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The Impact of Forecast Uncertainty on Hurricane Damages

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A growing body of research examines the economic impact of uncertainty. However, it is difficult to identify the effects of uncertainty since it can both be driven by and drive economic outcomes. We take a new approach to identify the impact of uncertainty by looking at Hurricane damages where the feedback channel from uncertainty is less of a concern. We construct an empirical model of damages for all hurricanes to strike the continental United States since 1955. We control for many possible drivers of damages using automatic general-to-specific model selection methods and find evidence of a forecast uncertainty impact on hurricane damages. We also find that forecast uncertainty operates largely through a short-term adaptation channel. Our results show that the around 60 percent improvement in hurricane forecasts over the past 6 decades is associated with damages being 15-30 percent lower than they otherwise would have been.