

Macroeconomics & Global Economics

Presentation 7

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How do agents formulate expectations?

Consider a generic variable X_t and its expected value for the future X_t^e

Expectations can be

- **ADAPTIVE**
- **STATIC**
- **MYOPIC**
- **RATIONAL**

Adaptive Expectations

Expectations are said to be **adaptive** if agents formulate expectations on the basis of past events. In case of mistake, agents modify slowly their expectations.

$$X_t^e = X_{t-1}^e + q(X_{t-1} - X_{t-1}^e)$$

The idea is that the expected level X_t^e , is adjusted upward (downward) relatively to its previous value X_{t-1}^e , when the most recent observed actual value X_{t-1} is larger (smaller) than its own previously expected value X_{t-1}^e . The parameter $0 < q < 1$ can be thought as the speed of adjustment.

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Static Expectations

Starting from the previous formula, if $q=0$

$$X_t^e = X_{t-1}^e$$

In this case expectations are said to be **static**.

Agents expect that the economic variable will not change in future, that is

$$X_t^e = X_{t-1}^e = X$$

Myopic Expectations

Starting from the adaptive expectations formula,
if $q=1$

$$X_t^e = X_{t-1}$$

In this case expectations are said to be **myopic**
(or **naïve**).

Agents expect that the economic variable will be equal to the value observed when formulating the related expectation.

Remarks

When agents formulate expectations according to previous methods there is a waste of information!!!!

According to these schemes in formulating their expectations economic agents:

- take into account only past outcomes**
- do not learn from their mistakes**
- commit systematic forecast errors**

Rational Expectations

Expectations are said to be **rational if agents formulate expectations on the basis of past events, on experience and on prediction about the effects of future and current policy actions and events.**

Agents do not waste the information they have!!!!

According to these schemes in formulating their expectations economic agents:

- take into account past outcomes**
- learn from their mistakes**
- do not commit systematic forecast errors**