

February 11, 2022

Rewriting Pandemic Economics

Your blogger co-authors one of the leading texts in health economics. *The Economics of Health and Health Care* (written with Sherman Folland z”l and Miron Stano) has had eight editions. For the third through the seventh editions, the authors included a chapter on “Economic Epidemiology”, with a focus on HIV/AIDS. With the development of treatments for HIV/AIDS, and a seemingly reduced interest in epidemics, the authors, with the agreement of the publisher, dropped the chapter for the eighth edition, which appeared in 2017.

Well, times have changed. With new co-author Shooshan Danagoulian, the authors are preparing a new edition, with a new chapter on pandemic economics. Your blogger has primary responsibility for the chapter, although all co-authors will participate. In preparation, he pulled out the text from the seventh edition, appearing in 2013, to see if anything could be salvaged.

In a couple of words, *not much*. Emphatically ... *not much*. Economists still view an epidemic or a pandemic as an economic “bad”, with externalities that defy market solutions. However, the previous models said nothing about lockdowns, nothing about supply chain problems, nothing about numbers of deaths that in the United States alone will top one million by mid-March 2022, only two years after the first one was recorded. Nothing about macroeconomic effects including unemployment and inflation, and nothing about breakdowns in world trade. YB has a lot of re-writing to do.

This is a health economics blog. Economists work with two kinds of models, *partial equilibrium* and *general equilibrium*. Please forbear the jargon. If, for example, a blight hits the crop of carrots, economists can look at the expected price and output in the carrot market *alone*, without paying too much attention to the carrot market’s impact on the celery market, much less the car market, or the housing market. For a lot of analyses, partial equilibrium, looking at a single market, works fine. It enables economists to produce useful and interesting analyses relatively quickly, and the results of the analysis (in the case above, a higher price and lower quantity of carrots) are sensible.

Even the world’s most recent epidemic, HIV/AIDS was generally considered in partial equilibrium analyses. There was enormous loss in the sub-Saharan Africa, but the economies there are relatively small compared to the rest of the world. There was a significant loss of life in the United States, particularly in the arts community (deaths of Rudolf Nureyev, Rock Hudson, Anthony Perkins, Freddie Mercury and others), but again, other than the significant loss of immensely talented artists, there was not a massive impact on overall artistic output or prices.

COVID-19 has proven to be a general equilibrium problem. It is so big that the markets are obviously related. Millions of deaths have led to changes in

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labor markets, which have reduced participation and raised wages. Measures to prevent economic collapse have led to (at least temporary) inflation. The demand for new cars collapsed, leading to a collapse in the supply of used cars, and increases in their prices. Decreased labor forces have led to undersupplies of computer chips, at any price, as well as (on occasion) yeast, chicken, and toilet paper.

No partial equilibrium model would have foreseen the massive impacts on the educational system, and those impacts will have far-reaching effects on economic output, and economic growth. No partial equilibrium model would have foreseen the massive change in work and commuting behavior in the United States and elsewhere. Understanding such impacts requires complicated modeling of multiple markets. The economics profession will spend years trying to explain the impacts.

The last time this happened, in the Spanish flu epidemic of 1918-1920, both economics and epidemiology were in their infancy. There are few comprehensive economic analyses of the impact of the Spanish flu. There are now more economists, and there is now more information, available. Economists must learn to learn economic epidemiology better, and to teach economic epidemiology better.

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