GENERAL DISCUSSION With respect to Andrew Atkeson's model, Robert Hall noted another scenario which ought to be included: delays in the propagation of the vaccine. There are two phases to testing a vaccine, Hall continued: the safety phase—which is quite straightforward as it doesn't require a large sample and can be done on an ongoing basis—and the efficacy phase—which, in the case of the United States, was delayed. Indeed, Hall observed, the vaccine was created in the first two months of 2020, right at the beginning of COVID-19. Thus, Hall concluded, delays in vaccine propagation were in the testing process, which suggests that a counterfactual with faster propagation would likely make a large difference in Atkeson's model.

Hall then wondered about Christina Romer's question regarding the prospects in the expansion of the economy. On the labor market side, Hall reflected that with around 6 percent current unemployment, it is possible to get back to an unemployment rate of about 4 percent, suggesting 2 percentage points of expansion. However, he pointed out that during the pandemic there has been a large decrease in the size of the labor force, implying that as the pandemic recedes there will be an increase in the participation rate. Hall specified that this is not usually the case during a typical expansion.

Claudia Sahm considered a point that Romer made during her discussion about the efficacy of the individual stimulus checks. Sahm specified that typically when there is a demand shock—which Sahm argued was the case during the past year—the best thing to do was very stimulative fiscal policy, such as stimulus checks. Furthermore, Sahm observed, the US safety net doesn't reach a lot of unemployed workers—as Abigail Wozniak also mentioned in her discussion—and she thus wondered why stimulus checks weren't the best policy choice as they do seem to reach unemployed workers falling through the cracks.

Katharine Abraham pondered the limited use of short-time compensation. In her view, given the advantages to reducing workers' hours and giving them prorated benefits rather than laying workers off, this limited use was a lost policy opportunity. The advantages of short-time compensation include allowing workers to avoid the costs of long-term unemployment and helping businesses maintain relationships with their employees, making it easier for them to ramp back up when the economy recovers. Especially as the businesses that were most affected by the pandemic provide services that will still be needed in the future, Abraham stated that she wasn't especially worried about the use of short-time compensation slowing needed reallocation. She asked Wozniak and Romer to comment on whether making

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greater use of short-time compensation as a response to temporary down-turns would be good future policy.

Addressing Atkeson, Maurice Obstfeld observed that one can become even more pessimistic when one understands that variants are likely to be endogenous and can arise even when a large proportion of the population is infected or immunized. He brought up the case of the city of Manaus in Brazil where the Brazilian variant arose even when an estimated two-thirds or more of the population had been infected. Obstfeld reasoned that there are two pockets of people that are of special concern currently: the vaccine-hesitant and those living in developing countries. Obstfeld remarked that the Kaiser Family Foundation estimated in March that developing countries have only been able to purchase enough doses to vaccinate about a third of their populations, suggesting other variants might emerge.¹

Steven Davis commented on the "pipes" of the unemployment insurance (UI) benefits system, addressing a recent report from the Inspector General of the Department of Labor.² This report, Davis stated, contains two findings relevant to the panel. First, the report finds that in fourteen out of the last seventeen years the improper payment rate of the UI system has been 10 percent or more. Second, the report states that their initial audit under the Coronavirus Aid, Relief, and Economic Security Act suggests this number might be higher. Connecting these two findings with Romer's comments on the size of UI benefit payments in 2020, Davis reasoned, suggests that the government misdirected something on the order of \$90 billion or more through the UI system. All in all, Davis expressed, there is a huge problem in functioning of the UI system, which ultimately undermines the targeting goal of the UI benefit program and involves a large waste of funds.

Frederic Mishkin addressed Atkeson, remarking that his model did not distinguish between different mitigation measures although some types of mitigation are much less costly than other types. For example, Mishkin expressed, mask mandates may be cheap and relatively effective, while lockdowns are quite costly. Similarly, Mishkin stated, testing and tracing is more expensive than mask mandates. Mishkin asked Atkeson to comment

^{1.} Anna Rouw, Adam Wexler, Jennifer Kates, and Josh Michaud, "Global COVID-19 Vaccine Access: A Snapshot of Inequality," Kaiser Family Foundation, March 17, https://www.kff.org/policy-watch/global-covid-19-vaccine-access-snapshot-of-inequality/.

^{2.} Department of Labor, Office of the Inspector General, "DOL-OIG Oversight of the Unemployment Insurance Program," https://www.oig.dol.gov/doloiguioversightwork.htm, accessed March 21, 2021.

on these three types of mitigation measures: mask mandates, testing and tracing, and lockdowns.

Gary Burtless asked Wozniak whether there is any evidence on trends in charitable giving, especially to organizations—like food banks or soup kitchens—that address immediate spending needs. After all, Burtless concluded, many people and richly endowed institutions have seen sizeable increases in wealth since January 2020.³

David Wilcox wondered whether a better approach to massive fiscal support is to introduce a temporary broad-based program of partial income insurance, up to some capped amount.

Joshua Gotbaum commented on modifications of the Paycheck Protection Program (PPP) that relaxed the requirement for firms to maintain their payrolls. Gotbaum observed that different analyses have reached varying conclusions about the PPP's efficacy in maintaining employment, and he inquired about Wozniak's view.

Erica Groshen addressed Wozniak and Romer, remarking that targeting is more possible with good granular and timely information, as well as robust, agile program infrastructure. Groshen speculated whether another lesson from the pandemic is that official statistics and programmatic operational infrastructure—such as the UI system—have a high value during crises. This added value, she deduced, is evidence for adequate investment in them on an ongoing basis as a means of increasing resilience to shocks.

^{3.} After the conference, Burtless noted that charitable gifts—in general and those aimed specifically at victims of the COVID-19 pandemic—did rise in 2020 despite the sharp downturn in the economy, according to the latest data provided by the Lilly Family School of Philanthropy at Indiana University; Anna Pruitt and John Bergdoll, "Americans Gave a Record \$471 Billion to Charity in 2020, amid Concerns about the Coronavirus Pandemic, Job Losses and Racial Justice," blog post, Lilly Family School of Philanthropy, June 16, 2021, https://blog.philanthropy.iupui.edu/2021/06/16/americans-gave-a-record-471-billion-to-charity-in-2020-amid-concerns-about-the-coronavirus-pandemic-job-losses-and-racial-justice/.