Hysteresis

REVIEWED BY WILL KENTON | Updated Aug 10, 2017

What is Hysteresis

In economics, hysteresis refers to an event in the economy that persists into the future, even after the factors that led to that event have been removed. Unemployment rate and international trade are two areas that are mostly used to explain the hysteresis effect.

Hysteresis was a term coined by Sir James Alfred Ewing, a Scottish physicist and engineer (1855-1935), to refer to systems, organisms and fields that have memory. In other words, the consequences of an input are experienced with a certain time lag or delay. One example is seen with iron: iron maintains some magnetization after it has been exposed to and removed from a magnetic field.

BREAKING DOWN Hysteresis

In economics, hysteresis arises when a single disturbance affects the course of the economy. An example of hysteresis in economics is the delayed effects of unemployment. The current unemployment rate of any economy includes the natural rate of unemployment and cyclical unemployment. The natural rate of unemployment is the level of unemployment in the economy where inflation neither rises nor falls, and includes frictional and structural unemployment. The natural rate of unemployment is not zero since workers will always be on the hunt for better jobs, but the rate will be low. A healthy economy with full employment will have 100% natural rate of unemployment and zero cyclical unemployment.

Cyclical unemployment is caused by a downturn in the business cycle. Workers lose their jobs when businesses conduct layoffs during a period characterized by low demand and declining business revenues. When the economy re-enters an expansionary phase, it is expected that businesses would start re-hiring the unemployed, and that the economy's unemployment rate would start declining towards its normal or natural unemployment rate until cyclical unemployment becomes zero. This is the ideal scenario of course, but hysteresis tells a different story.

Hysteresis states that as unemployment increases, more people adjust to a lower standard of living. As they become accustomed to the lower standard of living, people may not be as motivated to achieve the previously desired higher living standard. In addition, as more people become unemployed, it becomes more socially acceptable to be or remain unemployed. After the labor market returns to normal, some unemployed people may be disinterested in returning to the work force.

Hysteresis in unemployment can also be observed when businesses switch to automation during a market downturn. Workers without the skills required to operate this machinery or newly installed technology will find themselves unemployable when the economy starts recovering. In addition to hiring only tech savvy workers, these companies will only need to hire fewer employees than before the recessionary phase. In effect, the loss of job skills will cause a movement of workers from the cyclical unemployment stage to the structural unemployment group. A rise in structural unemployment will lead to a rise in the natural unemployment rate.

The recession experienced by the UK in 1981 is a good depiction of the effects of hysteresis. During the country's recessionary period, unemployment rose sharply from 1.5 million in 1980 to 2 million in 1981. After the recession, unemployment rose to more than 3 million