



ADDITIONAL TOPICS CHAPTER 12

The origins of the multiplier

John Maynard Keynes credited the idea of the multiplier to another British economist, R. F. Kahn. Kahn focused on the change in employment that would accompany a change in real GDP in a 1931 paper on the multiplier. Interestingly, Kahn's description of the multiplier began with a situation where real GDP is near potential GDP. In such a situation, Kahn wrote, 'If investment increases, the production of consumption-goods must diminish by an equal amount.'

But Kahn, like Keynes, did not write in times when real GDP was equal to potential GDP. He wrote during the Great Depression, a case of a departure from potential GDP. Under such conditions, he argued, '... for each man placed in primary employment, the number who receive secondary employment is:

$$k + k^2 + k^3 + k^4 + \dots = k/(1 - k)'$$

For Kahn, k was analogous to the marginal propensity to consume. By primary employment

(of 1 man) he meant the first round of the multiplier process as described in this textbook; by secondary employment [of $k/(1 - k)$ men] he meant all the other rounds. Thus, the value of Kahn's multiplier is $1 + k/(1 - k)$, which can be shown to equal $1/(1 - k)$. But where does the long series involving k , k^2 , k^3 , and so on, which Kahn used to find the multiplier, come from?

Kahn observed that the impact on employment of successive rounds of the multiplier is like the terms in a geometric sum. A geometric sum, you may recall from your mathematics courses, is a sum of terms each of which converges geometrically to zero. The terms in the sum are 1, k , k^2 , k^3 , k^4 , k^5 , and so on, where k is less than 1. For example, if $k = 0.6$, then the terms are 1, 0.6, 0.36, 0.216, 0.1296, 0.778, and so on.

Source of quote: Kahn, R. F. 1931, 'The relation of home investment to unemployment', *Economic Journal*, June.