

MODELING THE IMPACT OF OIL PRICE CHANGES AND INVESTMENT DECISIONS ON CONSTRUCTION WAGES IN THE U.S.

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Overview

The U.S. construction industry has been known to employ workers without a college education, providing adequate compensation make ends meet. Today, job quality in the industry has deteriorated to a level where wages are too low, causing workers to rely on U.S. safety net programs (Jacobs et. al. 2022). This may be exacerbated by oil price dynamics in regions where the oil industry is a significant driver of the economy. In this paper, we investigate the effects of oil price dynamics and investment decisions on real wages in the construction industry. We focus on six top oil producing counties in the U.S., using data between 2004 and 2021.

Methods

- Non-linear Autoregressive Distributed Lag Model
- Threshold autoregressive (TAR) distributed lagged model

Results

- Long-run findings indicate that a 10% increase in oil prices increases construction wages by 1.4%, 1.2% and 9.3% in Kern, Weld and McKenzie Counties, respectively.
- Short-run estimates indicate that a positive shock to oil prices increases wages in McKenzie County North Dakota.
- Our findings also reveal that the oil price variable is not significant under the low oil price regime in all counties and significant under the intermediate and high oil price regimes in all counties except McKenzie and Lea Counties
- Findings from the TAR reveal that the oil price variable is not significant under the low oil price regime in all counties and significant under the intermediate and high oil price regimes in all counties except McKenzie and Lea Counties

Conclusions

- Results from the TAR model show that the impact of an expansionary monetary policy to increase investment—and accordingly, increase wages—is diluted when oil prices are below the low oil price threshold.
- The positive economic effects of relatively high oil prices are revealed when oil prices exceed the low oil price threshold value.

References

Jacobs, K., Huang, K., MacGillvary, J., & Lopezlira, E. (2022). The Public Cost of Low-Wage Jobs in the US Construction Industry. UC Berkeley Labor Center, January.