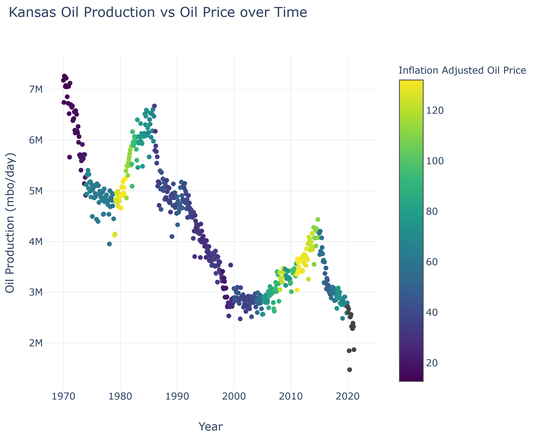
Oil in Kansas: The economic impact of the oil industry on rural counties in Kansas

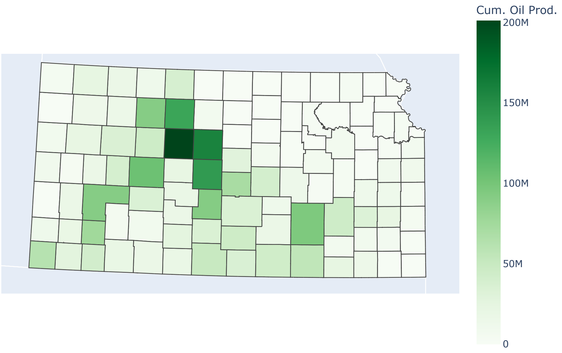
July 29, 2021 by Group 2

Kansas has been a major oil producing state since the early 1900s. Most of the oil has been produced from a handful of rural counties, and output has fluctuated with the price of oil over time. While the impact of these “boom-bust” cycles is something felt at the county level, it can and does vary from county to county. We have quantified this phenomenon for residents of rural counties, so that they can make the best financial decisions for themselves as possible.

Since the early 1970s, statewide production has ranged from a maximum of 7mmbo/d (millions of barrels of oil per day) in 1970, to just under 2mmbo/d in early 2020. Between these two points, two oil booms occurred: one in the mid-1980s, and the other in the mid-2010s. A boom is defined as a period of increased oil production and is predated with an increase in oil price. A bust is the subsequent collapse in oil production, which is accompanied by a collapse in oil price.

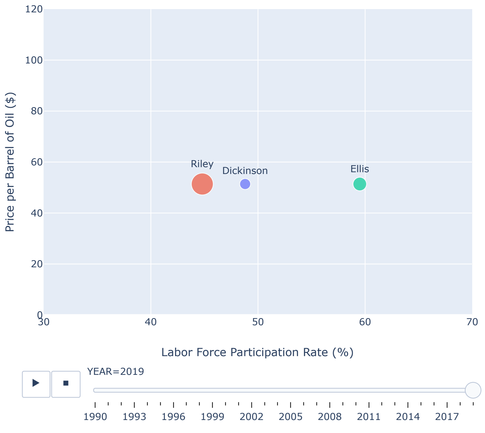


Ellis County is the most significant of Kansas’ oil producing counties, accounting for about five percent of the state’s production (KGS). And with Hayes, the biggest settlement in western Kansas, as its seat, Ellis County is the hub for all oil activity of the region (and includes neighboring Barton, Ness, Rooks, and Russell Counties - 22.6% of all of Kansas’ production).



This makes Ellis County a good case study of oil’s price and production fluctuations on the county-level economy. While many economic indicators were considered for this study, the simplest and straightforward-most is labor force. To illustrate how counties experience oil fluctuations differently, we chose Dickinson and Riley Counties, both of which are far less significant oil producing counties, for comparison.

Labor force data’s (Kansas Dept of Labor) time range is limited from 1990 to today. Simply put, labor force is the number of residents who are either already employed or are seeking to be. While the number of individuals gives an indication of the economy’s ability to support employment, standardizing it to a percentage of the total population (Kansas State Library, American Community Survey, US Census Bureau) puts all counties for fair comparison. The following graph on the left illustrates how each county’s labor force (as a percent of total population) changes over time, and the graph on the right shows the change in oil price over the same timeframe.



As we suspected, Ellis County labor force increased from 54% before the boom, to 63% at its peak, before dropping to 60% after oil prices imploded. Riley County’s labor force remained unchanged from just prior to the boom to its peak at 52%, before falling to 49.5% after prices imploded. Lastly, Dickinson County’s labor force percentage has, on average, slightly declined since 1995.

In conclusion, oil booms are correlated with increased economic health for counties rich in oil production, as labor force would not increase if the local employment outlook was poor. However, the opposite is also true: oil busts are accompanied by weakened economic health for those same counties, as labor force declines because of poor employment outlook. Lastly, counties with low oil production do not see these same effects. This is for better or worse, as they are neither prone to economic deterioration or enhancement, that busts and booms are associated with (respectively).

While we found this to be the case for rural counties in Kansas, it may be different for other states.

Older Newer

About

This is a fictional blog created by DSA Case Study Group 2 to demonstrate communicating our data story. Based on the Bootstrap Blog template v5.0.

Archives

July 2021
June 2021
May 2021
April 2021
March 2021
February 2021
January 2021
December 2020
November 2020
October 2020
September 2020
August 2020