The link between social class and generosity is of fundamental importance to both social science and public policy. Working in this vein, recent studies have linked higher income with diminished generosity, but this research has thus far ignored macro-levels of economic inequality. Analyzing results of a unique nationally-representative survey that included a real-stakes giving opportunity (N = 1,479), we find that in the most unequal U.S. states and regions, higher income respondents were less generous than lower income respondents. However, the income-generosity relationship was the reverse in the most equal states and regions. To better establish causality, we conducted an experiment (N = 704) in which apparent levels of national economic inequality were portrayed as either high or low. When participants believed inequality to be high, higher income participants were less generous than lower income participants, but there was no relationship between income and generosity when inequality was perceived to be low. Further analyses revealed that higher income individuals held more meritocratic beliefs about economic outcomes, viewing financial success as indicative of hard work, and these beliefs led them to give less when they believed that inequality was high. This research implies that the tendency for higher income citizens to be less generous manifests in high but not low inequality areas, suggesting a previously undocumented way in which high economic inequality can undermine collective welfare.