The intake of cola-flavoured sodas is falling off. In the United States consumption of Coca-Cola has dropped to just under 100 litres per person per year. Which is still quite a lot. Sales of Pepsi-Cola are not faring any better. Consumers in the developed world are gradually giving up sodas, and the battle against overweight is now a public-health priority. As a modest contribution to combating this scourge, I should point out that a 33 centilitre can of Coke or Pepsi contains 38 grams of sugar, equivalent to nine teaspoons. If you were to drink six litres a day, like Kathy O’Sullivan, a young mother of two, your daily sugar intake would exceed half a kilo.¹

So does the decline of soda consumption herald a truce between the two cola giants? Why carry on fighting when your customers are deserting you, not for a competitor but for healthier beverages?

**Duel or Duopoly**

But was there ever actually a war? It is surely high time to debunk this misleading representation of competition as a zero-sum game, or worse still a negative-sum game. When, as is the case here, it involves two competitors, it is wrongly presented as a sort of boxing match.

This sort of conception suggests that competition is only destructive. One of the two protagonists must disappear, eliminated by a knock-out blow. The fist-fight inevitably ends with a winner and
a loser. It’s a zero-sum game. The martial metaphor is even more misguided because war destroys much more wealth than it creates. Competition can certainly be violent and companies aggressive, but it is a positive-sum game. For an economist, competition is the key incentive driving business to cut costs and innovate. As a result consumers have the benefit of cheaper, better quality goods and services. For business itself the gain may be far from negligible because lower prices and innovation stimulate demand.

In other words, if we see competition as a combat sport, we’re only getting a snapshot which wholly overlooks consumers. Sure enough when the Coca-Cola Company lowers its prices, it wins customers from its rival. It’s the same when PepsiCo hires Michael Jackson for an advertising campaign. For the firms it is indeed a zero or negative-sum game when the competition adopts the same strategy of lower prices or publicity spending. But this is only true if we take a static view.

You may think it’s going a bit far to suggest a positive, dynamic vision of competition with regard to cola-flavoured sodas, given that competition boosts demand for a product not necessarily too good for health. Economic theory would say that if the behaviour of consumers is prejudicial to third-parties or society – for example because obesity is hard on the public purse – it is up to government to take the appropriate measures. Which is beginning to happen. The governments of Indiana, Chicago, Mexico, France and even the island of Saint Helena, among others, have introduced tax on sodas. If the competition heats up in polluting industries or the market for cocaine, the solution is not to rein it in order to reduce production but to act on prices through taxation or make it an offence.

Rivalry between Coca-Cola and PepsiCo is not a form of warfare: it is a competitive oligopoly. We might even say it’s a duopoly because the two firms control almost the entire market for soda-flavoured colas. But with demand falling in developed countries,
competition is slackening and its focus shifting. Let’s take a more detailed look at all this.

**Competition Between Substitutable Goods**

Duopolistic competition in the cola market does not impact so much on price as on other dimensions. Yet there is surely nothing more like a can of Coke than a can of Pepsi? However, in a duopoly based on perfectly substitutable goods, competition impacts solely on price and annihilates any hope of profit for either firm. Just over a century ago, the French mathematician Joseph Bertrand demonstrated that in such a case a duopoly’s equilibrium price is equal to the marginal cost, the same price as in a situation of perfect competition with a very large number of producers! If one of the two firms sets a price slightly lower than its competitor, all the consumers in the market will buy the former’s product; the second firm must in turn set an even lower price to corner the market. This process of successive price cuts will end when the price can go no lower, in other words when it equals the unit cost. Below that limit the company would lose money. Obviously the lack of any constraint on the production capacity of the two players is a key assumption in this model. And of course it does not hold true for Coca-Cola and Pepsi. Gigantic as it is, their individual capacity for manufacturing cola concentrate and bottling soda does not match total demand.

But in any case, cut-throat competition of this sort does not apply to our duopoly because their products are not perfectly substitutable, due to the corresponding brands. The findings of laboratory tests are categorical. Subjected to blind tests consumers are unable to say whether the beverage they have tasted is Coke or Pepsi. The proportion of right answers does not significantly differ from the results of random choice. The results are the same when the glasses presented and tasted one after another contain different colas, or contain the same beverage, but without test participants
being told they are drinking the same thing each time. Regarding their preferences, it seems that Pepsi came out on top in the blind tests. But this result is disputed, as it is based mainly on tests organized by Pepsi in supermarkets. Critics claim that its cola was served slightly cooler than the rival beverage, which biased the outcome. An alternative explanation, slightly less machiavellian, is that Pepsi has a slightly higher sugar content. Both the palate and the brain of homo sapiens like the taste of sugar.

Either way, consumer preferences change with any mention of brands. Witness real-life experience: shoppers buy more Coke than Pepsi in supermarkets, where the two brands appear side by side. Magnetic-resonance imagery confirms this advantage. An experiment reported in a neuroscience journal showed that the same part of the brain was activated when a participant in a blind test drank Coke or Pepsi. In contrast, when they knew it was Coke another part of the brain lit up too, revealing a particular emotion. So clearly brand awareness leaves its mark on our minds! Their preference for Coke is probably due to advertising. The Atlanta-based firm spends more than $2 billion a year on publicity, far outstripping Pepsi. It has been doing so for decades.

Price, Switching Costs and Other Tools

With regard to competition, the presence of brands creates friction in demand, which economists refer to as switching costs. Such friction is equal to the sum that must be given to a consumer for them to accept a change of product or supplier. According to recent research, consumers of Coke would switch to the competitor's cola on condition they were given 30 cents a can, which would be equivalent to selling Pepsi with a 30% discount on its current price. Just 13 cents would convince adepts of Pepsi to switch brands. However one cannot generalize on the basis of these figures. The relevant research was based exclusively on purchasing
behaviour in a supermarket of a large US city in the early 1990s. It does nevertheless illustrate that Coke drinkers display greater loyalty to their preferred brand than their Pepsi fellows. This no doubt explains why Coke is on sale almost everywhere and always more expensive than Pepsi.

So Coca-Cola and Pepsi do not compete on price, apart from promotional drives linked in particular to moving into a new area or launching new packaging. Moreover, there have been few periods of price war. Competition is nevertheless very real: it just takes other forms. Let’s look at three examples.

First, competition in publicity to create and maintain brand loyalty, and consequently recruit stars too. Sticking with the duel theme, Olympic boxer Marlen Esparza punches for Coke, whereas amateur wrestler Henry Cejudo fights for Pepsi.

Second, competition for control of upstream activities in order to contain costs and prices. For a long time, an independent network was tasked with processing concentrate, bottling – now mainly canning – and distribution. Thanks to a series of acquisitions, Coca-Cola and PepsiCo have gradually taken over these companies. In the USA, this was a massive undertaking, leaving independent bottling plants with less than 15% market share.4

Third, competition for the exclusive presence of their goods to capture more customers, and to trigger and secure loyalty. On supermarket shelves the duopoly’s products are stacked side by side, often competing with other brands, such as Sam’s Cola at Walmart or Cola Classic at Carrefour. In contrast, consumers have no choice at filling stations, cafeterias, snack bars or even baker’s shops. In this sort of outlet, space is too limited to install several refrigerated cabinets stocked with bottles and cans. There is keen rivalry between Coca-Cola and PepsiCo to reach exclusive agreements with such retailers, for it is a way of generating repeat sales. Part of the customer base of such outlets are regulars. The chances are that when they go elsewhere they will purchase the cola that
has, by force of habit, become their preferred choice. Competition between the brands is even stiffer to obtain exclusive contracts with leading chains and keep the soda fountain flowing. McDonald’s is Coca-Cola’s top blue-chip customer. The Atlanta-based brand also has an exclusive contract with Burger King. If you prefer Tex-Mex food, chicken rather burgers, you’ll be drinking Pepsi at Taco Bell or KFC.

**Innovation and Its Limits**

Lastly, competition is a key driving force for innovation. The world of Coca Light, Pepsi Light, Coca-Cola Zero, Pepsi Max, Coke Life and Next Pepsi has not always existed. PepsiCo started the ball rolling with artificial sweeteners replacing saccharine. That was in 1964. Veteran consumers will no doubt recall the stunning flop of New Coke. This new recipe with a slightly sweeter taste was rolled out in 1985 to coincide with the brand’s hundredth anniversary. The plan was for it to completely replace the previous version, blind tests having shown that a majority of participants preferred it to Pepsi Cola and conventional Coke.

The switch was announced on 23 April, with production of the traditional recipe stopping a week later. But as there is a chasm between what people prefer during blind tests and in real life, many consumers started hoarding the old stuff and thousands of others indignantly complained to the firm by phone or in writing. Word has it that even Fidel Castro, a great Coke drinker, joined the uprising. He purportedly saw the change as yet another sign of the decadence of capitalism.

Coca-Cola reacted by relaunching the traditional beverage three months later. Classic and New Coke co-existed for a few years, then the newcomer vanished into the dustbin of history and Classic became good old Coke again. The year of the Coca-Cola centenary was one of the rare occasions when Pepsi sales exceed those of Coke.
Less Intense Competition

In the world of today, with the steady slide in demand for sodas, competition is less intense. Indeed, we are seeing the opposite of a price war. If Coca-Cola ups its price, Pepsi follows suit, and vice-versa. But there is nothing co-ordinated about this process, no collusion akin to what we have seen in cartels or alliances (see Chapter 5). With falling demand becoming a durable trend there is less pressure to make dynamic price trade-offs. The choice between reaping the benefits of brand loyalty today by selling at a higher price to loyal customers, or broadening the future customer base by setting a lower price to poach the competition’s consumers has shifted.

The focus of competition has also moved as demand has declined. Coca-Cola and PepsiCo do not only market cola-flavoured water containing varying amounts of sugar, they also sell mineral water, fruit juice, smoothies and such. PepsiCo has taken the lead here, doing much more to diversify into other beverages. It is investing more in health-conscious drinks than the Atlanta firm and has done for longer. But the war – which is not a war – is still being waged on the original battlefield – which is not a battlefield either – for there is still much to be done to slake the thirst for cola among the middle classes of India, China and other Asian countries.

Notes