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Economic Impact of Hurricanes Harvey and Irma

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In recent weeks, multiple southern states and U.S. territories have experienced significant property damage and loss of life as a result of severe hurricanes, including Harvey, Irma, and Maria. This Insight will focus on the economic impact of Hurricanes Harvey and Irma, as the impact of Hurricane Maria is still unfolding in Puerto Rico. Hurricane Harvey first made landfall in Texas on August 25 as a category 4 storm, before stalling for a number of days above south and southeast Texas delivering torrential downpours. Hurricane Irma made landfall in the Florida Keys as a category 4 storm on September 10 after sweeping through the Caribbean, impacting multiple other countries and U.S. territories. A combination of strong winds and widespread flooding, resulting from strong rains and storm surges, have disrupted large communities in the South and South East and resulted in widespread property damage.

Damage to property often gets significant media attention following a hurricane, but it is not the only impact on economic activity. Property damage affects the overall capital stock, which is used in the production of goods and services, but does not itself factor into gross domestic product (GDP), as GDP is a measure of the flow of goods and services produced. Severe storms often dampen economic activity in the short term by disrupting the consumption and production of goods and services. Severe weather impacts the consumption of goods because of limited mobility and availability of these goods during the event. Advance figures from the Census Bureau show that retail sales decreased by 0.2% in August, after rising 0.3% in the previous month. Severe weather can also impact the production of goods and services by damaging machinery, disrupting the local labor supply, and disrupting national supply chains.

In the medium term, severe storms often result in a rebound in economic activity as rebuilding begins and businesses resume production that may erase any loss in economic output resulting from the storm. After a major disaster, there are numerous government programs that distribute aid to those affected. Additionally, many individuals and businesses begin to receive insurance payments in the months following natural disasters. The spending of government aid and insurance payments can result in a significant boost to economic activity.

For a number of reasons, the negative impacts of Hurricanes Harvey and Irma on economic activity are likely to be larger than average due to the amount of damage to property, the duration of the storms, the populous nature of the areas affected, and the concentration of energy industries in the area affected, particularly with respect to Harvey. Hurricanes Harvey and Irma are estimated to have each caused between $42.5 billion to $65 billion in property damage, amounting to between 0.2%-0.3% of GDP,

making these storms among the most destructive U.S. natural disasters in the post-WWII period. While property damage is not explicitly factored into economic output (GDP), more damage is generally associated with a larger short-term decrease in economic output due to larger disruptions in the production and consumption of goods and services. Additionally, Hurricane Harvey stalled for several days resulting in significant and lasting flooding, which delayed rescue and recovery efforts. The duration of the storm likely exacerbated the impact of the storm on economic activity as well, by disrupting economic activity for a longer period.

Both Hurricane Harvey and Hurricane Irma also struck densely populated areas, which tends to impede economic activity to a larger degree as more individuals are displaced, disrupting the labor supply and production. According to analysis by Goldman Sachs, the combined share of the U.S. population living in counties under a national disaster declaration from either storm was roughly 10% of the country, suggesting a large number of individuals and businesses were impacted by the storms. Hurricane Harvey did not impact the employment figures for August as reported by the Bureau of Labor Statistics (BLS), as the survey data were collected before the storm occurred. Employment figures for September may register some impact from Hurricanes Harvey and Irma when figures are released by BLS on October 1. BLS has reported that severe storms are more likely to reduce average weekly hours worked, rather than overall employment levels, as most workers are displaced temporarily by severe weather.

Additionally, Hurricane Harvey affected the Gulf Coast, which is responsible for a large portion of the U.S. petroleum refining capacity, and played a role in increasing energy prices by 2.8% in August, with gasoline prices rising by 6.3%. Increased energy prices tend to affect the broader economy by increasing input prices for a wide variety of goods and services.

As a result of Hurricanes Harvey and Irma, many expect to see a discernible negative impact on national economic growth in the third quarter of 2017, when advance estimates become available on October 27 from the Bureau of Economic Analysis (BEA). BEA does not attempt to disaggregate the effect of storms or natural disasters on GDP, so there will not be an official estimate of the impact.

Many other groups have attempted to estimate the impact of the recent storms on GDP. Moody's recently adjusted their estimate for Q3 real GDP growth down from 3% to 2.5%, due to the impact of Harvey and Irma. Goldman Sachs is also anticipating lower economic growth due to the storms, revising its Q3 estimate of real GDP growth down from 2.8% to 2.0%. However, as discussed earlier, as government aid and insurance checks begin to be distributed in the areas affected by the hurricanes, economists anticipate a rebound in economic activity. Accordingly, Goldman Sachs has revised its real GDP growth projections upward by 0.4 percentage points to 2.7% in Q4, 0.2 percentage points to 2.5% in Q1 of 2018, and 0.4 percentage points to 2.4% in Q2 of 2018, erasing the projected third quarter reduction in growth.