RANDOMIZED SAFETY INSPECTIONS AND RISK EXPOSURE ON THE JOB: QUASI-EXPERIMENTAL ESTIMATES OF THE VALUE OF A STATISTICAL LIFE

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Abstract

This research employs the first quasi-experimental design within a labor market setting to provide causal evidence on the existence and magnitude of compensating wages for workplace fatality and accident risks. Federal safety inspections conducted by the Occupational Safety and Health Administration that randomly select plants for inspection (conditioned on known and measured plant characteristics) are used to instrument for plant-level risks. Inspection records are combined with confidential U.S. Census data on plant-level wages and worksite characteristics to estimate compensating wages associated with riskier working conditions and provide new estimates of the value of a statistical life (VSL). Our approach directly addresses several empirical challenges inherent in earlier work relying on cross-sectional or panel-data hedonic wage models to estimate the VSL, including the inability to measure the risk faced by workers at their actual place of employment, and correlated unobservables. Results indicate that prior studies may substantially overstate the value workers place on reducing workplace risks.

Keywords: value of a statistical life, VSL, compensating wages, OSHA, quasi-experiment, natural experiment

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