Competitive Markets

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Competitive Markets Defined

A competitive market is one in which:

(1) Sellers provide identical goods.

(2) All buyers and sellers can see the best available price.

(3) Each buyer and seller is a small part of the market.

=> There is just one price, the market price, and individual sellers are too small to raise price successfully (and buyers are too small to lower it).

Quantities Supplied and Demanded

The quantity supplied (Q_S) is the total quantity that the suppliers would like to sell, at the current market price.

The quantity demanded (Q_D) is the total quantity that the demanders would like to buy, at the current market price.

Quantity supplied and quantity demand are *numbers* (e.g. one million hours, ten million bushels).

Market Supply and Demand

The market supply curve shows the total quantity supplied at various prices. For this graph, the dependent variable is the quantity supplied (even though we normally show quantity on the horizontal axis).

The market demand curve similarly shows the total quantity demanded at various prices.

Laws of Supply and Demand

Higher prices *increase* the quantity supplied. (The curve has positive slope.)

Higher prices *decrease* the quantity demanded. (The curve has negative slope.)

Quantity Traded

If $Q_S > Q_D$, then $Q_S - Q_D$ is the excess supply in the market.

If $Q_D > Q_S$, then $Q_D - Q_S$ is the excess demand in the market.

Short-side principle: If $Q_S \neq Q_D$ at the market price, then the quantity traded (Q_T) equals the smaller of the two.

Price Adjustment

If there is *excess supply*, then we expect unsatisfied suppliers to bid the price *down*.

If there is *excess demand*, then we expect unsatisfied demanders to bid the price *up*.

The price continues to adjust until the excess supply or demand disappears.

Market Equilibrium

The equilibrium price and quantity occur at the intersection of the supply and demand curves.

Economists typically assume that markets adjust rapidly to equilibrium.

Most (not all) economists believe that exceptions can occur: markets occasionally remain out of equilibrium for extended periods.

Exogenous vs. Endogenous

Variables are exogenous to a model if the model assumes that they are determined *outside* that model: the model treats them as *given*. Endogenous variables are determined *inside* the model; they are what the model *seeks to predict*.

For the S & D model in a given competitive market, P and Q are *endogenous* to the model, but the supply and demand functions are *exogenous*. In other words, the model *predicts* P and Q *given* the S & D functions.

A Common Error

Because the *exogenous* supply curve is determined outside the S&D model, it does *not* respond to the demand curve. Sellers may not even understand the demand curve. They care about the market price, and the supply curve shows how they respond to that price.

Similarly, the *exogenous* demand curve does *not* respond to the supply curve. Buyers care about the market price, and the demand curve shows how they respond to that price.

Therefore, the market reaches equilibrium by adjustments in price, *not* in the curves. The curves *predict* the price (not the other way around).

The Central Role of Prices

A key feature of the S & D model is that buyers and sellers do not react to other buyers and sellers or even care what they are doing. Each buyer and seller reacts only to the market price.

In other words: all relevant information about the current state of the market flows through the market price.

Where the S & D Model Applies

Competitive markets are the conceptual and technical foundation for the Supply and Demand model.

Therefore, if we are being precise, then we should apply the Supply and Demand model only to competitive markets.

Because Economics is not a precise science, we routinely use the Supply and Demand model to study markets that are "close enough" to competitive.

A practical question: when are sellers small enough to consider the market (approximately) competitive?