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Markets for Breakfast and Through the Day

Market design is so pervasive that it touches almost every facet of our lives, from the moment we wake up. The blanket you chose to sleep under, the commercial playing on your clock radio —even the radio itself—embody the hidden workings of various markets. Even if you eat only a light breakfast, you likely benefit from the global reach of multiple markets. And while most of those markets are easy to participate in, even that apparent simplicity may disguise a sophisticated market design.

For example, you probably don't know where your bread was baked—but even if you do, your baker doesn't have to know who grew the wheat that went into the flour used to make the bread. That's because wheat is traded as a *commodity*—that is, it is bought and sold in batches that can all basically be considered the same. That simplifies things, although even commodities need to be designed, so that the market for wheat doesn't have to be a matching market, as it was as recently as the 1800s.

Every field of wheat can be a little different. For that reason, wheat used to be sold "by sample"—that is, buyers would take a sample of the wheat and evaluate it before making an offer to buy. It was a cumbersome process, and it often involved buyers and sellers who had successfully transacted in the past maintaining a relationship with one another. Price alone didn't clear the market, and participants cared whom they were dealing with; it was at least in part a matching market.

Enter the Chicago Board of Trade, founded in 1848 and sitting at the terminus of all those boxcars full of grain arriving in Chicago from the farms of the Great Plains.

The Chicago Board of Trade made wheat into a commodity by classifying it on the basis of its quality (number 1 being the best) and type (winter or spring, hard or soft, red or white). This meant that the railroads could mix wheat of the same grade and type instead of keeping each farmer's crop segregated during shipping. It also meant that over time, buyers would learn to rely on the grading system and buy their wheat without having to inspect it first and to know whom they were buying it from.

So where once there was a matching market in which each buyer had to know the farmer and sample his crop, today there are commodity markets in wheat, corn, soybeans, pork bellies, and numerous other food items that are as anonymous—and efficient—as financial markets. Just as investors don't worry about which particular shares of AT&T stock they buy, buyers don't care which particular 5,000 bushels of number 2 hard red winter wheat they have shipped to them. Thanks to the rating system, they can buy wheat without seeing it. Commodifying wheat via a reliable grading system helped make the market safe.

Wheat can even be sold *before* it's harvested, as *wheat futures*—a promise of wheat to come. This allows big millers and bakers to make their purchases and lock in their costs in advance. They can do so without fear, because the standardized description of what is being purchased means they don't have to worry about what will be delivered. The purchase of wheat futures is a purely financial transaction, with no wheat even present in the marketplace.

As for the transaction itself, brokers inspecting and buying lot by lot have been replaced by commodity traders on the floor of the Chicago Board of Trade signaling and calling out their bids and offers in the trading pits of the open outcry markets that came to dominate this kind of transaction. Nowadays traders also buy and sell enormous volumes of grain while sitting at computer screens.

Turning a market into a commodity market helps make it really thick, because any buyer can buy from any seller, and any seller can sell to any buyer. At the same time, it also helps the market deal with one of the main sources of congestion in matching markets, since in a commodity market each offer to sell can be made to all buyers, and each offer to buy can be made to all sellers. So unlike in the market for jobs, or for houses, no one has to wait for an offer to be made to him personally; anyone who sees (or hears) a price he likes can take it. We'll see in more detail how such markets can work when we look into financial markets in chapter 5, and we'll see just how fast commodity markets can sometimes operate.

Coffee and More

Turning a product into a commodity can affect not just how it's bought and sold but even what is produced. Still keeping our sleepy eyes squarely on the breakfast table, let's shift our attention to coffee and its own remarkable market tale.

Coffee beans have been grown in Ethiopia for centuries, but until the twenty-first century they were traded a lot like nineteenth-century American wheat. If you wanted to buy Ethiopian coffee in bulk at the source, you had to have an agent there who could extract a sample from deep inside each sack to taste and evaluate it.

That changed in 2008 with the creation of the Ethiopia Commodity Exchange. At its heart is a system of anonymous coffee grading, in which professional tasters sample and grade each lot put up for sale. (By the way, there was also some thoughtful market design that went into the rules—that is, the market design—involved in organizing quality grading. For example, tasting must be “blind”; the tasters can’t know whose beans they’re tasting. Otherwise they could be bribed by the seller to inflate the grades.)

The standardization of coffee can actually improve the quality of the coffee harvest. Coffee beans grow inside a “cherry,” and the best coffee is harvested when the cherry is ripe and red. But the beans are sold after being removed from the cherry and dried. So when buyers simply see coffee beans, they can’t tell whether they were harvested from ripe red cherries or from unripe green ones. Before coffee was graded, coffee farmers sometimes were tempted to harvest a whole hillside at once, red and green beans, ripe and unripe. But now that tasters can tell the difference, it makes sense to have coffee pickers pluck only the red cherries and to come back later to harvest the rest of them when they are ripe. Since the graders can tell the difference, the market reliably rewards such care with a higher grade and a higher price. The ultimate result is that foreign buyers can now buy Ethiopian coffee beans in bulk from a distance, without having to taste them on the spot, and from multiple sellers, without worrying about the sellers’ reputation or pedigree.

So as you sip your morning coffee, you are benefiting from some fairly recent design in the marketplace for an ancient agricultural commodity, which wasn’t always as standardized—or as good—as it is today.

That said, your coffee doesn’t necessarily come to you anonymously, even if you don’t know who grew the beans. You may run out to pick up your coffee already brewed from Starbucks or a more local coffee shop, but in either case you know quite a bit about the seller. You may have chosen your coffee joint for its convenience, for the pastries it sells with the coffee, or even for the designs the barista swirls into the foam on your latte. And if you’re a regular, that seller may also know a lot about you—for instance, getting your “usual” ready when she sees you walking in.

Coffeehouses try hard to differentiate their products so that customers will want to return and buy regularly from them. Of course, if you're in a strange city, you may find yourself seeking a big chain such as Starbucks precisely because of the standardization of the drinks it sells, since you haven't had a chance to locate a more idiosyncratic coffee shop that might suit you better.