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GDP and Beyond

Summaries from the 2020 Annual Meeting of the American Economic Association

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The views expressed in this paper are those of the author and do not necessarily represent the U.S. Bureau of Economic Analysis or the U.S. Department of Commerce.

The inadequacy of GDP as a measure of well-being has been much discussed in recent years. BEA’s “Beyond GDP” is an effort to respond to this concern. The project involves several dimensions: some offer new types of information, like GDP by county and by income quintile, while others involve improving the information content in existing measures, like efforts to better measure deflators in health care.

Although GDP is widely used as a measure of economic activity, there is a perhaps surprising amount of disagreement among economists at what a “perfectly measured” GDP would include. For example, should the consumer surplus from new goods—like health care improvements or Facebook—be included in GDP, or would including that be creating an entirely new concept? How about including environmental costs associated with production when measuring quality?

BEA’s approach to these types of questions is to create satellite accounts that are alongside but not a part of official GDP. This allows them to move ahead with efforts to improve measurement without having to resolve these debates. In these comments, I’ll focus on one such account: the Health Satellite Account.¹

The health care sector is a large and growing share of our economy, but its output is measured poorly. There is little attempt to measure changes in the quality of care and instead, procedures—like hip replacements or stent insertions—are priced over time as if their quality is unchanging. In addition, changes in prices paid arising from changes in the location of service—from inpatient to outpatient, say, or from surgery to prescription drugs—are not counted as price reductions and so are never picked up.² The Health Satellite Accounts are intended to provide a different way of accounting for health output. Rather than being classified by place of service, health spending in the accounts is classified by the underlying reason people incur these expenditures—to treat a medical condition or to prevent illness. The first stage of the project involved regrouping health spending into disease-based treatments. The BEA now has an estimate of how much money was spent treating breast cancer and diabetes in 2016, for example. The next stage will entail coming up with price deflators for that spending, a much more difficult task, but an essential one if the health satellite accounts are to be useful in thinking about wellbeing.

The literature uses different conceptual frameworks to estimate quality-adjusted health care deflators, and these frameworks can yield very different results. One method that has been used is to redefine the good that is being priced—say, as an extra year of disability-free life expectancy rather than a surgery—and to measure the price of that over time. So, for example, if the price of a procedure increases, but the procedure improves enough that the price per additional year of life falls, then the quality-adjusted price is deemed to have declined. The second is to directly value the changes in life expectancy (say, at \$100,000 per disability-free year) and subtract this from the price increase. For example, if the price of a procedure increases by \$20,000, but the procedure is associated, on average, with an increase of 0.2 years of life, then the quality-adjusted price increase is \$20,000 minus $0.2 \times \$100,000$ —that is, zero. Malinovskaya and Sheiner (2016) show that the latter method captures consumer surplus, but the former one, intuitive as it may seem, does not.³ Furthermore, using the latter method seems to produce much slower increases in health prices.⁴

There are, of course, many challenges involved in this kind of measurement. For example, in order to accurately quality-adjust health spending deflators, researchers need to be able to show that changes in outcomes are caused by improved medical interventions, rather than to other factors like declines in smoking. In addition, as Hall (2015) points out, quality-adjustments need to be able to account for changes in outcome other than mortality, like alleviation of symptoms, which can be the goal of much of health spending.⁵ (Not all diseases kill, after all.) Finally, this kind of work can't be done in a timely manner—it will only be *ex post* that improvements in outcomes can be measured.

Other conceptual issues still need to be explored as well. For example, health spending is quality-adjusted on the basis of outcomes, should inputs be similarly adjusted? If the improvements in outcomes stem from improved equipment—perhaps an imported MRI machine—should the deflators for the MRI machine also be quality-adjusted based on outcomes? Finally, health spending in the NIPA is viewed as consumption. Is this right conceptually? Or should it be counted as an investment in health capital that then depreciates over time as a person ages?

While including quality adjustments will likely show that prices in health care have risen more slowly than official statistics suggest, and thus that productivity and real health output have been higher, it is also true that our health care system is inefficient. Increases in spending may have yielded good value, while, at the same time, that value could have been achieved at much lower cost. Moving to a quality-adjusted measure of health spending could help in this regard. Imagine, for example, changes in the health system eliminate wasteful tests. Under our current system of measuring health outcomes, this would show up as a less health spending and a lower quantity of real health services. It would not boost productivity. But under the proposed quality-adjusted deflators, such an outcome would appear as lower spending but unchanged quality, and thus lower prices and higher health care productivity. Having a system that would measure changes in efficiency like these seems to me a valuable goal, and I look forward to seeing BEA continue to progress in this area.

1. See BEA “Health Care” at <https://www.bea.gov/data/special-topics/health-care>.
2. One semi-exception to this is the case of generic prescription drugs, which the BLS considers as perfect substitutes for brand names, so that measured prices do decline when a drug goes off patent.
3. Malinovskaya and Sheiner. 2016. “Measuring Productivity in Healthcare: An Analysis of the Literature.” https://www.brookings.edu/wp-content/uploads/2016/08/hp-lit-review_final.pdf
4. Dauda, Seidu, Abe Dunn, and Anne Hall. 2019. “Are Medical Care Prices Still Declining? A Systematic Examination of Quality-Adjusted Price Index Alternatives for Medical Care.” <https://www.bea.gov/system/files/papers/WP2019-3.pdf>
5. Hall, Anne E. 2015. “Adjusting the Measurement of the Output of the Medical Sector for Quality: A Review of the Literature.” <https://www.bea.gov/index.php/system/files/papers/WP2015-5.pdf>

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