

# Keynes and the multiplier

John Maynard Keynes was an influential economist, publishing his *General Theory* in the wake of the Great Depression of the 1930s. His influence is still felt today. Here is some discussion of the multiplier, which is one of the concepts that Keynes pioneered

## 1 The General Theory of Employment, Interest and Money (1936)

In his *General Theory*, Keynes launched what we now recognise as macroeconomics. He switched the focus of economic analysis from decisions made by individuals and households to the relationship between economic aggregates. This followed the so-called Great Depression, when unemployment rose to unprecedented levels, which Keynes partly attributed to what he saw as impotent government policies.

## 2 The importance of aggregate demand

Classical economists had believed in Say's Law, which argued that supply would create its own demand. Keynes argued that this would not always happen, and that in aggregate, the level of demand in the economy could be inadequate, resulting in unemployment. This could be countered by finding a way of stimulating aggregate demand.

## 3 A simple model

Consider a simple model of the aggregate economy, in which we assume no government and no international trade. In this world, there are households who allocate their income to consumption ( $C$ ) and saving ( $S$ ), and there are firms who undertake investment expenditure ( $I$ ) and produce both consumer goods and investment goods. Aggregate demand is then given by  $AD = C + I$ . Keynes argued that consumption expenditure would depend upon income ( $Y$ ), and that investment spending would have a multiplied effect on equilibrium income — there would be a **multiplier** effect at work.

## 4 Why would there be a multiplier effect?

The core idea underpinning the notion of the multiplier is that when firms increase investment expenditure, they have to hire more workers, who would then spend part of their income, thus creating more demand. Firms would then have to hire more workers in order to meet this additional demand. Those workers would then spend part of their income, creating more demand...and so on. There would be a process of cumulative causation.

## 5 How large is the multiplier effect?

Although the multiplier effect would have cumulative effects, the process would not go on for ever. This is because households would not spend all of the additional income that they received, but would save some of it. In other words, there would be a **leakage** (or withdrawal) from the system, depending on the proportion of additional income that is saved. This proportion is known as the **marginal propensity to save** ( $s$ ). The proportion of additional income that is spent is similarly known as the **marginal propensity to consume** ( $c$ ). The size of the multiplier effect is  $k = 1 / (1 - c)$  or  $1 / s$ .

## 6 Trade and government

Relaxing the assumptions of no government and no international trade introduces more components of aggregate demand (injections) and withdrawals. Injections are government expenditures ( $G$ ) and exports ( $X$ ); withdrawals now include taxes ( $T$ ) and imports ( $M$ ) as well as saving ( $S$ ). The size of the multiplier now depends upon the **marginal propensity to withdraw** ( $mpw$ ), so becomes  $k = 1 / mpw$ . However, there are also more potential injections that could have a multiplier effect. In particular, notice that government expenditure ( $G$ ) would have a multiplier effect on equilibrium income, suggesting that the government could manipulate aggregate demand in order to combat unemployment in times of recession. Multiplier effects could also be associated with major events, such as the Olympic Games.

## 7 Calculating the multiplier

In the simple model without government and international trade, the value of the multiplier is  $1 / s$ , so if the marginal propensity to save is 0.2 (i.e. households spend 80% of additional income), then the multiplier is  $1/0.2 = 5$ . In other words, if firms' investment expenditure increases by £100 million, equilibrium income would increase by £500 million. In a more complex world, if the marginal propensities to save, import and tax are 0.25, 0.1 and 0.15 respectively, the marginal propensity to withdraw is 0.5, and the multiplier is 2.

## 8 Evaluation of the multiplier

Although the existence of the multiplier seemed to offer governments an easy way of manipulating aggregate demand in order to combat recession, issues arose in practice. A key issue is whether firms in the domestic economy are able to respond rapidly to changes in aggregate demand. If the elasticity of supply of domestic output is low, then the result could be an increase in imports, thus diluting the multiplier effect by increasing withdrawals from the circular flow. This could be especially important if the economy is operating close to its potential level of real output. This could mean that the increase in aggregate demand is mainly reflected in rising prices.

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