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The Market for Eggs: How Prices Are Hatched

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High Egg Prices Show No Sign of Cracking
—Headline from the Butler Eagle (PA), December 28, 2022

If you've bought a dozen eggs recently, you might have noticed that prices have taken a sharp turn higher, making your omelet seem like a luxury. Eggs play an important role in the culinary lives of many people, from serving as a breakfast staple to being a key ingredient in countless recipes. According to the U.S. Department of Agriculture (USDA), the American consumer eats 250-300 eggs per year on average. So when their price fluctuates, people notice. Since the summer of 2024, the price of eggs has more than doubled in some places, with consumers paying more than $6 per dozen in March 2025, according to the Associated Press.

What's behind the sharp increase? As with many things in economics, it all boils down to supply and demand—where the short shelf life of eggs, the egg production cycle of hens, and consumer habits all play a role in cracking the price puzzle.

Where Do Egg Prices Come From?

The price of eggs, as with most goods and services, is determined in a market made up of consumers and producers. And, eggs have a surprisingly sophisticated marketplace, aptly named the Egg Clearinghouse, Inc. (ECI), where billions of eggs are traded every year. In 2024, 2.6 billion eggs and 39 million pounds of egg product, valued at more than $600 million, were traded on its online platform.

Specifically, ECI helps large-volume egg suppliers fill in the gaps. For example, if a farmer is trying to fill a large order for a supermarket and comes up a little short, they can use the exchange to buy enough eggs to fill the gap. Likewise, other farmers might have excess eggs to sell on ECI. In this way, ECI helps establish the wholesale price of eggs, which informs the retail price, where it is passed on to consumers and businesses. And, of course, the price changes in real time as the market changes in response to shifting supply and demand. Speaking of supply and demand, let's look at how the supply and demand for eggs determines their price.

The Demand and Supply of Eggs

The Demand Side

Economics is built on simple foundational principles such as the **law of demand**, which states that when the price of a certain good goes up, consumers buy a smaller quantity of that good. Despite rising egg prices, however, the quantity of eggs demanded by consumers has remained relatively steady over

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time, as shown in the table below. This is because eggs are a dietary staple: Even at their current high prices, eggs remain a relatively small portion of people's food budgets, and there are few good substitutes. This suggests that eggs have relatively **inelastic demand**, which means that people don't reduce their consumption very much as the price rises. Data and research from the *American Journal of Public Health* support the idea that demand is relatively inelastic.

U.S. Egg Consumption per Person

Year	Eggs per person
2023	249
2022	281
2021	286
2020	288

SOURCE: "Shell Eggs from Farm to Table." U.S. Department of Agriculture, Food Safety and Inspection Service. Last updated November 20, 2024.

The Supply Side

Likewise, the **law of supply** teaches us that when the price of a good goes up, producers supply a greater quantity of that good. There's less research on the elasticity of supply of eggs, but let's consider some of the factors that contribute to how quickly suppliers respond to a change in price.

Unlike a manufactured good, where output can often be increased by turning a dial or reprioritizing resources, chickens have an incubation period, literally; a commercial laying hen takes about 18 to 22 weeks to mature before they can start laying eggs and are kept for 2-3 years. On top of that, the U.S. Food and Drug Administration notes that eggs have a shelf life of three weeks, which means that it's hard to build up inventory. As such, let's assume that eggs have relatively **inelastic supply** in the **short-run**; this means producers don't (or cannot) increase the quantity they supply very much relative to the increase in price. In the **long-run**, supply is more elastic because farmers can adjust their flock sizes, invest in larger facilities, expand production, or even vaccinate their chickens. And, in the long-run, if prices remain high, new firms (farms) can enter the market.

Why Does Elasticity Matter?

Let's take a textbook approach to elasticity. Figure 1 below shows standard supply and demand curves in the left panel and a similar graph with relatively inelastic supply and demand curves in the right panel. The result of having inelastic supply and demand curves with this more steeply sloped, vertical shape is that changes in either supply or demand result in relatively larger changes in price. Let's compare the left and right panels. The supply curve has shifted leftward by the same quantity in both graphs, but there is a much larger change in price for the graph with inelastic supply and inelastic demand. This relationship shows how small changes in supply, when it's inelastic, can result in much larger changes in price.

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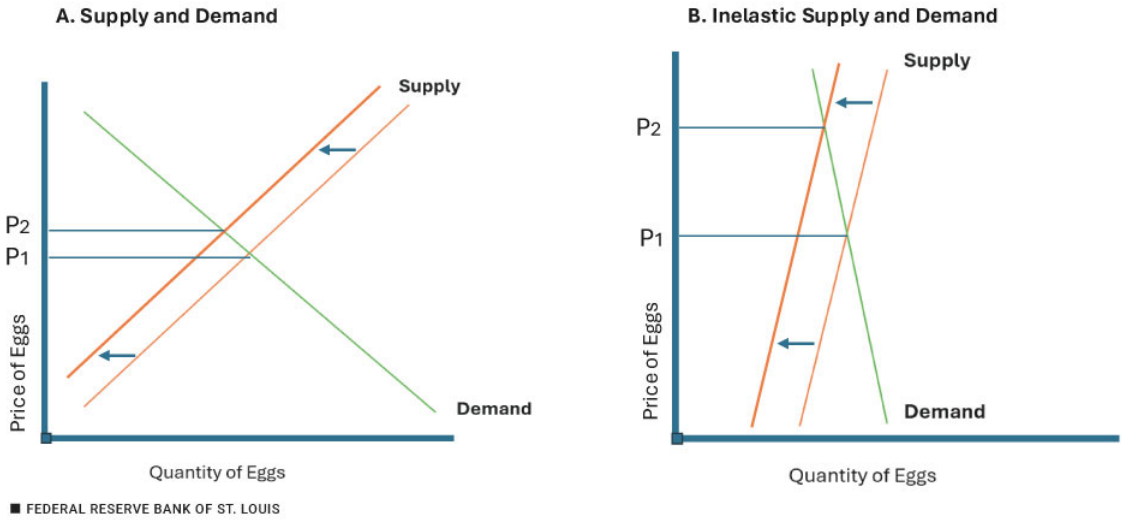
Figure 1: **Inelastic Supply and Demand**

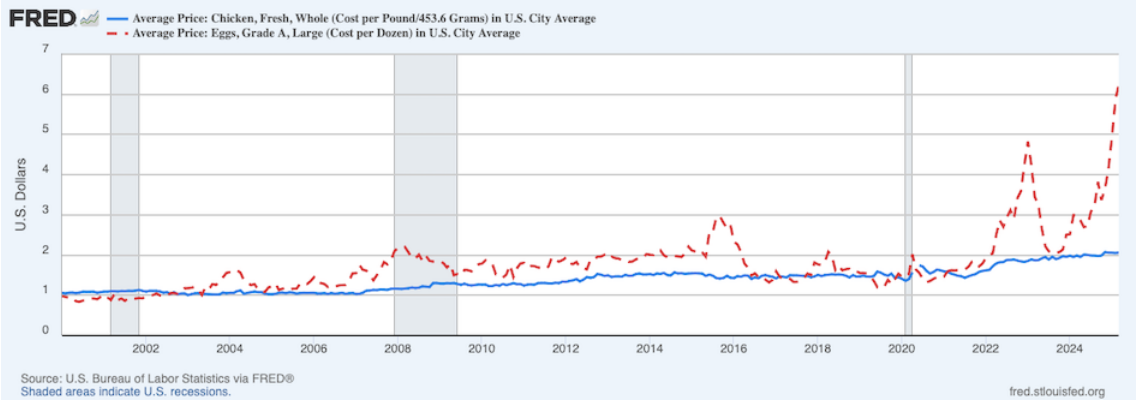


Enter Avian Flu

Avian flu was first detected in 2016, according to the U.S. Centers for Disease Control; it was first detected in a commercial flock in February 2022. When avian flu is detected in a flock of chickens, the farmer must quarantine and humanely euthanize the entire flock. Its effects have been devastating: More than 168 million egg-laying hens have been killed since 2022, with 55 million chickens killed in 2024 and 30 million killed in just the first two months of 2025.

Avian flu itself seems to target egg-laying hens: Per the February 2025 *Yahoo News* article, "Egg Prices Are Surging, So Why Are Chicken Prices Stable?" more than 75% of the losses have been among egg-laying hens, with just 9% among chickens used for meat ("broilers"). This helps explain the differences shown in the Figure 2 FRED graph below.

Figure 2: **Chicken or Egg?**



NOTE: Since the avian flu outbreak in 2022, egg prices have been more volatile and have risen more sharply than chicken prices.

SOURCE: Average Prices: Chicken, Fresh, Whole (Cost per Pound) and Eggs, Grade A, Large (Cost per Dozen) in U.S. City Average, U.S. Bureau of Labor Statistics via FRED, Federal Reserve Bank of St. Louis; accessed April 10, 2025.

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As farmers who have lost chickens attempt to fulfill orders and contracts, they have relied heavily on ECI. One farmer may have had to put much of his chicken flock down because of avian flu but needs to fulfill an order of 20,000 eggs for a major grocery chain. If other farmers are facing similar situations and millions of chickens have had to be euthanized, there will be many more people looking to buy than sell in the ECI marketplace: Fewer chickens mean fewer eggs, resulting in a leftward shift of the supply curve and higher prices.

Conclusion

The egg market provides a compelling example of how supply and demand interact to determine prices. ECI plays an important role (1) by helping suppliers efficiently meet large orders and (2) in setting wholesale prices, which influences retail prices. Recent events, such as the avian flu outbreak that reduced the chicken population, have disrupted supply and led to sharp price increases: The USDA projects egg prices will rise another 41% in 2025.

Glossary

Inelastic demand: The type of demand that exists when the percentage change in quantity demanded is less than the percentage change in price; that is, consumers are not very sensitive to a change in the price of a good or service.

Inelastic supply: The type of supply that exists when the percentage change in quantity supplied is less than the percentage change in price; that is, producers are not very sensitive to a change in the price of a good or service.

Law of demand: As the price of a good or service rises, the quantity demanded of that good or service falls. Likewise, as the price of a good or service falls, the quantity demanded of that good or service rises.

Law of supply: As the price of a good or service rises, the quantity supplied of that good or service rises. Likewise, as the price of a good or service falls, the quantity supplied of that good or service falls.

Long-run: In microeconomics, a business planning period in which the quantities of all inputs are variable.

Short-run: In microeconomics, a business planning period in which the quantities of some inputs are fixed while the quantities of other inputs are variable.

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Name_____ **Period**_____

Reading Q&A

The Market for Eggs: How Prices Are Hatched

After reading the article, complete the following:

1. What primarily determines the price of eggs in the market?
   a. Government regulations on egg production
   b. The interaction of supply and demand
   c. The cost of transporting eggs to grocery stores
   d. The nutritional value of eggs compared with other foods

2. What role does the Egg Clearinghouse, Inc. (ECI) play in the egg market?
   a. It sets the retail price of eggs for grocery stores.
   b. It ensures that eggs meet safety and quality standards.
   c. It allows suppliers to buy and sell eggs in large volumes.
   d. It provides financial assistance to egg farmers.

3. Why is the demand for eggs considered relatively inelastic?
   a. Eggs have few substitutes and are a small part of food budgets.
   b. Consumers always buy eggs in large quantities, no matter the price.
   c. Egg prices rarely change, so demand remains stable.
   d. Egg prices fluctuate seasonally, making demand unpredictable.

4. Why is the short-run supply of eggs considered inelastic?
   a. Farmers can quickly increase production when prices rise.
   b. Egg-laying hens take several months to mature before producing eggs.
   c. Eggs can be stored for long periods, allowing farmers to adjust supply.
   d. Farmers can easily switch to producing eggs from other animals.

5. How does inelastic supply and demand contribute to large price swings in the egg market?
   a. Small changes in supply or demand cause large changes in price.
   b. Egg prices remain stable due to government intervention.
   c. Consumers react quickly to price changes by reducing egg consumption.
   d. Farmers adjust production immediately to meet demand.

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6. How has avian flu affected egg prices?
   a. It has led to a decrease in consumer demand for eggs.
   b. It has reduced the number of egg-laying hens, decreasing supply.
   c. It has made eggs safer to consume, increasing demand.
   d. It has increased the number of chickens available for egg production.
7. Why do egg farmers rely on ECI when facing supply shortages?
   a. It allows them to borrow money to buy new hens.
   b. It helps them meet large orders when their own supply is insufficient.
   c. It provides government assistance during economic downturns.
   d. It ensures eggs are distributed equally among farmers.
8. In the long-run, why is the supply of eggs more elastic?
   a. Farmers can increase flock sizes, expand production, or enter the market.
   b. Egg prices stabilize over time, making production easier.
   c. Consumers start buying substitutes for eggs.
   d. Egg production becomes automated and no longer depends on hens.
9. How does ECI influence the retail price of eggs?
   a. It determines government subsidies for egg producers.
   b. It establishes wholesale prices, which affect retail prices.
   c. It regulates the maximum price grocery stores can charge.
   d. It provides consumers with information about egg quality.
10. What has been a key difference in the impact of avian flu on egg-laying hens versus broiler chickens?
    a. More egg-laying hens have been affected than broiler chickens.
    b. More broiler chickens have been affected than egg-laying hens.
    c. The impact has been equal on both egg-laying hens and broiler chickens.
    d. Broiler chickens have been more resistant to avian flu than egg-laying hens.

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