To keep pace with inflation and rising populations, the economy should ideally be in a constant state of growth. But what is the best way to feed the economy? Robert Solow created a new model, often called the Solow–Swan neoclassical growth model as it was also independently created by Trevor W. Swan, which could separate various factors into inputs (capital and labor) and technology.
By using this model, first published in 1956, Solow calculated that 80 percent of any increase in productivity could be attributed to new technology, the only sustainable source of such growth. But when it came to capital, Solow was a fan of the new. He created a growth model that examined different vintages of capital and concluded that new capital is more valuable, as it is produced through new technology with greater potential for improvement and growth.

Other economists have since adapted or improved Solow's models to produce alternative results, but economists still use his model to estimate the effects of the three main variables: capital, labor and technology. For his ground-breaking work he was awarded the Nobel Prize in Economics in 1987 and the US National Medal of Science in 1999.

He has also contributed to macroeconomic questions of policy and unemployment, as well as the economic management of natural resources.

Robert Merton Solow was born in Brooklyn, New York, in 1924 and was the oldest of three children. He attended local schools where he excelled and in 1940 gained a scholarship to Harvard College, where he studied sociology, anthropology and economics. When America joined World War II Solow interrupted his education to sign up for the army, serving in North Africa and Italy. He returned to Harvard in 1945 and continued to study economics under Wassily Leontief, acquiring an interest in statistics and probability models.

To study statistics more intensively, in 1949 Solow took a fellowship year at Columbia University, while also working on his PhD thesis. Before going to Columbia he was offered the post of assistant professor at Massachusetts Institute of Technology (MIT), where he taught statistics and econometrics from 1950 onward.

By chance, at MIT he was given the office next to that of Paul Samuelson and the pair became good friends and partners in a