

Mona

(Ad-hoc Faculty)

Department of Economics

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MA Economics, Semester - II

Module- 3 (Equilibrium Analysis)

CC-7 Micro Economic Analysis II

Cobweb Model

Introduction:

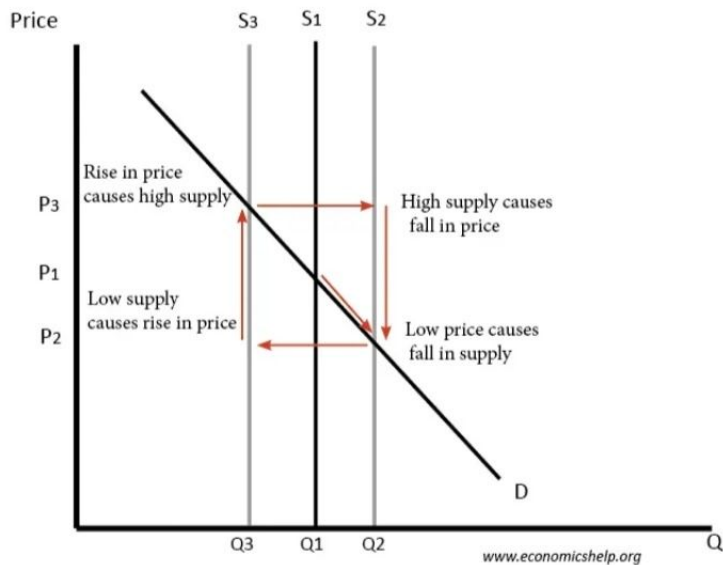
Nicholas kaldor analysed the model in 1934, coining the term "**cobweb theorem**",citing previous analyses in German by Henry Schultz and Umberto Ricci.

Cobweb theory is the idea that price fluctuation can lead to fluctuations in supply which cause a cycle of raising and falling prices.

In a simple cobweb model, we assume there is an agricultural market where supply can vary due to variable factors,such as the weather.

Assumptions:

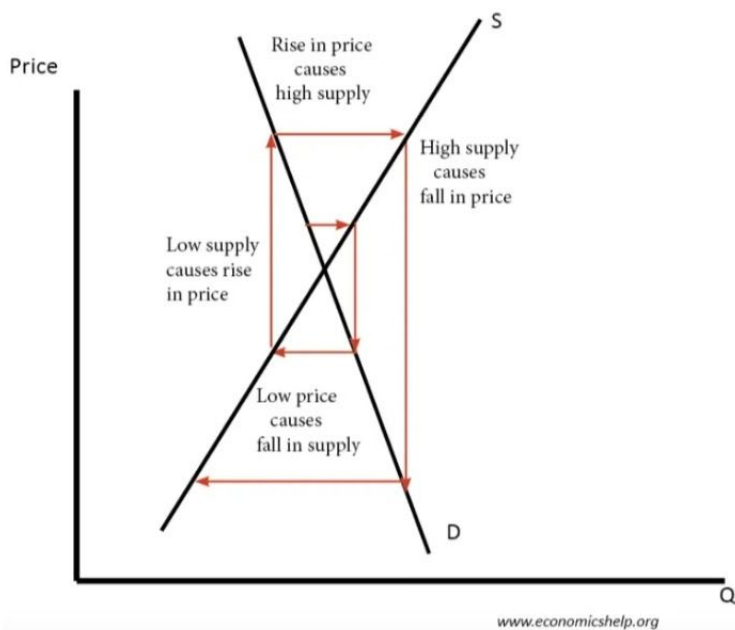
- In an agricultural market, farmers have to decide how much to produce a year in advance - before they know what the market price will be (supply is price inelastic in short run).
- A key determinant of supply will be the price from the previous year.
- A low price will mean some farmers go out of business. Also,a low price will discourage Farmers from growing that crop in the next year.
- Demand for agricultural goods is usually price inelastic (a fall in price only causes a smaller percentage increase in demand).



1. If there is a very good harvest, then supply will be greater than expected and this will cause a fall in price.
2. However, this fall in price may cause some farmers to go out of business. Next year farmers may be put off by the low price and produce something else. The consequence is that if we have one year of low prices, next year farmers reduce the supply.
3. if supply is reduced, then this will cause the price to rise.
4. If farmers see high prices (and high profits), the next year they are inclined to increase supply because that product is more profitable.

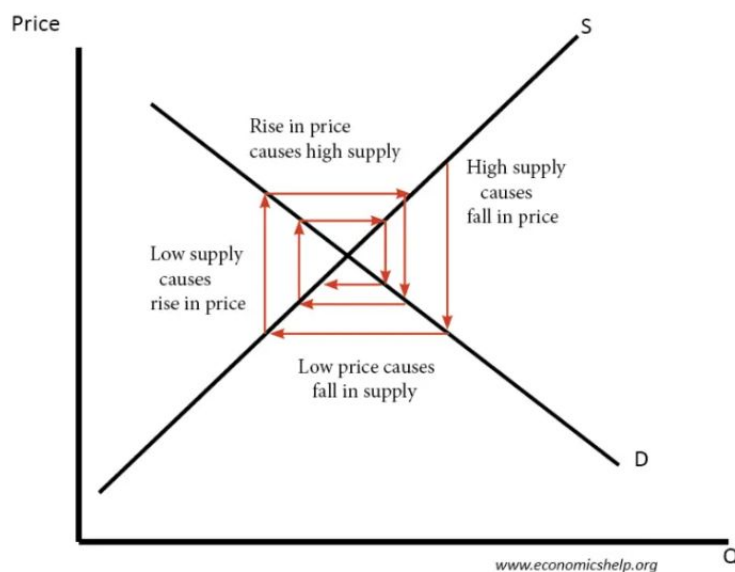
In this theory, the market could fluctuate between high price and low price as suppliers respond to past prices.

Price divergence:



If the slope of the supply curve is less than the demand curve, then the price changes could become magnified and the market more unstable.

Price convergence:



At the equilibrium point, if the demand curve is more elastic than supply curve, we get the price volatility falling, and the price will convergence on the equilibrium .

Limitations:

Rational expectations:

The model assumes farmers base next years supply purely on the previous price and assume that next year's price will be the same as last year (adaptive expectations). However, that really applies in the real world. Farmers are more likely to see it as a "good" year or "bad" year and learn price volatility.

Price divergence is unrealistic and not empirically seen:

The idea that farmers only base supply on last year's price means, in theory, prices could increasingly diverge, but farmers would learn from this and pre-empt changes in price.

It may not be easy or desirable to switch supply:

A potato grower may concentrate on potatoes because that is his speciality. It is not easy to give up potatoes and take to aubergines.

Other factors affecting price:

There are many other factors affecting price than a farmers decision to supply. In global markets, supply fluctuation will be minimised by the role of importing from abroad. Also, demand may vary. Also, supply can vary due to weather factors.

Buffer stock schemes:

Governments and producers could band together to limit price volatility by buying surplus.

Conclusion:

In spite of its shortcomings the cobweb model is important besides its application as an explanation for the cyclical behaviour of wheat and other agricultural product's markets. It concentrates attention on the important fact that the present events depend upon the past happenings it furnishes us with technique to demonstrate the process of change over time.

References

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