Title: Impact of Contracting on Occupational Injuries and Fatalities in Underground Coal Mining

Abstract

Contracting out of mining operations has increased significantly in the underground coal mining industry over the last two decades. Contract miners are hired by coal operators to extract coal, usually for a specified price and using equipment often leased from the operator or mine controller. We hypothesize that the market and organizational incentives facing contractors increase the likelihood of traumatic injuries and fatalities to their workforce relative to miners working directly for operators in comparable mines. We test this hypothesis using data from the Mine Safety and Health Administration for the period 2000-2010. We statistically model the determinants of injuries and fatalities based on contract status along with mining methods, geologic characteristics, union status, size of mine and controller, and prior history of violations. Our preliminary results suggest increased risk exposure for contract operations and mines with high contractor utilization. These findings have important implications for enforcement and public policies and extend the evidence of the adverse impact of forms of subcontracting on health and safety to the mining sector.