

What is a (economic) multiplier?

A multiplier is based on the idea that the impact of a dollar of new spending in an economy is larger than the dollar of new spending. Consider, for example, what might happen to the local economy with a new dollar of spending in Las Cruces, New Mexico. If the dollar is spent on consumer goods (say a soft drink at a fast food restaurant), then there is an immediate increase of a dollar in economic activity in the city. But this is not the end of the story. The fast food restaurant purchases inputs from other businesses and households to meet the demand for this new dollar of spending. What does the fast food restaurant buy? It buys supplies such as the soda from wholesalers, electricity to run its business from a utility, and labor from households. As a result of these purchases, economic activity in the area has increased by more than a dollar. In turn the supplying businesses and households spend what they received. If all of the activity generated by the new dollar of spending is measured, we might find that spending the new dollar generated a total of \$1.76 in new economic activity in the area. In this case the multiplier would be 1.76.

Where did the new spending come from? Perhaps the new spending came from a tourist traveling through town. Perhaps someone flying over the area in a helicopter simply dropped the dollar from the air and someone on the ground picked it up. The important thing is that the dollar of spending is in fact, new in the area being considered. The idea behind the economic stimulus plan (American Recovery and Reinvestment Act) at the national level also depends on new spending –in this case, government spending.

How large are multipliers? Most multipliers for income, output or employment are in the range of 1.5 to 3.0. If someone tells you the multiplier for a new activity is ten, they probably don't know what they are talking about.

Are multipliers different for different kinds of economic activity? Yes multipliers are industry specific.

Do multipliers differ geographically? Yes. Larger geographic areas (presumably with a larger economy) generally have larger multipliers than smaller geographic areas. Even areas of roughly the same size and economic activity will have different industry specific multipliers because being similar in size does not mean that two areas will have the same type of economic activity.

Where do the multipliers come from? Multipliers are byproducts of economic models –often containing hundreds of equations. At the state and county level, multipliers are available from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA) <www.bea.gov> and from a number of private economic modeling firms.

Second Example:

An individual is paid an income of \$3,000 per month. Of the total amount spent, some portion goes to businesses outside of the local economy (leakages); some of the spending stays in the local area. For this example let's say 40 percent or \$1,200 of that income stays in the local area. This amount becomes income and wages for other individuals, who will also choose to spend part of this income, and for simplicity also 40 percent remains in the area. This process continues with each amount of consumption becoming income and wages for other individuals.

Turnover Number	Consumption	Cumulative Total Spending
1	\$3,000.00	\$3,000.00
2	\$1,200.00	\$4,200.00
3	\$480.00	\$4,680.00
4	\$192.00	\$4,872.00
5	\$76.80	\$4,948.80
6	\$30.72	\$4,979.52
7	\$12.29	\$4,991.81
9	\$4.92	\$4,996.72
10	\$1.97	\$4,998.69
11	\$0.79	\$4,999.48
12	\$0.31	\$4,999.79
13	\$0.13	\$4,999.92
14	\$0.05	\$4,999.97
15	\$0.02	\$4,999.99
16	\$0.01	\$4,999.99
infinity	\$0.00	\$5,000.00

The process continues until there is \$0 left of the initial consumption amount. The equation for the multiplier in this case is: $1 / (1-0.40) = 1.67$. This number tells us that each \$1 spent leads to an addition of \$.67 that are spent in the local economy. The first individual is paid an income of \$3,000 and this eventually leads to a cumulative total of \$5,000 spent in the economy.

Are there other kinds of multipliers?

Yes. The example given above is an income multiplier. Multipliers are also available for changes in employment, output and value added.

Last Updated: September 24, 2009
