Policy Analysis and Management *presents:* co-sponsored with Applied Economics and Management

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## The Impact of Oil and Gas Extraction on Infant Health In Colorado

The benefits and costs of resource extraction are currently being hotly debated in the case of shale gas development (commonly known as "fracking"). Colorado provides a unique research environment given its long history of conventional oil and gas extraction and, most recently, shale gas development. The immediate outcomes of interest are infant health at birth measures (birth weight, gestation length, low birth weight and premature birth). To define exposure, I utilize detailed vital statistics and mother's residential address to define close proximity to drilling activity. Using a difference-in-differences approach (before and after and close versus less-close), this paper compares health at birth of infants born to residences within 1 km of the well head versus 1-5 km to identify the impact of drilling. Exploiting both the inter-temporal and cross-sectional variance in the presence of oil and gas extraction in Colorado, I find that proximity to wells reduces birth weight and gestation length on average and increases the prevalence of low birth weight and premature birth.



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