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Adverse Selection: Akerlof's Market for Lemons

Review the basic assumptions of the Akerlof model before answering these questions. Many exercises will refer to these basic assumptions.

Comprehension Questions

Indicate whether the statement is true or false, and justify your answer. Be sure to state any additional assumptions you may need.

1. In the Akerlof model, suppose that the price of used cars is P and the quality of used cars (X) held by sellers varies between 0 and 100. Suppose further that sellers' utility is given by

$$U_S = M + a \sum_i^n X_i$$

where M is the number of units of video games, which sell at \$1 per game, and a is a utility function parameter that is strictly less than one ($a < 1$). Then sellers will offer cars with quality $X_i = P$ on the market.

TRUE. If $a < 1$, then sellers get more utility from P dollars than from a car with quality P . Therefore, they will offer cars of quality P for sale.

2. In the model, buyers know the utility function of sellers, but do not know anything about the general quality of cars for sale.

FALSE. Buyers do not know anything about the quality of a *particular* car, but they know how the quality distribution of all cars.

3. If buyers care sufficiently more about cars than do sellers, then there are prices at which transactions can occur. In that scenario, there is no longer any adverse selection (although there still may be some information asymmetry).

FALSE. There are prices at which transactions can occur under these conditions, but there is still adverse selection because worse cars are offered for sale and better cars are not.

4. The Akerlof model indicates that government intervention is the only way to solve the adverse selection problem.

FALSE. Adverse selection will occur as long as an information asymmetry persists. If a government or other organization – like a consumer watchdog group or even a private company – dismantles the information asymmetry, adverse selection will cease.

5. If the quality of cars is normally distributed rather than uniformly distributed, the market will not unravel.

FALSE. The market may still unravel under these conditions.

6. Ultimately, the market unravels because buyers are risk averse. If buyers were risk neutral, there would always be prices at which cars would sell.

FALSE. We are already assuming that buyers are risk neutral. It is true that the market would be more likely to unravel with risk-averse buyers, because uncertainty about car quality is more likely to dissuade them from buying cars.