Investment and Taxation: the Case of Oil and Gas in the Permian Basin

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Abstract. This paper evaluates the sensitivity of investment and production for the upstream oil industry in the Permian Basin to taxes. I set up a model of auctions for land leases followed by well drilling by the lease holder. Leveraging the strategic decisions of agents about the timing of drilling, the model allows me to evaluate the distortionary effects from revenue taxes for the industry even in absence of variation in taxes. I estimate the model on data from the state of New Mexico and use it to show how alternative policies can affect oil production and state revenues. The results show significant distortions in drilling activity and moderate scope for improving the state’s revenues through alternative tax policies.

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