

**Abstract:** We assess the effect of the COVID-19 pandemic on global fossil fuel consumption and CO<sub>2</sub> emissions over the two-year horizon 2020Q1–2021Q4. We apply a global vector autoregressive (GVAR) model, which captures complex spatial-temporal interdependencies across countries associated with the international propagation of economic impact due to the virus spread. The model makes use of a unique quarterly data set of coal, natural gas, and oil consumption, output, exchange rates and equity prices, including global fossil fuel prices for 32 major CO<sub>2</sub> emitting countries spanning the period 1984Q1–2019Q4. We produce forecasts of coal, natural gas and oil consumption, conditional on GDP growth scenarios based on alternative IMF World Economic Outlook forecasts that were made before and after the outbreak. We also simulate the effect of a relative price change in fossil fuels, due to global scale carbon pricing, on consumption and output. Our results predict fossil fuel consumption and CO<sub>2</sub> emissions to return to their pre-crisis levels, and even exceed them, within the two-year horizon despite the large reductions in the first quarter following the outbreak. Our forecasts anticipate more robust growth for emerging than for advanced economies. The model predicts recovery to the pre-crisis levels even if another wave of pandemic occurs within a year. Our counterfactual carbon pricing scenario indicates that an increase in coal prices is expected to have a smaller impact on GDP than on fossil fuel consumption. Thus, the COVID-19 pandemic would not provide countries with a strong reason to delay climate change mitigation efforts.