

The Rise of the Intangible Economy: U.S. GDP Counts R&D and Artistic Creation

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On July 31, the U.S. Bureau of Economic Analysis will [rewrite history](#) on a grand scale by restating the size and composition of the gross domestic product, all the way back to the first year it was recorded, 1929. The biggest change will be the reclassification—nay, the elevation—of research and development. R&D will no longer be treated as a mere expense, like the electricity bill or food for the company cafeteria. It will be categorized on the government's books as an investment, akin to constructing a factory or digging a mine. In another victory for intellectual property, original works of art such as films, music, and books will be treated for the first time as long-lived assets.

It's a great idea, if late. The BEA has the 20th century economy down cold. It can tell you about personal [income](#) trends in Anchorage, Alaska, or America's annual output of rubber products and plastics. Now the agency is putting more attention on R&D—the lifeblood of the 21st century economy—by moving it from an experimental “satellite” account into the heart of measured GDP.

GDP is the main yardstick of macroeconomics—the sum total of all goods and services produced in the country. Business R&D was never counted in that total. It was considered an expense, an “intermediate input,” that ate into profit. Intangible investments such as R&D and the creation of artistic originals have been like physicists' dark matter: influential but invisible. As Federal Reserve Chairman Ben Bernanke said in a 2011 speech, “We will be more likely to promote innovative activity if we are able to measure it more effectively and document its role in economic growth.”



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The effect of the revision will be immediate. Measured GDP will get a one-time boost of about 2.7 percent when the government starts counting R&D and artistic creation as investments. (New Mexico and Maryland will get the biggest lifts.) The future growth rate will probably be fractionally higher, too. With R&D treated as an [investment](#), measured economic growth from 1959 to 2007 would have been 3.39 percent annually instead of 3.32 percent, the BEA estimates.

Of course, it's hard to work up much excitement over an upward revision in historical GDP figures. It's like being told that you're happier than you thought you were: unconvincing. The “comprehensive revision” won't raise wages or put anyone back to work. Then again, that's not the BEA's job.

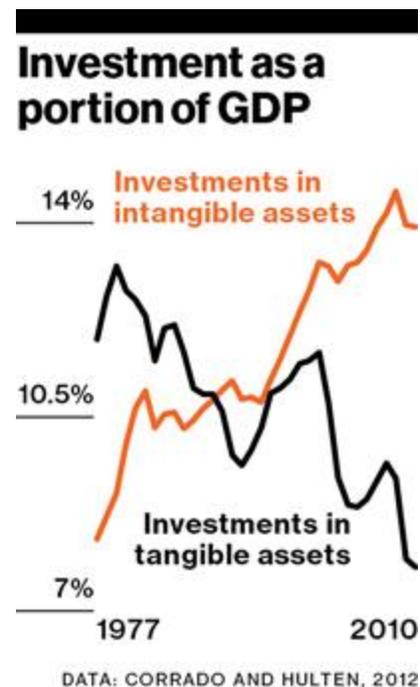
Intangible investment is far from a faddish new idea. In 1908 the sociologist and economist Thorstein Veblen used the phrase to encompass everything from advertising to design. A century before the iPad's launch, he wrote of companies that give their goods "a more elegant finish for the sake of a readier sale, beyond what would conduce to their brute serviceability." In the 1930s and 1940s, economist Joseph Schumpeter made intangibles the centerpiece of his theory that economies grow through innovation. Businesses, he observed, innovated to differentiate their products so they could charge higher prices.

Economic theory was ahead of accounting practice. Stage 1 for recognition of intangibles was the reclassification in 1999 of software development as an investment. That was appropriate, since a big software installation can last longer than the sturdiest piece of factory equipment. The second stage is part of a change agreed to through a United Nations working group in 2008. Australia and Canada have already made the switch, and Europe will do so in 2014.

The U.S. generates a disproportionate share of its wealth from the likes of patents, copyrights, trademarks, designs, cultural creations, and business processes. To see the intangible economy in numbers, look at Apple's ([AAPL](#)) balance sheet: Property, plant, and equipment, those traditional forms of wealth from the industrial and preindustrial eras, account for \$15 billion of its \$400 billion market value—just 4 percent of the total. They're only 7 percent of market value at moviemaker Time Warner ([TWX](#)) and drugmaker Pfizer ([PFE](#)).

Thanks in part to the power of ideas, the nine or 10 most valuable companies in the world are headquartered in the U.S. (It's nine on days when PetroChina edges ahead of Wells Fargo ([WFC](#)).) Only three—General Electric ([GE](#)), ExxonMobil ([XOM](#)), and Chevron ([CVX](#))—are in the world's top 10 for tangible fixed capital, according to data compiled by Bloomberg.

If all forms of intangible investment were officially recorded, they would exceed investment in bricks, mortar, and machines, according to estimates by economists Carol Corrado of the Conference Board and Charles Hulten of the University of Maryland. Intangibles include brand-building, worker training, and the development of advanced organizational practices like total quality management, which meet the definition of an investment because they create assets that will produce revenue a year or more in the future, says Hulten. Those, however, will continue to be treated by the government as expenses. Brent Moulton, the BEA's associate director for national economic accounts, says their investment nature can't yet be measured accurately enough to use as official data.



That underscores the limits of trying to come up with a single statistical measure of the nation's economic activity. Government statisticians have to make some heroic assumptions and generalizations to incorporate intangibles like R&D and works of art. Not knowing their true worth, the BEA assigns value to them by estimating the cost to create them. It thus undervalues Hollywood blockbusters and overvalues big-budget flops, assuming that the errors will cancel out in the long run.

Then there's the challenge of calculating depreciation. Ideas don't rust like machines, but they do lose value to their creators as they are copied or superseded. The BEA assigns an annual depreciation rate of 10 percent to pharmaceutical R&D assets, vs. 36 percent for computer systems design; 9 percent for movies, but 27 percent for music. In a priceless footnote, it writes: "Long-lived television programs include situation comedies and drama programs. Other types of television programs, including news programs, sporting events, game shows, soap operas, and reality programming, have much shorter service lives and will not be capitalized."

So *Under the Dome* is an investment but *America's Got Talent* isn't. You can see how quickly a good economic theory slides into guesstimation and value judgments. And measuring intangible investment is only a first step toward figuring out how much that investment contributes to economic growth. Robert Atkinson, president of the Information Technology & Innovation Foundation think tank, criticizes "intangible-capital fundamentalists" who, he says, unreasonably dismiss the contribution to growth of investment in tangible high-tech equipment.

No one said this would be easy. Steering a \$16 trillion economy with the aid of historical GDP data is like driving a car while looking in the rearview mirror. But if that's what policymakers must do—and it is—they need to make sure that the view to the rear is as clear as possible. That's the purpose of recognizing R&D and artistic originals as investments, and bringing the national accounts more closely in line with the way the economy works and businesspeople think. Is it perfect? No. But better to be imprecisely correct than precisely incorrect.