

# Forbes

## Investment and Technological Progress

[Timothy B. Lee](#)

10/04/2011

Karl Smith [argues](#) that increasing investment rates won't increase economic growth:

An increase in investment will increase the size of the capital stock which will take us to a higher growth path. The reason we are on a higher growth path is because we have more capital per worker and that makes every worker more productive.

However, the fundamental reason we have economic growth is because increases in technology. Expanding the capital stock happens naturally as technology improves. But, increasing investment will likely have very little effect on how fast technology progresses and thus the long term growth rate of the economy.

Smith is a real economist and I'm not so I might be missing something. But that last sentence seems obviously wrong to me. For the last 18 months or so, Apple been paying a bunch of engineers and designers to develop the next iPhone, which will reportedly be unveiled today. They've been doing this for decades, while Apple products are mostly produced by third parties in Asia. In other words, Apple is a giant machine for turning cash into faster technological progress.

To put the point in more general terms, companies don't just invest financial capital in new factories, buildings, and equipment. They also pay for research and development, which is the production of knowledge that allows them to use their resources more efficiently. And large companies also spend money acquiring smaller companies that have pioneered cutting-edge technologies, and then investing in the expansion of those companies. These are all activities that increase the rate of technological progress, yet they're not going to show up in "the capital stock."

This helps to explain Smith's [unwarranted pessimism](#) about the ability of increased stock market investments to boost growth rates. I was puzzled by his implicit assumption that a dollar invested in stocks would have the same effect on economic growth as a dollar invested in bonds. That view makes a bit more sense if you assume we can't turn cash into faster technological progress. Fortunately we can.