Economics 101 Reflection Essay

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Fundamental market forces shape the price of everyday items, like the eggs essential for an American breakfast: supply and demand. Understanding their interaction explains how events like the recent bird flu outbreak can significantly impact costs, turning breakfast staples into luxuries.

Supply and demand form the basis of our market system. *Demand* reflects consumer desire for a product at various prices; typically, lower prices increase demand, shown by a downward-sloping curve. *Supply* represents the quantity producers offer at different prices; higher prices usually incentivize more production, creating an upward-sloping curve. Where these curves intersect lies the market equilibrium—the price and quantity balancing consumer wants and producer capabilities.

The severe bird flu outbreak beginning in early 2022 provides a stark real-world example. The primary response—culling entire flocks upon infection—led to the loss of over 120 million egg-laying hens. This direct reduction in the number of egg producers (the number of suppliers in the market) fundamentally decreased the market's capacity to supply eggs at any given price level. This constituted a major *supply-side shock*, abruptly shifting the supply curve leftward (from S to S' in Figure 1) as fewer eggs became available. With demand remaining relatively unchanged—consumers kept buying eggs, lacking good substitutes—a shortage occurred at the old equilibrium (E_0). Prices inevitably rose until a new equilibrium (E_1) emerged, with fewer eggs (Q_1) sold at a much higher price (P_1). Daquan Woodberry, owner of RVA Cafe in Richmond, noted that the wholesale cost for 15 dozen eggs jumped from around $40 to upwards of $120-$189. This price surge reflected the inelastic nature of both supply (farmers couldn't quickly replace hens) and demand (eggs are a staple).

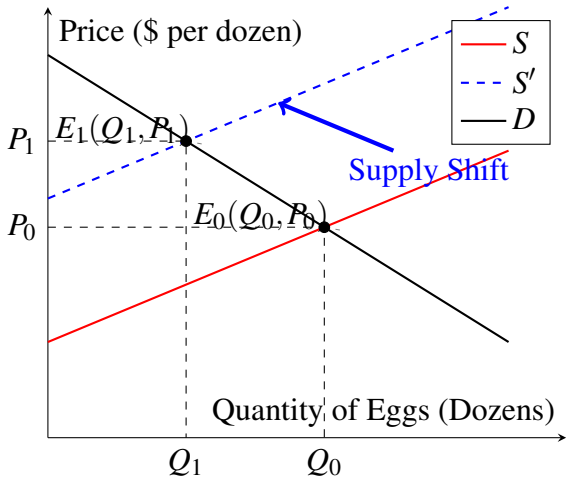

Figure 1: Supply and demand shifts in the egg market due to bird flu.

This shock heavily impacted related businesses like Daquan's RVA Cafe, which uses thousands of eggs weekly. Since eggs are a key input, higher egg prices raise the marginal cost of producing each egg dish. Increased egg costs function as a leftward shift in the café's supply curve for egg dishes (from $S_{\text{café}}$ to $S'_{\text{café}}$ in Figure 2). To maintain profitability, cafés like Daquan's had to raise menu prices, sometimes adding explicit surcharges—he added about $1 to egg dishes. The price hike depended on factors like the dish's reliance on eggs (omelets vs. pancakes), customer price sensitivity, and the availability of substitutes, which Daquan noted are hard to find for core breakfast items.

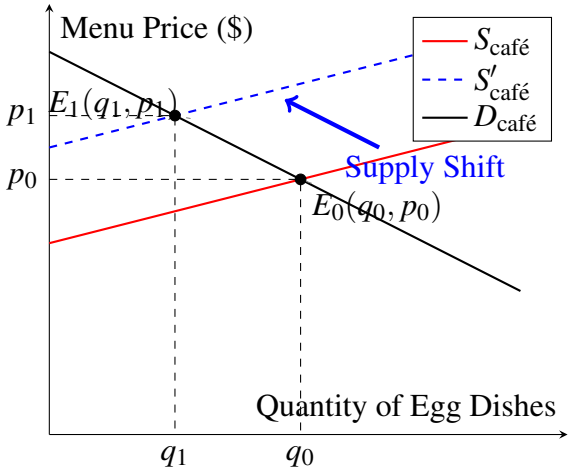

Figure 2: Supply shift in the breakfast café market due to higher egg costs.

The bird flu scenario also reveals externalities related to potential solutions like vaccination. Vaccinating the nation's 300 million hens offers a private benefit (farmer's flock protected) and

a crucial social benefit (reduced disease spread, stable supply/prices). This latter benefit is a *positive externality*; individual farmers don't capture the full societal value of preventing large outbreaks. Therefore, market forces alone may lead to under-vaccination. As illustrated in Figure 3, the market equilibrium (Q_e) occurs where demand (D) meets the marginal private cost (MPC). However, the socially optimal quantity (Q^*) is greater, occurring where demand meets the lower marginal social cost (MSC), which accounts for the positive external benefits. Significant hurdles exist, including the logistical nightmare of vaccinating so many birds and fears among broiler chicken producers about losing export markets if trading partners reject vaccinated poultry due to concerns about masked infections. Despite these issues, the egg industry increasingly favors vaccination. A government subsidy, represented conceptually by the vertical distance between MPC and MSC at Q^*, could encourage production closer to the socially optimal level, enhancing overall welfare.

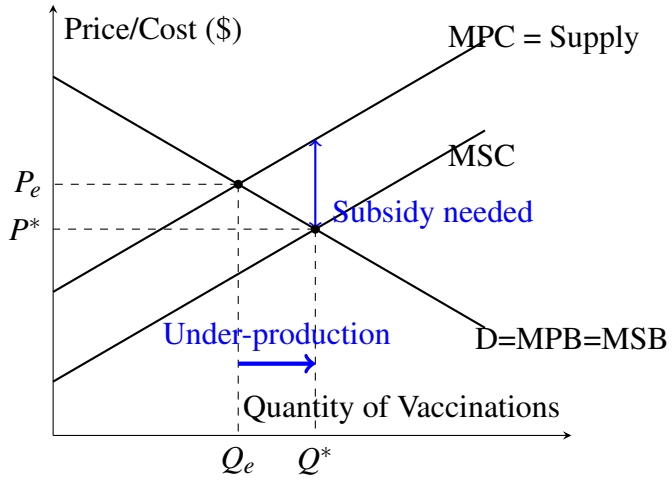

Figure 3: Positive Externality in Hen Vaccination.

Tracing these effects—from the supply shock impacting farmers to consumer and café price adjustments to the complexities of vaccination—demonstrates the power of supply and demand principles in explaining how seemingly distant events influence everyday economic life.