Modeling the Macroeconomic Effects of a Universal Basic Income

How would a massive federal spending program like a universal basic income (UBI) affect the macroeconomy? We use the Levy Institute macroeconometric model to estimate the impact of three versions of such an unconditional cash assistance program over an eight-year time horizon. Overall, we find that the economy can not only withstand large increases in federal spending, but could also grow thanks to the stimulative effects of cash transfers on the economy.

We examine three versions of unconditional cash transfers: $1,000 a month to all adults, $500 a month to all adults, and a $250 a month child allowance. For each of the three versions, we model the macroeconomic effects of these transfers using two different financing plans - increasing the federal debt, or fully funding the increased spending with increased taxes on households - and compare the effects to the Levy model's baseline growth rate forecast. Our findings include the following:

• *For all three designs, enacting a UBI and paying for it by increasing the federal debt would grow the economy.* Under the smallest spending scenario, $250 per month for each child, GDP is 0.79% larger than under the baseline forecast after eight years. According to the Levy Model, the largest cash program - $1,000 for all adults annually - expands the economy by 12.56% over the baseline after eight years. After eight years of enactment, the stimulative effects of the program dissipate and GDP growth returns to the baseline forecast, but the level of output remains permanently higher.

• *When paying for the policy by increasing taxes on households, the Levy model forecasts no effect on the economy.* In effect, it gives to households with one hand what it is takes away with the other.

• *However, when the model is adapted to include distributional effects, the economy grows, even in the tax-financed scenarios.* This occurs because the distributional model incorporates the idea that an extra dollar in the hands of lower income households leads to higher spending. In other words, the households that pay more in taxes than they receive in cash assistance have a low propensity to consume, and those that receive more in assistance than they pay in taxes have a high propensity to consume. Thus, even when the policy is tax- rather than debt-financed, there is an increase in output, employment, prices, and wages.

Levy's Keynesian model incorporates a series of assumptions based on rigorous empirical studies of the micro and macro effects of unconditional cash transfers, taxation and government net spending and borrowing (see Marinescu (2017), Mason (2017), Coibion et al (2017), and Konczal and Steinbaum (2016)). Fundamentally, the larger the size of the UBI, the larger the increase in aggregate demand and thus the larger the resulting economy is. The individual macroeconomic indicators are (qualitatively) what one would predict given an increase in aggregate demand: in addition to the increase in output, employment, labor force participation, prices, and wages all go up as well**.** Even in a deficit-financed policy, an increase in the government's liabilities is mitigated by the increase in aggregate demand.

Specifically, the Levy model assumes that the economy is not currently operating near potential output (Mason 2017) and makes two related microeconomic assumptions: (1) unconditional cash transfers do not reduce household labor supply; and (2) increasing government revenue by increasing taxes levied on households does not change household behavior. Other macroeconomic models would make different, likely less optimistic forecasts, because they would disagree with these assumptions.

Estimating the macroeconomic effects of UBI is a critical component of any policy evaluation, because what would appear to be a zero-sum transfer in static terms (money is simply transferred from some households to others) turns out to be positive sum in the macro simulation, thanks to the increase in aggregate demand and therefore in the size of the economy.