Drivers of Royalty Rates and Primary Terms in Private U.S. Mineral Leases
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Research question:
Oil and gas royalties are a major source of income for rural communities. Brown et al. (2016) estimate that 2011 Texas oil & gas royalties were $15.9 billion. However, lease terms vary over time and space.

Why do some landowners get better terms? Use an ordered logit regression model and data from Texas to find out.

Mean royalty rates rise... ...and terms vary by play

Leasing data
- All wells in Texas (from Drillinginfo) within 10km of each lease center.
- Land classification relative to mean land use from land cover satellite data at 30m × 30m.

Other data
- Royalty
- Primary Term
- Royalty rates (monthly)
- Pct of area already leased in 10km
- Times 18 mo futures price
- Nearest 3 wells in last 3 yrs

Data extent

An Eagle Ford lease

Play fixed effects

Conclusions: What drives mineral lease terms?
- Firms’ valuations drive lease terms.
  - Better geology, technology, and higher prices increase royalty rates, as do
  - Bigger leases,
  - Recent drilling activity (also affects primary term), and
  - Prior leasing activity

- Landowner characteristics don’t.
  - Census block group socioeconomic status (race, income, education) have little effect, as do
  - Absentee ownership, and
  - Firm market power.
  - Shorter primary terms may be more prevalent in lower-educated areas that are not bilingual.

- Economic value of land may.
  - Developed lands and shreshubland receive higher royalties than cultivated land.

- Scarcity favors landowners.
  - Scarcity is correlated with firms’ valuations, so identifying causality is problematic.

- This is consistent with a competitive market for leasing.