

Duopoly and Oligopoly In a duopoly or oligopoly, price setting by one competitor generally leads to price wars with fatal outcomes. Of course, it is always possible that firm *A* draws customers from firm *B* by a price decrease. But since it is also possible for *B* to do the same, the only outcome, if a price war breaks out, is perfect competition equilibrium with price being equal to marginal cost, leading to ruin for one of the competitors. So price setting is generally not the solution, except when agreements between firms lead to a situation close to a monopoly. Such situations are common, and have developed among such firms as Boeing and Airbus, Pepsi and Coca-Cola, and Ford, General Motors, and Toyota.

The only strategy left, if one excludes agreements, collusion, and various nonmarket arrangements, is a determination of quantity produced by one or more competitors, the same price being settled by all. Such a situation will be stable or unstable, according to the behavior of competitors (i.e., their aggressiveness).

It must be recognized that in many industries, firms sell very similar, nonidentical products. In such markets, it is equally easy to represent firms as price choosers or quantity choosers.

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PRICE VS. QUANTITY ADJUSTMENT

The phrase *price vs. quantity adjustment* refers to the debate over the way in which the economy adjusts over the business cycle. Neoclassical economics claims that the price mechanism (prices, wages, and interest rates) is the most important adjustment mechanism in the economy, whereas Keynesians believe that the quantity of output

and employment are the primary forces of adjustment during the business cycle, and that downward price and wage flexibility in fact tends to make things worse.

The neoclassical view claims that under conditions of perfect competition, the economy is self-correcting and therefore would not require government intervention. When labor supply exceeds labor demand, competitive pressures would compel job-seekers to accept lower wages, which would encourage firms to hire more workers, thus increasing aggregate output and employment. If the newly produced output is entirely purchased by the newly hired workers, then workers' savings would be equal to zero and the labor market would converge to full employment. However, under a more likely scenario, workers would save a portion of their income, which creates a potential problem for the self-adjusting mechanism of the market. The dual nature of saving means that on the one hand, from the workers' perspective, saving is income not spent and is therefore a benign if not a desirable decision. On the other hand, from the firms' perspective, saving is the equivalent of production not purchased. This problem, however, is dealt with in the loanable funds market. For neoclassical theory, the increased amount of savings would create an excess supply of savings relative to the demand for investment, thus driving down the interest rate due to bank competition to lend out their excess reserves. Consequently, a lower interest rate would encourage firms to borrow and invest in plant and equipment, thus continuing to hire workers up to the point where savings equal investment at full employment. The simultaneous adjustment of the labor market and loanable funds market requires price flexibility. Any obstacles to the price mechanism, such as minimum-wage laws, union bargaining wage policies, or central bank interest-rate target policies, would interfere with the self-regulating feature of the market, and are therefore undesirable.

The Keynesian view, however, was developed in the midst of the Great Depression in response to the neoclassical *laissez-faire* approach that dominated academic and policy circles alike. According to John Maynard Keynes (1883–1946), unemployment was not due to wage and price rigidities but rather to a lack of effective demand. Keynes rejected the loanable funds theory, which assumes that saving creates investment through interest-rate adjustments. From a macroeconomic perspective, the neoclassical model assumed that when aggregate consumption falls, aggregate saving would increase and would finance an equal amount of investment, which would keep aggregate demand high (thanks to the price mechanism). Keynes, on the other hand, showed that when the economy is in a recession or depression, consumer expectations turn negative due to unemployment and job insecurity. This leads to an aggregate reduction in consumer spending, leading to fewer sales, lower business revenues,

and a downturn in business expectations about future profits. Firms will slow down production (in an attempt to reduce inventories), cancel investment spending, and eventually lay off more workers, thus leading to further deterioration in business activity.

Keynes explained that a reduction in consumer spending is likely to be accompanied by a fall in investment spending, hence an overall reduction in effective demand. It is understandable that during a recession, consumers will not go out on a shopping spree, nor will firms expand their productive capacity when they have difficulty liquidating their inventories. Therefore, the only solution to boost the economy during the recession is to increase the level of effective demand through government spending in order to compensate for low consumption and investment spending.

In Keynesian economics, the key adjustment mechanism is the level of effective demand, with aggregate investment being the engine of the economy. More investment (financed through credit rather than savings) leads to higher aggregate income, which in turn fuels more consumption and generates a residual amount of aggregate savings. The increase in consumption will, in turn, generate more revenues and stimulate positive expectations about future profits, thus helping increase the level of investment, output, and employment.

Robert W. Clower (1965) and his student Axel Leijonhufvud (1967) launched a significant attack on the neoclassical interpretation of Keynes known as the *Neoclassical-Keynesian Synthesis*, which dominated macroeconomics through the standard IS-LM model. Clower and Leijonhufvud started the so-called disequilibrium Keynesianism movement, which culminated in the creation of the famous Barro-Grossman model in 1971. The IS-LM interpretation of Keynes made the Keynesian model a special case of a neoclassical model with sticky (nonflexible) prices. Leijonhufvud, however, showed that one could understand Keynes's theoretical contribution only in the context of the rejection of the Walrasian auctioneer coordinating mechanism. Both Clower and Leijonhufvud believed that the disequilibrium situation (i.e., unemployment and effective demand failure) is the result of information and coordination deficiencies, rather than wage and price stickiness. Clower explained that when unemployed workers offer their services to firms, this does not constitute a signal of an effective demand for goods. Additionally, the change in time preference of individual economic agents—say, an increase in saving—will result in a fall in effective demand, leading to a decrease in both employment and output levels. This coordination failure results, therefore, in involuntary unemployment according to Clower and Leijonhufvud.

With the rise of the rational expectations theory, Robert Barro and Herschel Grossman abandoned the disequilibrium approach and reunited with the standard equilibrium models of New Classical economics in the late 1970s. A revival of the same (mis)interpretation of Keynes in terms of sticky prices has been echoed by New Keynesian economists since the early 1990s, claiming that in reality prices and wages are not as flexible as in the neoclassical model because of things like efficiency wages, long-term labor contracts, menu costs, credit rationing, capital market imperfection, adverse selection, and adverse incentives. New Keynesian economics is, therefore, in favor of the price adjustment approach. The Keynesian quantity adjustment approach, however, argues that downward wage and price flexibility could make things worse by adding to consumer income insecurity and business uncertainty about investment and operating costs. Therefore, downward wage rigidity and price inflexibility reduce uncertainty and provide a more stable environment for economic growth. This debate, however, continues to be one of the most important ones at the theoretical and policy level, with arguments over the usefulness of minimum-wage laws, labor unions, and discretionary fiscal policy.

SEE ALSO *Barro-Grossman Model; Business Cycles, Theories; Competition; Economics, Classical; Economics, New Classical; Economics, New Keynesian; Equilibrium in Economics; General Equilibrium; Great Depression; Sticky Prices; Tâtonnement; Wages*

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