



Source: Beverage Marketing Corporation
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rate 16 consecutive times through 2007. Growth slowed considerably in 2008 before it halted in 2009. Yet PET's 0.9 percent reduction was far less than the 2.5 percent loss measured for bottled water in general. Moreover, 2009 PET volume of almost 5.2 billion gallons stood more than 4.1 billion gallons higher than it had in 1999, and its share of total bottled water swelled from 24 percent to more than 61 percent during that ten-year period. In 2010, PET experienced the strongest growth of any bottled water segment, advancing by 6.8 percent to 5.5 billion gallons, which boosted its share above 63 percent. Growth slowed in 2011 but remained well in advance of the total market: volume greater than 5.8 billion gallons flowed from growth of 5.3 percent, which pushed PET's share to 64 percent. In 2012, the segment saw its strongest showing since 2007, increasing by more than 8 percent to 6.3 billion gallons, which represented 65 percent of the overall market. Greater than 6 percent growth in 2013 pushed volume up to nearly 6.7 billion gallons—essentially two-thirds of the total. In 2014, the segment advanced at an even greater rate than in 2012, catapulting volume above 7.2 billion gallons and market share to 66.2 percent. Still another year of acceleration in 2015 drove PET volume to nearly 7.9 billion gallons and share to almost 67 percent. In 2016, the single-serve segment enlarged by more than 9 percent to reach 8.6 billion gallons, which gave it still more market share. PET volume slowed in 2017, but with volume of close to 9.2 billion gallons, the segment still accounted for roughly 67 percent of U.S. bottled water volume.

Retail bulk volume experienced some reversals as numerous consumers picked convenient PET multipacks in large format retail channels instead of larger (1 to 2.5 gallon) sizes. Its share slid from nearly one-quarter of the category volume at the beginning of the century to less than 9 percent by 2017, largely due to competition from PET.

After several declines, the segment did grow each year from 2011 to 2017. Even so, retail bulk's 3.5 percent uptick was much slower than the overall bottled water market, or the non-sparkling sub-set, in 2017.

Much like retail bulk, direct delivery faced competition from handy PET bottles. The segment, which was the largest of them all as recently as the mid-1990s, accounted for a little more than 10 percent of total volume by 2017. U.S. home and office delivery (HOD) volume slipped from close to 1.4 billion gallons in the early 2000s to around 1.2 billion gallons a few years later before inching back up to about 1.4 billion gallons again in 2017, when volume enlarged by 1.3 percent.

The comparatively small, mostly regional vending segment consisting of refillable jug containers saw some growth even when total bottled water volume did not. Its low cost during economic difficulties undoubtedly had something to do with vending's positive results. It continued to grow in 2017, but at a slower pace than the domestic still water market or the bottled water market as a whole (though it did grow faster than both retail bulk and HOD).

The two segments outside the domestic non-sparkling space grew in 2017; one did so forcefully, while the other slowed significantly but still outshined the overall market. Imported water, the smallest segment of them all, is prone to fluctuations. In the 2000s, it registered double-digit percentage growth in some years, and equally sizeable contractions in others. After one of those up years in 2007, imported water's volume fell sharply in 2008 and then plummeted precipitously in 2009. It continued to shrink in 2010 before inching up modestly in 2011. In 2012, imports notched their first double-digit growth rate since 2007. Growth rates remained at similarly high levels for a few years until 2017, when imported volume enlarged by

U.S. BOTTLED WATER MARKET Volume and Growth by Segment 2015 - 2017								
Year	Non-sparkling		Domestic Sparkling		Imports		Total	
	Volume*	Change	Volume*	Change	Volume*	Change	Volume*	Change
2015	11,175.6	7.3%	423.7	25.1%	199.3	12.2%	11,800.8	8.0%
2016	12,012.6	7.5%	573.9	35.4%	222.2	11.5%	12,808.8	8.5%
2017	12,678.2	5.5%	731.7	27.5%	242.6	9.2%	13,710.5	7.0%

*Millions of gallons

Source: Beverage Marketing Corporation

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9.2 percent. Sparkling water held a small share of bottled water volume but grew at an even more explosive rate than imports, let alone retail PET, for several years, and 2017 was another one of them.

As usual, domestic non-sparkling water accounted for almost all per capita bottled water consumption in 2017. Sparkling water volume worked out to about 2.4 gallons per person. (With imports, the figure translated into about three-quarters of a gallon per U.S. resident.) In the key PET portion, average intake moved from 17.3 gallons in 2007 to nearly 28.2 gallons ten years later.

International Developments

Bottled water emerged as a beverage industry phenomenon not only in the United States—which until fairly recently ranked as the No.1 market in terms of volume—but also in practically every region of the world. Bottled water first became a sizeable, mainstream commercial beverage category in Western Europe, where consumption of it has long been part of many residents' routines. It later grew into a truly global beverage. Several Asian markets achieved strong growth to become major bottled water markets during the 2000s. In fact, Asia itself became the largest regional market in 2011, edging out North America and easily outshining Europe. After having moved ahead of Mexico to claim the No.2 position in 2012, China surpassed the United States to take the lead in 2013. By 2017, China accounted for more than one-quarter of the world's bottled water volume.

Global bottled water consumption is estimated to have reached nearly 100 billion gallons in 2017, according to data from the latest edition of Beverage Marketing's *The Global Bottled Water Market*. Total consumption swelled by more than 7 percent during the year. Per capita consumption of more than 13 gallons represented a gain of close to 3 gallons over the span of five years.

Of course, per capita consumption by individual region or country can diverge significantly from the global average. For instance, several Western European countries have per capita consumption levels far above 25 gallons, and the No.1 market had average intake of more than 67 gallons in 2017. Simultaneously, much of the developing world, where the majority of the world's population resides, finds its per capita consumption figures still in the single-digit range.

Although the global per capita consumption figure can obscure significant regional variations, bottled water's international growth signals demand for it in all types of markets. Consumers have shown a thirst for it in highly developed markets, in less developed ones, and in econo-

HOD volume inched up in 2017 to about 1.4 BILLION GALLONS, when volume enlarged by 1.3 percent.



mies in transition. Bottled water tapped into differing consumer trends around the globe. In developed countries such as the United States and Canada, bottled water became a particularly dynamic major commercial beverage category by registering as an attractive option for health-conscious consumers. Marketers positioned bottled water as a virtuous alternative to carbonated soft drinks and fruit juice drinks (some of which comprise sizeable portions of their own product portfolios). In the developed world, some people viewed bottled water not only as a way of achieving hydration but also as a functional beverage. Simultaneously, bottled water serves at least as a partial solution to the problem of often-unsafe water found in many economically developing countries.

Much of the world's bottled water market is still highly fragmented and controlled by local brands, but consolidation has occurred. Four companies came to dominate much of the market. Swiss food and beverage giant Nestlé and France's Danone are the traditional leaders of the bottled water pack. Both companies originally centered their operations around the core markets of Western Europe and the United States. However, as water growth is increasingly coming from the developing world, Nestlé and Danone expanded their initiatives to the competitive fields of Asia, Latin America, and other areas. Danone stepped back from the U.S. market to focus instead on some of those other markets. Soft drink industry leaders Coca-Cola and PepsiCo also entered the bottled water arena. After reaching solid positions in the United States, both companies directed resources and energy to expanding their global bottled water businesses.

North America contains two of the three largest individual bottled water markets with the United States and Mexico, which together represented 22.5 percent of the world's packaged water market in 2017. The U.S. bottled water market had been a catalyst for much of the global expansion up until the mid-2000s, and its ongoing growth

GLOBAL BOTTLED WATER MARKET				
Leading Countries' Consumption and Compound Annual Growth Rates 2012 - 2017				
2017		Millions of Gallons		CAGR*
Rank	Countries	2012	2017	2012/17
1	China	14,579.9	25,468.9	11.8%
2	United States	9,711.4	13,710.5	7.1%
3	Mexico	7,516.3	8,682.9	2.9%
4	Indonesia	4,966.4	8,158.2	10.4%
5	Brazil	4,611.9	5,794.5	4.7%
6	India	3,623.6	5,759.0	9.7%
7	Thailand	3,135.4	3,966.3	4.8%
8	Germany	3,024.1	3,131.5	0.7%
9	Italy	2,904.8	2,917.5	0.1%
10	France	2,287.9	2,445.7	1.3%
Top 10 Subtotal		56,361.7	80,034.9	7.3%
All Others		16,532.8	19,520.7	3.4%
WORLD TOTAL		72,894.5	99,555.6	6.4%

*Compound annual growth rate

Source: Beverage Marketing Corporation

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Global bottled water consumption is estimated to have nearly reached **100 BILLION GALLONS** in 2017.



continues to contribute to the overall market's enlargement. Its compound annual growth rate (CAGR) of 7.1 percent for the five-year period ending with 2017 was faster than the 6.4 percent CAGR achieved by the global market in the same timeframe. Mexico alone accounted for 8.7 percent of the global volume with nearly 8.7 billion gallons in 2017. With a five-year CAGR of 2.9 percent, however, it grew much more slowly than either the United States or the world market.

Besides the United States, China was the only other country that could claim a double-digit share of global volume, with 29.5 billion gallons and a percentage of the total market higher than the combined shares of the second and third largest markets in 2017. Chinese bottled water volume enjoyed double-digit percentage growth rates for sev-

Still water accounts for the majority of bottled water sales in much of the world.

SPARKLING WATER SALES ARE STRONG in countries like Argentina, where it is traditionally served with meals.



eral consecutive years, registering an 11.8 percent CAGR for the period from 2012 to 2017—the highest rate among the ten biggest bottled water markets. Fourth-place Indonesia moved well ahead of the international market, as did India, the No.3 Asian market, which ranked sixth overall. Thailand also ranked as a top-ten bottled water market, but it grew more slowly than China, Indonesia, and India.

Though Europe can no longer claim to have any of the biggest bottled water markets, it does have several major ones, including three of the ten biggest. These are firmly established markets, which means their growth tends to be slower than those where bottled water has less of a tradition. Some of the most prominent continental countries experienced only very slight growth. For example, during the five-year period ending with 2017, Italy's volume grew by a CAGR of just 0.1 percent. Germany, the eighth largest bottled water market in the world, had a CAGR of 0.7 percent, and tenth-place France moved recorded a CAGR of 1.3 percent. As a group, the trio of leading European bottled water markets accounted for 8.5 percent of the world's total volume in 2017—less than the share Mexico held by itself.

Still water accounts for the majority of bottled water sales in much of the world. Sparkling water sales are strong in several countries, such as Argentina, Chile, Uruguay, the Netherlands, and Germany, where sparkling water is often served with meals. On a global level, sparkling water accounts for an estimated 10 percent of the total volume, with still water accounting for the remaining 90 percent.

Plastic packaging is preferred over glass in almost every country. Even in Germany and other countries, such as the United Kingdom, where glass has a strong presence, PET is the most dynamic and rapidly growing segment. At about one-third of global volume, HOD, or bulk water, still accounts for a minority of global bottled water sales. Yet it is a vital segment in many countries, such as Mexico,

where it accounts for more than two-thirds of the volume.

Mexico regularly leads the world in bottled water per capita consumption, and that remained the case even after China surpassed it in absolute volume. Average intake in Mexico went from 62.2 gallons in 2012 to 67.2 gallons five years later. Per capita consumption in China stood almost four times lower, at 18.4 gallons, in 2017. The not-long-ago leader in average intake, Italy, consumed the equivalent of 48.2 gallons per person in 2017, which put it in third place behind Thailand, which in 2012 consumed the equivalent of 46.9 gallons per person but had upped average intake to 57.5 gallons by 2017.

Several Middle Eastern markets rank very highly in per capita bottled water consumption. With the equivalent of more than 30 gallons for each resident in 2017, Saudi Arabia had the eleventh highest level of bottled water consumption in the world. In addition to Saudi Arabia, the Middle East region had the United Arab Emirates in the top 20 in per capita bottled water consumption. At slightly more than 20 gallons per resident, both Kuwait and Lebanon also consume bottled water at rates greater than the global average, though neither made it onto the 2017 top-20 list.

Although Europe no longer held the top spot in volume per capita, nine of the top 20 bottled water consumers on a per person basis were European countries as of 2017. The consumers of the combined market of Belgium-Luxembourg imbibed more than 35 gallons each, a rate that tended to inch upward over the years. Germany, France, Spain, and Italy were the other European countries with per capita consumption greater than 30 gallons, while Hungary came close to that level. French consumers quaffed more than half a gallon more bottled water in 2017 than they had five years earlier. In 2017, Germany and Spain had per capita consumption rates of 37.9 gallons and 32.6 gallons, respectively, putting them in fifth and ninth

GLOBAL BOTTLED WATER MARKET
Per Capita Consumption by Leading Countries
2012 – 2017

2017		Gallons Per Capita	
Rank	Countries	2012	2017
1	Mexico	62.2	67.2
2	Thailand	46.9	57.5
3	Italy	47.7	48.2
4	United States	30.9	42.1
5	Germany	36.6	37.9
6	France	35.8	36.4
7	Belgium-Luxembourg	34.6	35.1
8	United Arab Emirates	25.3	33.9
9	Spain	30.9	32.6
10	Indonesia	20.1	30.9
11	Saudi Arabia	27.8	30.5
12	China, Hong Kong SAR	25.3	29.5
13	Hungary	28.4	29.2
14	Korea, Republic of	20.1	28.5
15	Brazil	23.2	27.7
16	Poland	21.3	25.6
17	Argentina	28.2	24.9
18	Austria	25.3	24.6
19	Pacific Islands	21.3	24.4
20	Switzerland	25.0	24.3
Global Average		10.3	13.2

Source: Beverage Marketing Corporation
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place in terms of average bottled water intake. Like France, Germany consumed more bottled water per person in 2017 than it had five years before. Hungary, which ranked thirteenth, also increased its bottled water consumption, though only slightly. Other European markets among the top 20 were Austria, Switzerland, and Poland.

Though Asian nations attained prominence among the world's bottled water markets when measured in total volume, the most populous countries generally do not have high per-person intake levels. The Chinese special administrative region (SAR) of Hong Kong made the list for the first time as its average intake approached 22 gallons in

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2009 and continued to increase per capita consumption subsequently, climbing to 29.5 gallons in 2017. Despite its status as the largest market, mainland China did not rank among the top 20 markets in per capita consumption in 2017, although intake had climbed above the global norm by that point.

Americans' 2017 per capita bottled water consumption put the United States in the No.4 position among the countries of the world, right behind Italy but ahead of Germany.

Looking Ahead

Beverage Marketing expects bottled water to continue transforming the U.S. multiple beverage marketplace, enlarging its market share in the process. The total quantity of liquid Americans annually imbibe will remain stable, resulting in overall volume growth commensurate with population increases. Bottled water is poised to grow much faster, unlike carbonated soft drinks or fruit beverages, which will in all likelihood lose share points. Other major beverage categories, such as coffee and tea, are expected to grow but do so much more slowly than bottled water.

Thus, building on its already noteworthy history of growth, bottled water appears virtually certain to put more distance between itself and carbonated soft drinks, the beverage category it deposed as the biggest in volume in 2016.

John G. Rodwan, Jr., is editorial director at Beverage Marketing Corporation, a New York-based research, consulting, and financial services firm dedicated to the global beverage industry. Beverage Marketing publishes numerous market reports on bottled water and other beverages. For more, visit www.beveragemarketing.com.