

## INCOME INEQUALITY AND LOW BIRTH WEIGHTS, 1979-2017

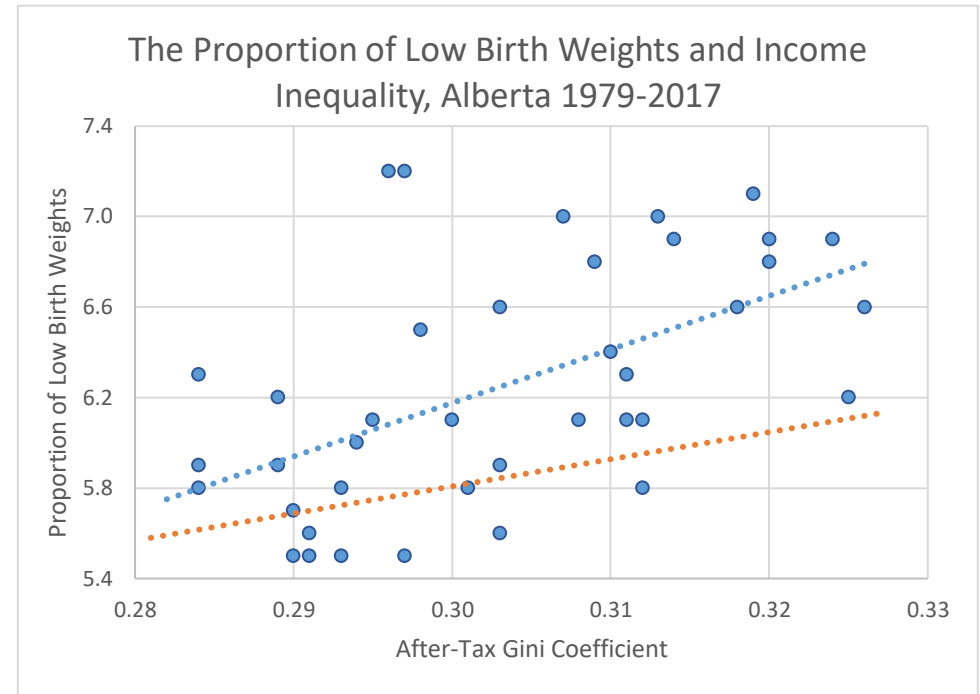
Income inequality has been associated with many negative social outcomes. Low birth weights and the negative health and social outcomes that tend to follow is another.

The figure presents data for Alberta from 1979 to 2017 showing the correlation between a measure of income inequality and a measure of the health of newborns. Income inequality is measured by the after-tax Gini coefficient. The health of newborns is measured by birth weight.

A low birth weight for a newborn is defined as less than 2,500 grams (or about 5.5 lbs). The Gini coefficient is a summary measure of income inequality. A value of zero would indicate perfect income equality. In this case everyone has the same income. A value of one indicates perfect income inequality meaning all income falls to one person. The after-tax Gini coefficient measures the extent of income inequality after taxes have been paid and income transfers have been received. By adjusting tax rates and the size of income transfers, governments can influence after-tax income inequality and, hence, the size of the after-tax Gini coefficient.

Birth weights are sensitive to many factors including some that may be related to public policy choices. One of these may be income inequality.

Each of the dots in the graph identifies the combination of income inequality and the proportion of low birth weights observed in a year. The dashed blue line is a trend line showing that greater income inequality is correlated with an increased proportion of children born with low birth weights, something shown in other [research](#). The dashed red line is a trend line through similar data (not shown) showing after-tax income inequality and the proportion of low birth weights in all of Canada. The slope of both trend lines is statistically significant ( $p < 0.01$ ) and in both Alberta and Canada income inequality explains about 30% of the variation in the proportion of low birth weights. The relative slopes of the two trend lines suggest



Source: Statistics Canada Tables 13-10-0404-01 (birth weights) and 11-10-0134-01 (Gini coefficient).

that the proportion of low birth weights is more sensitive to income inequality in Alberta than it is in Canada as a whole.

Low birth weights are often [associated](#) with risk factors leading to poverty later in life. Tax and transfer policies intended to reduce income inequality may therefore represent an important investment not only in children's health but also in poverty reduction decades into the future. The results discussed here are consistent with [research](#) showing that shifting resources toward investments in social policies intended to reduce poverty and income inequality may do more to improve health outcomes than still more investments in a health care system which treats the symptoms rather than the causes of poor health.