

Teaching and Educational Commentary**Considerations for Economic Instruction in the Era of COVID-19****Thomas P. Zacharias^a and Keith J. Collins^b***National Crop Insurance Services^a, U.S. Department of Agriculture^b*JEL Codes: **A1, A2, D6, H4**Keywords: **COVID-19, externality, free rider, information, market failure, public good****Abstract**

Educational concerns during the COVID-19 pandemic center on how to effectively assemble, communicate, and assess material to be taught and learned. We believe that in advancing “the how” of remote, online, and related learning, we do not overlook “the what” that is to be learned, as well as other concerns. U.S. performance in combating the pandemic provides an exceptional opportunity to teach students data presentation, interpretation, and basic economic principles to better understand individual behavior, hopefully to improve future societal responses to pandemics. We believe an important factor in the persistence and rebound of the virus as it spreads from urban to rural areas is the presence of negative externalities associated with the failure to wear masks and socially distance. Additionally, the public good nature of virus-free air and public health may not be well understood. U.S. performance has been affected by a complex interaction of economic, social, and political behavior. Dissecting these influences would challenge students at all levels to learn about and discuss the economic considerations surrounding the pandemic.

1 Introduction

In preparing a paper for this COVID-19 Special Issue, it occurred to us that although the primary focus of the submission request was on the “how-to” of teaching economics under conditions of the pandemic, we should not lose sight of the importance of the larger context of economic instruction in relation to the situation during the pandemic. In expanding on the “how-to” theme, we thought it useful to submit a commentary that reflects on the why, what, when, and who of economic instruction in relation to the COVID-19 pandemic, speaking to the broader societal concerns of the crisis.

2 The Why (Motivation)

Why the need for a special issue? As the novel coronavirus (SARS-Cov-2) increasingly caused sickness and death, demand for many goods and services significantly decreased, forcing business shutdowns and over 20 million U.S. job losses. Responses during the pandemic have included government and private financial assistance; intensive efforts to find vaccines and therapeutic medicines; and advice from experts on steps to be taken by governments, businesses, and individuals to carry on and be protected from the virus. It is premature to definitively judge the degree of success in preventing and suppressing the pandemic, but at this point in time, some impacts are known. The United States leads the world in the number of cases and deaths at this stage. Yet, the death-per-case ratio in the United States is much lower than many other highly affected countries (Johns Hopkins University, “Mortality Analyses”), suggesting some success in treatment and protection of the most vulnerable. The United States has also led development of therapeutics and vaccines, as well as generally avoiding stringent and prolonged lockdowns, which, while likely adding to the case count, limited the economic and related harm that otherwise could have occurred. While the nation is recovering, we consider whether the response could have been better.

As the virus rebounded after its initial decline and we saw people attending large gatherings, not distancing and wearing masks, the authors’ reaction was, “How well are externalities understood?” We

fear the connection between private and public benefits and costs may not be well understood. We believe that now is a critical time in our society for economics education as a guidepost for improved decision making, both individually and collectively.

3 The What to Teach

We believe that economics has a great deal to say about both the individual and public response to the pandemic. Had certain relatively straightforward economic analytical constructs been widely understood and adopted, perhaps better public health outcomes could have been achieved domestically and internationally. The following list is not all inclusive, but illustrative of what economic thinking brings to the table in our current crisis. The list goes something like this: the concept of a negative externality, public health as a public good, and an informed statistical and analytical understanding of the crisis.

3.1 Negative Externalities

Most economic students are introduced to the concept of an externality in their first principles and/or intermediate microeconomics class. Traditional examples are firms polluting either air or water. For those not fortunate enough to have participated in the study of markets and market failures, such as externalities, when are students (and citizens) exposed to the simple notion that one's pursuit of personal well-being may impose a cost, risk, or benefit on others in society? Now is a good time. Health experts have determined that wearing a mask, social distancing, and avoiding large crowds help slow virus transmission (U.S. Department of Health and Human Services 2020). These protocols benefit the individual by providing some protection from infection from others and benefit others, a positive externality, by protecting them should the individual be infected and be transmitting the virus (perhaps even unknowingly if they are asymptomatic). Not wearing a mask or social distancing exposes the individual to infection, and if infected and transmissible, exposes others to infection, a negative externality. Homo economicus may ignore externalities in deciding how to behave, but most "real" people are likely to be cognizant of third-party effects. However, in the pandemic, there is another economic agent, the government, which is generating externalities as well. To reduce the negative externalities caused by infected individuals, governments have closed businesses, schools, and other entities. These government actions created negative externalities for individuals, including loss of jobs, income, stress, in-class instruction, freedom of movement, and so on. These externalities may have long-run costs, but may even have long-run benefits, if the restrictions lead to new technologies, more cost-effective ways of doing business, and expanding access to education.

3.2. Public Health as a Public Good

The notion of public health as a public good could be fundamental to achieving better societal outcomes. Public good examples such as national defense or the lighthouse in the case of public good inputs are commonly taught in more upper level undergraduate courses in detail. At what level are students and, again, the general citizenry exposed to the concept of "public-ness" in terms of the benefits to all in the context of non-rivalrous consumption? A related concept, the "tragedy of the commons," is essential for a better understanding of the risks and costs borne by the collective in the presence of free-rider or hoarding behavior. This principle concludes that when people seek to maximize their use of finite resources, the resources can be depleted, making the behavior self-defeating and reducing social welfare. Hoarding of masks and sanitizers led to shortages of these items that then reduced the ability of some people to protect themselves and others. To what extent, do individual and collective decisions add to or diminish the "stock" of public health that benefits our society? Characterizing public health as a public good would seem to be a conceptual framework that would better frame the political discourse (Anomaly 2011).

3.3. Statistical and Analytical Understanding

A case could be made that statistical and analytical training is a public good unto itself (a topic for another day). To reiterate though, as important as how economics is taught in the COVID-19 environment, what is taught is far more important. Without an understanding of basic statistics and quantitative analysis, our society will be hard pressed to evaluate the serious public health alternatives and economic choices we now face each day in addition to planning for a highly uncertain future.

Data and analytics are commonly being presented to assess the pandemic and define the health goal to “bend the curve.” The term is being used to induce people to act in ways that change the trajectory of COVID-19 cases, hospitalizations, and deaths. Students and citizens in general should be able to examine various charts and national, state, and regional data sets to identify the problem of spread and what constitutes bending the curve (see Johns Hopkins University and Medicine 2020, for various charts and data). In addition to arresting spread and death, a key goal is to ensure the number of people needing medical care will be below the resources of the medical system, which relies on plots of hospital admissions, ICU beds occupied, tests, ventilators used, deaths, and so on. These variables may also be graphed by region, age, race, and so on. It is critical that students understand the definitions of the variables used and the composition of the populations being sampled when making comparisons of metrics over time and space. The need and importance of a sound analytical understanding of the data and metrics used in COVID-19 discussions can simply not be overstated.

4 When and Who to Teach

It is not uncommon to hear “virtual meeting” conversations these days begin with statements to the effect, “What day is this?” Or, in working from home, “I have lost track of time...” Assuming that the pandemic world is with us for some time, these feelings will no doubt linger. With online technology and a fluid work/study environment, economics instruction can be 24/7. Extending beyond the daily time scheduling dimension, a more compelling question is when should students and the public have greater exposure to economic instruction? How early can young people begin to acquire a basic understanding of the importance of economics as a behavioral science? Having a basic idea of capitalism, socialism, competitive markets, and market failure would help young people better understand what they see and hear in the news and the world around them. Because the last pandemic occurred over a century ago, there is a lack of institutional memory about the lockdowns and mask ordinances that were implemented then. It would be ideal if every high school student received a dose of economics training, American history, and how our political and economic systems function. The challenge of course is opportunity cost, as more economics means less of something else. There also is the challenge of imparting economic concepts in a nonquantitative way to students with little analytical training, and in finding those capable of doing so.

In pursuit of a greater public understanding of externalities and public goods, the profession should seek to broaden its outreach beyond the traditional college classroom, which is easier said than done. With more people using the internet, the pandemic represents an excellent opportunity to do so. Webinar-based instruction, podcasts, and the like are excellent means to reach a broader clientele. Virtual communications technologies appear to be stable, relatively low cost, and easy to use, as observed by the very quick widespread adoption of these tools for both professional and personal use. These technologies will no doubt continue to improve and gain even wider spread adoption and allow the profession to speak to a wider audience. As one is never too old to learn, accessing the more mature segment of the population is an added aspiration to aid public appreciation of market failures, although we are unclear on how to incentivize that segment to want to learn economics. Admittedly though, would it not be beneficial if many more thought like an economist?

It needs to be pointed out that while many students are capable of functioning well with remote learning, many are not, making their less effective education a negative externality because of lockdowns and social distancing. Students may lack proper equipment and internet access, not have a place

conducive for learning, lack personal discipline outside the classroom setting, have insufficient family support, and other limitations. There is the added burden on parents when all are employed. Advances in remote and hybrid learning are needed to address these and many other issues, such as widely accessible, flexible, and low-cost delivery platforms for hard-to-reach populations; prevention of abusive behavior; cybersecurity; appropriate assessment of learning; enhanced social and academic interaction among students; and teacher training and health. These considerations, and the belief that in-person education is the gold standard, underlie the resistance to shutting schools during the pandemic and the push to reopen in-class education as soon as possible.

5 Final Thoughts: Economics and Beyond

It is naïve and disingenuous to suggest that if society and governments had a better understanding of economic thinking that public health outcomes would have vastly improved. Even so, as economists, we work on the margins. Had physical restrictions or use of masks been adopted earlier, how many lives would have been saved, and how much sooner would case counts have dropped? Moreover, how much sooner might most economic activity have recovered? With the benefit of perfect hindsight, one would like to think both public health outcomes and economic activity could have been improved with better economic decision making.

Going forward, the global community still faces enormous challenges in terms of public health and reopening of economies and educational institutions. A major impediment we see to addressing COVID-19 spread is individuals choosing not to wear masks and social distance. Why are these choices being made? The answer is complicated and involves more than economics, as factors like morality and political persuasion also come into play. Difficult tradeoffs between protecting oneself, protecting others, and the need to return to economic and social normalcy are factors as well. Perhaps we worry too much how expansive the drive for more STEM-emphasized education might become, but we believe that a well-founded knowledge of history and economics are fundamental for a nation's citizens to understand and collectively deal with COVID-19 and other challenges of today's world. Increasing social divisiveness to the point of discounting harm to others can have roots in misperceptions of how society and its institutions function and in a lack of knowledge of basic facts about the causes and effects of the forces that have shaped our society and economy over time. We think the current pandemic provides an opportune time to challenge students at all levels to learn about and discuss the causes of market failures and social welfare.

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