

OIL! OR WILL THERE?

The Decline of Norwegian Oil

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OIL!

*A romance
of the
Oil fields*



By UPTON SINCLAIR

Daniel Day-Lewis

GOLDEN GLOBE[®]
NOMINEE
BEST PICTURE

GOLDEN GLOBE[®]
NOMINEE
BEST ACTOR
DANIEL DAY-LEWIS



There Will Be Blood

Written for the Screen and Directed by PAUL THOMAS ANDERSON

MIRAMAX

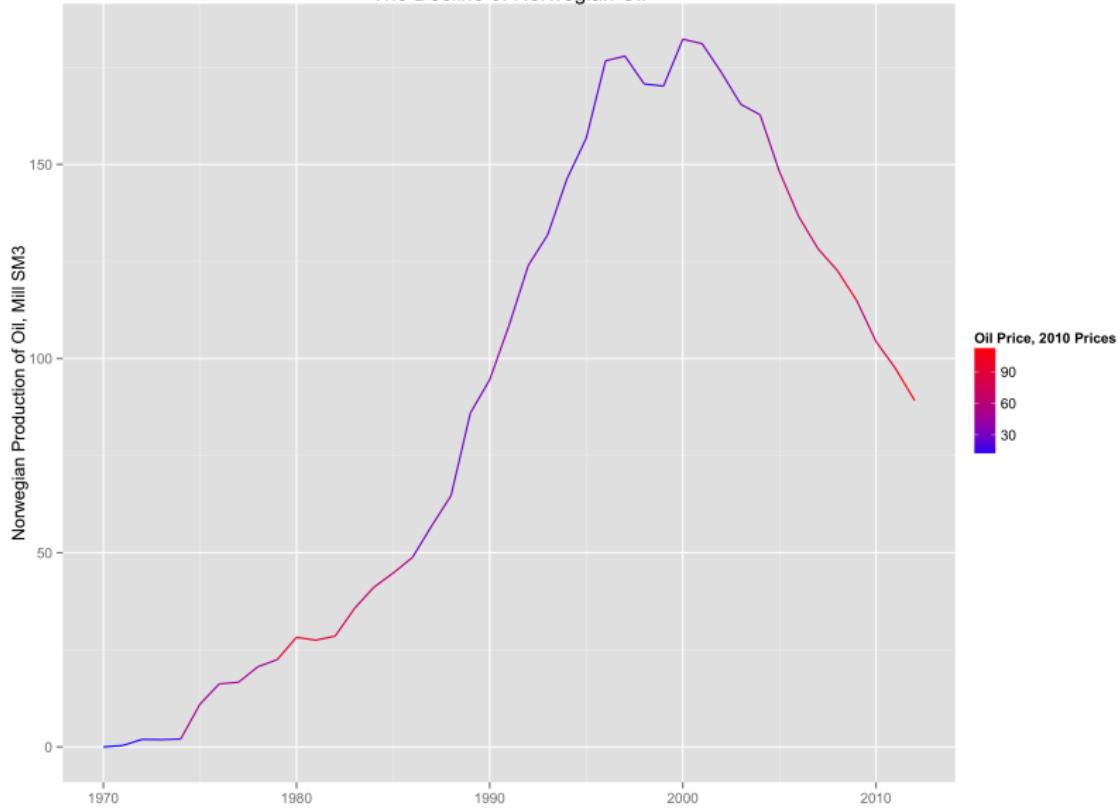
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12.26.07

SOUNDTRACK ALBUM ON VANGUARD RECORDS

www.paulthomasanderson.com

The Decline of Norwegian Oil



or...

Naive Modeling of Oil Field Data

or...

Naive Modeling of Oil Field Data

or...

A top-down-bottom-up multilevel non-parametric generalized additive model of oil field production in the Norwegian continental shelf

or...

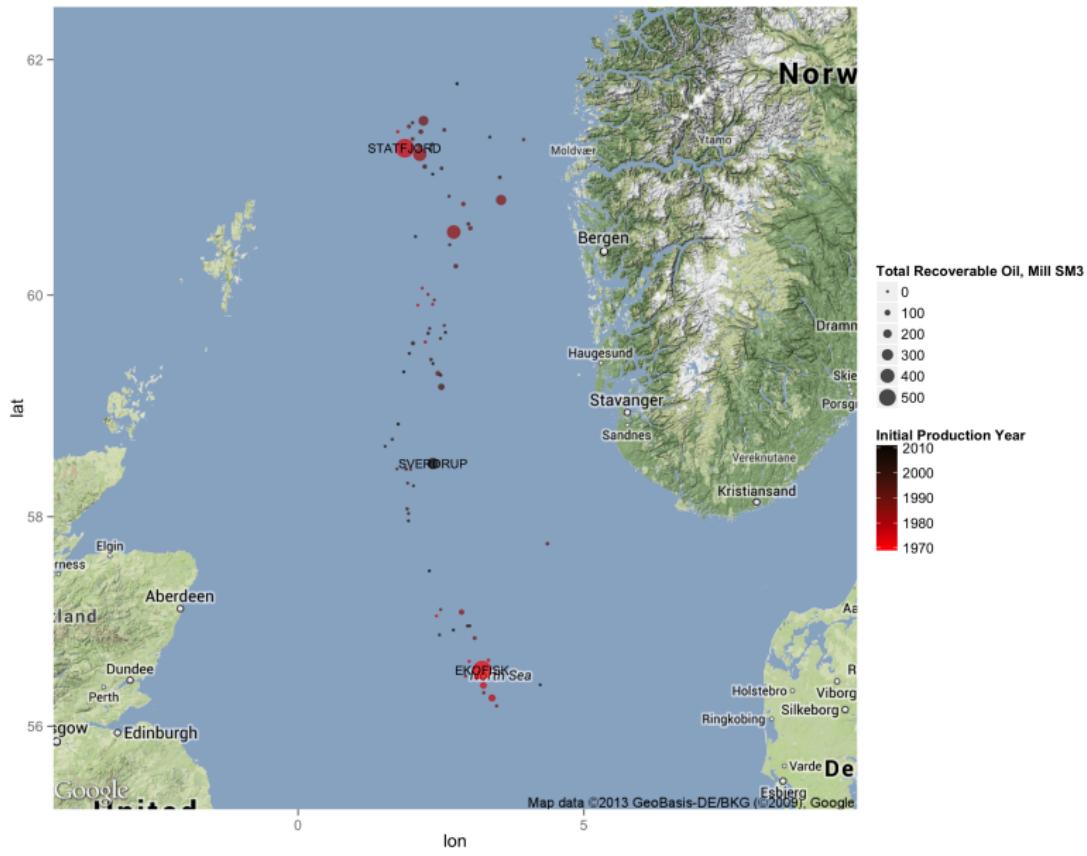
Naive Modeling of Oil Field Data

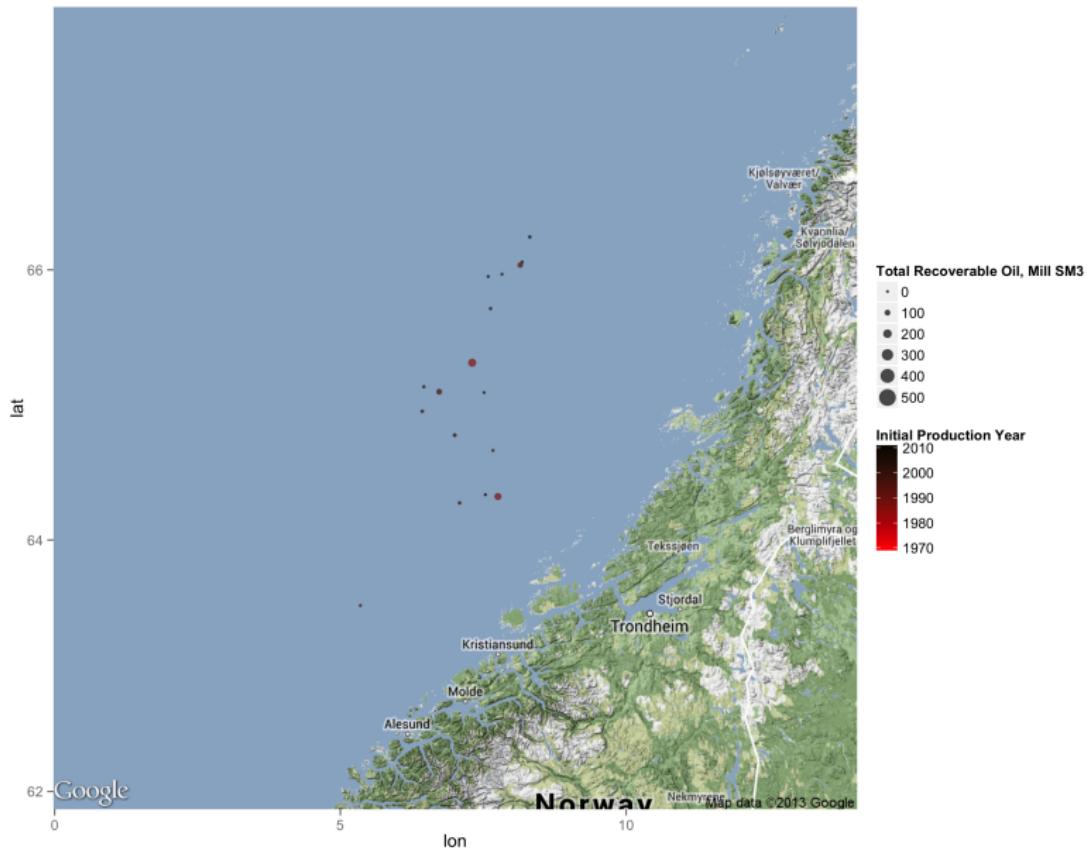
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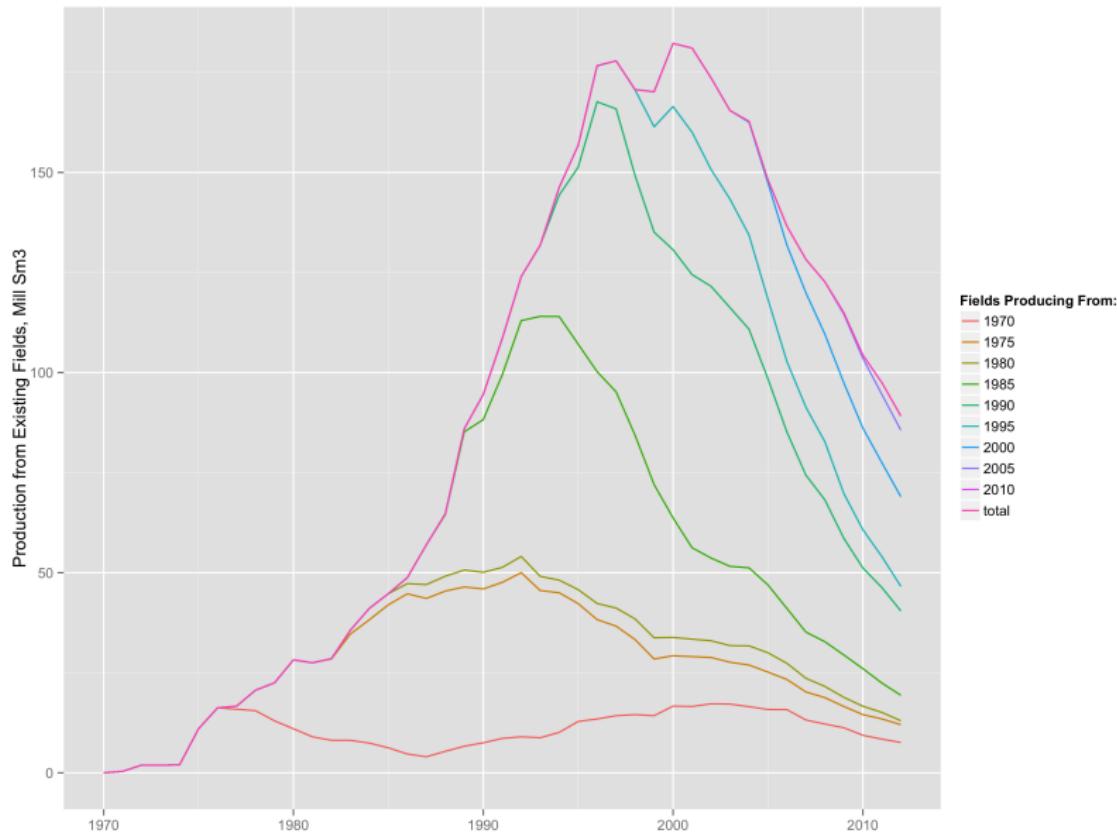
A top-down-bottom-up multilevel non-parametric generalized additive model of oil field production in the Norwegian continental shelf

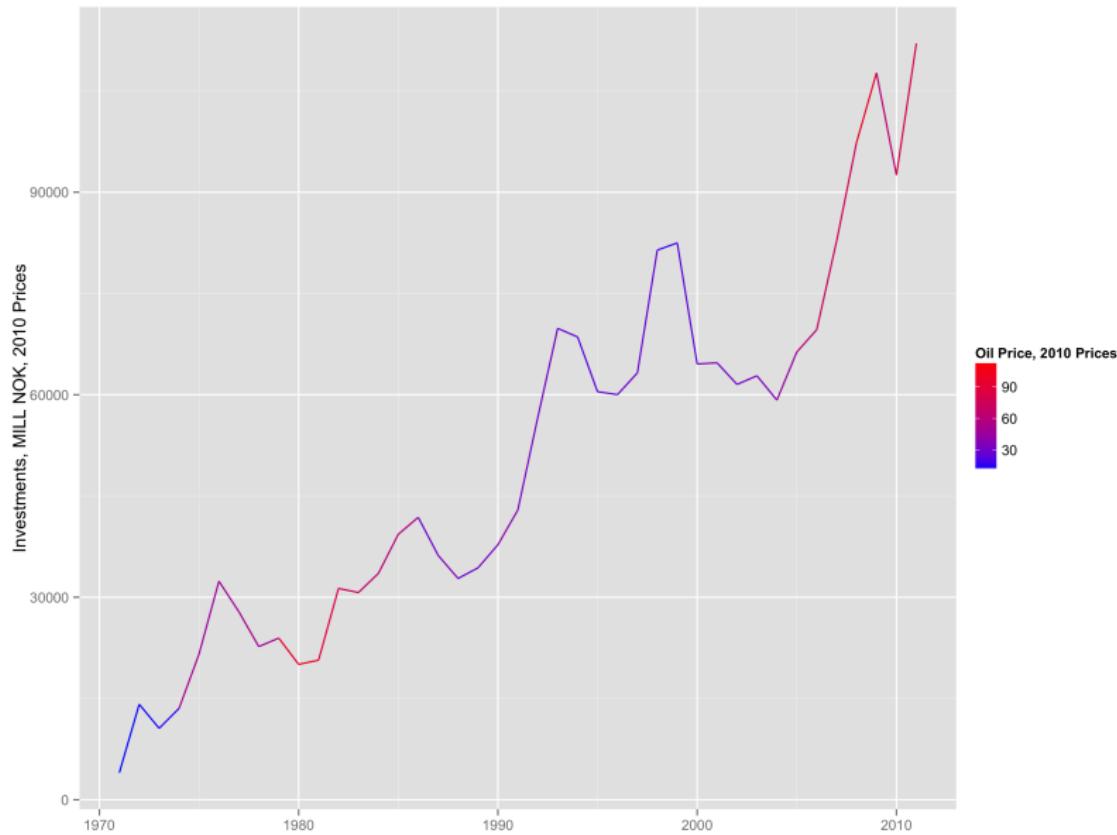
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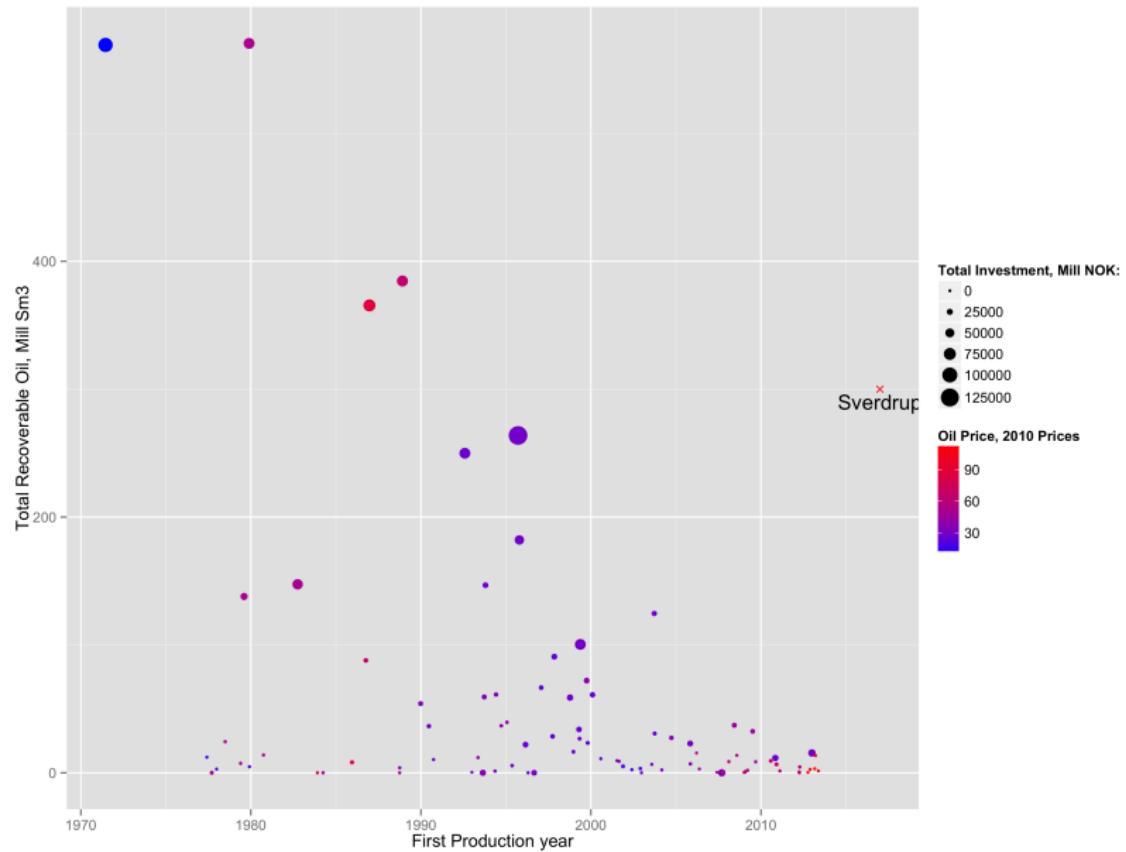
Oil Price Does Not Seem to Matter (Much) for Production in Existing Fields

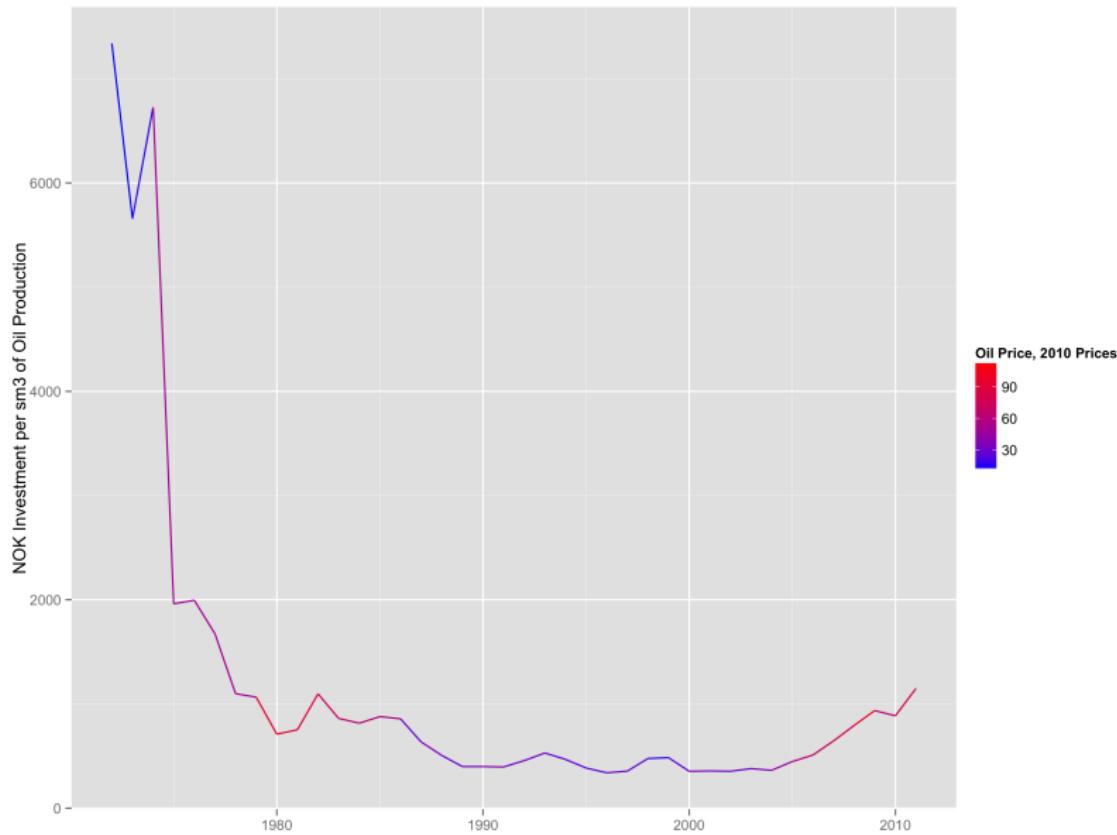


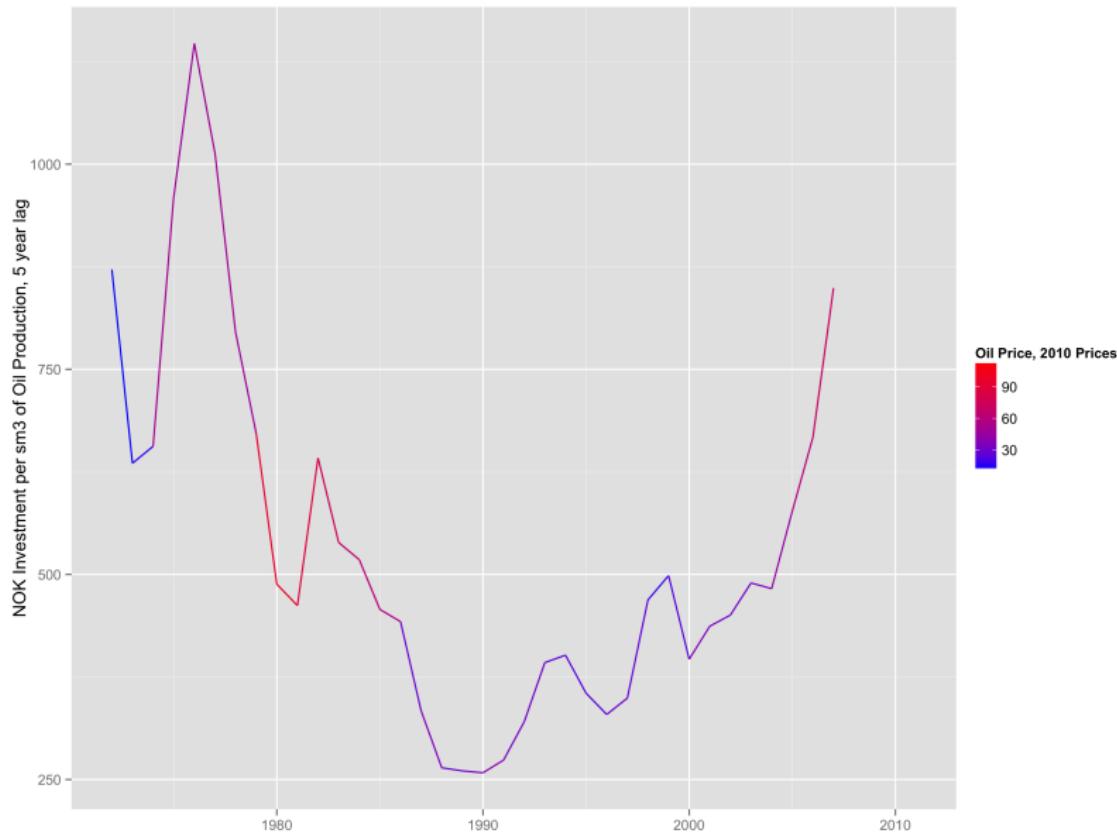




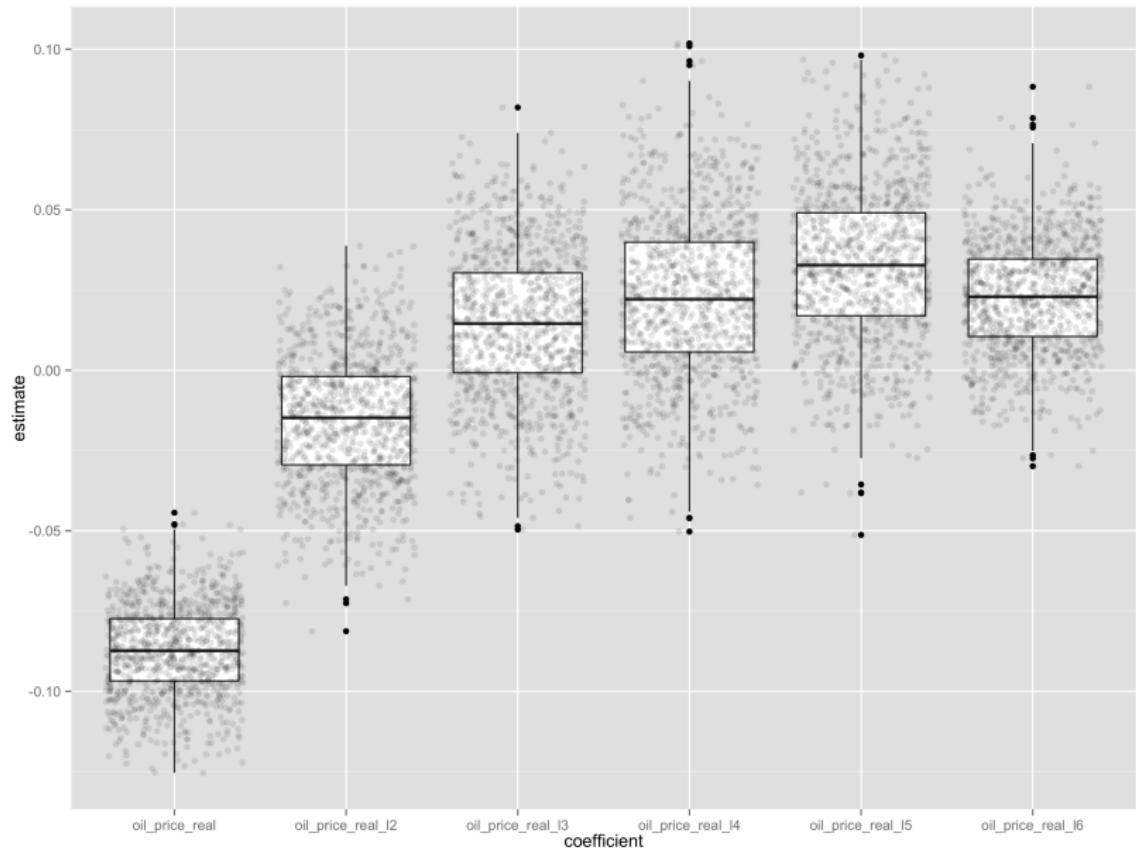




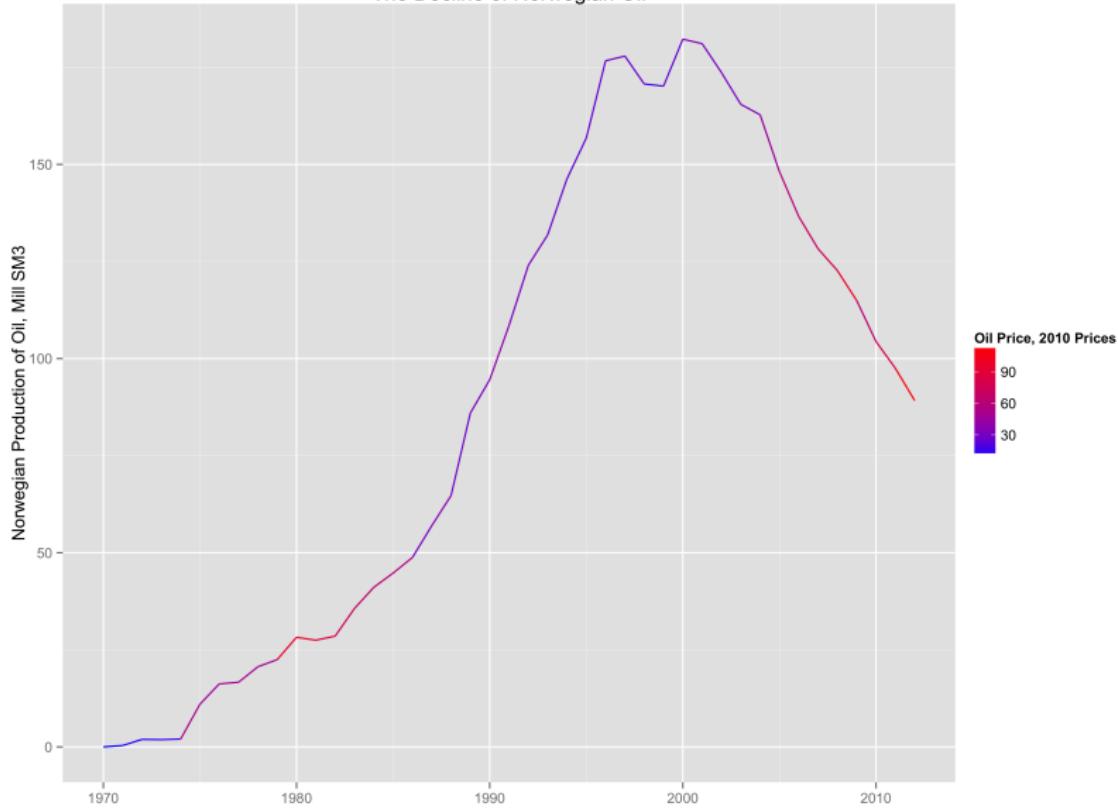




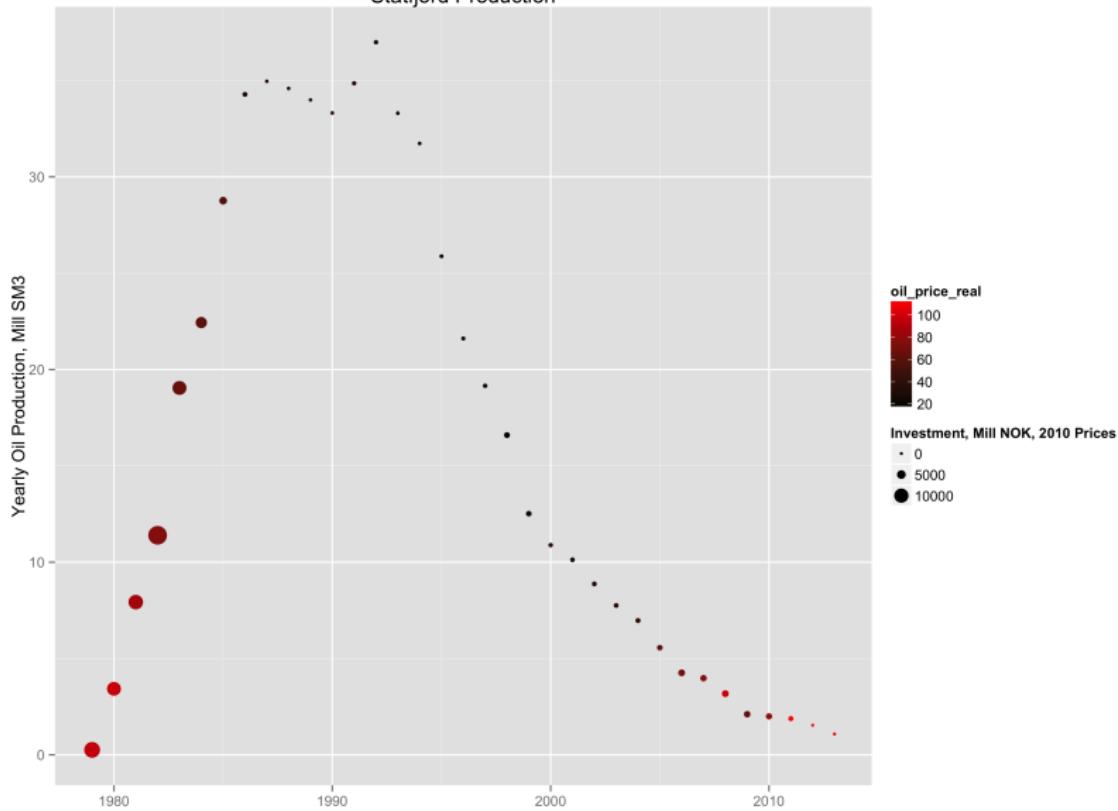
$$\begin{aligned} \text{Log}(Production_{i,t}) = & \alpha_0 + \alpha_1 time_to_peak_{i,t} + \alpha_2 time_to_peak_{i,t}^2 \\ & + \alpha_3 time_to_peak_{i,t}^3 + \alpha_4 peak_to_end_{i,t} + \alpha_5 peak_to_end_{i,t}^2 \\ & + \alpha_6 peak_to_end_{i,t}^3 + \gamma total_recoverable_oil; \\ & + \beta_1 oil_price + \beta_2 oil_price_l1 + \dots + \epsilon \end{aligned}$$



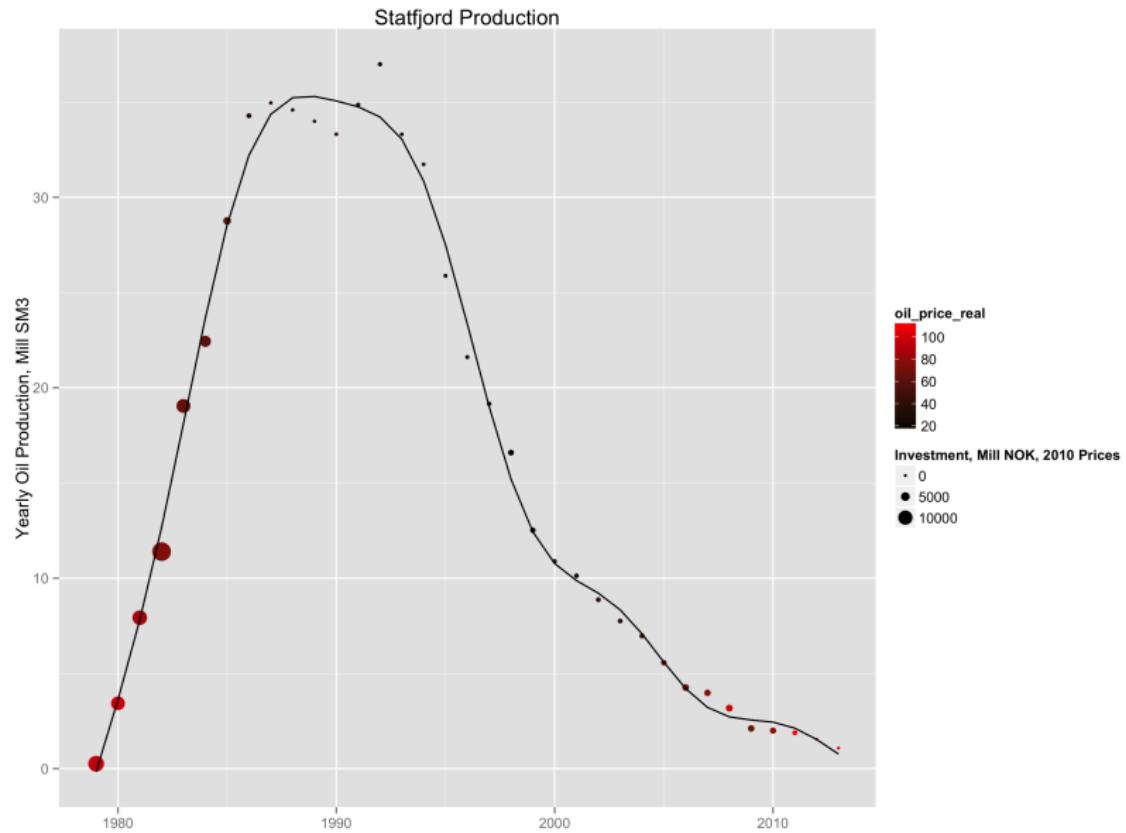
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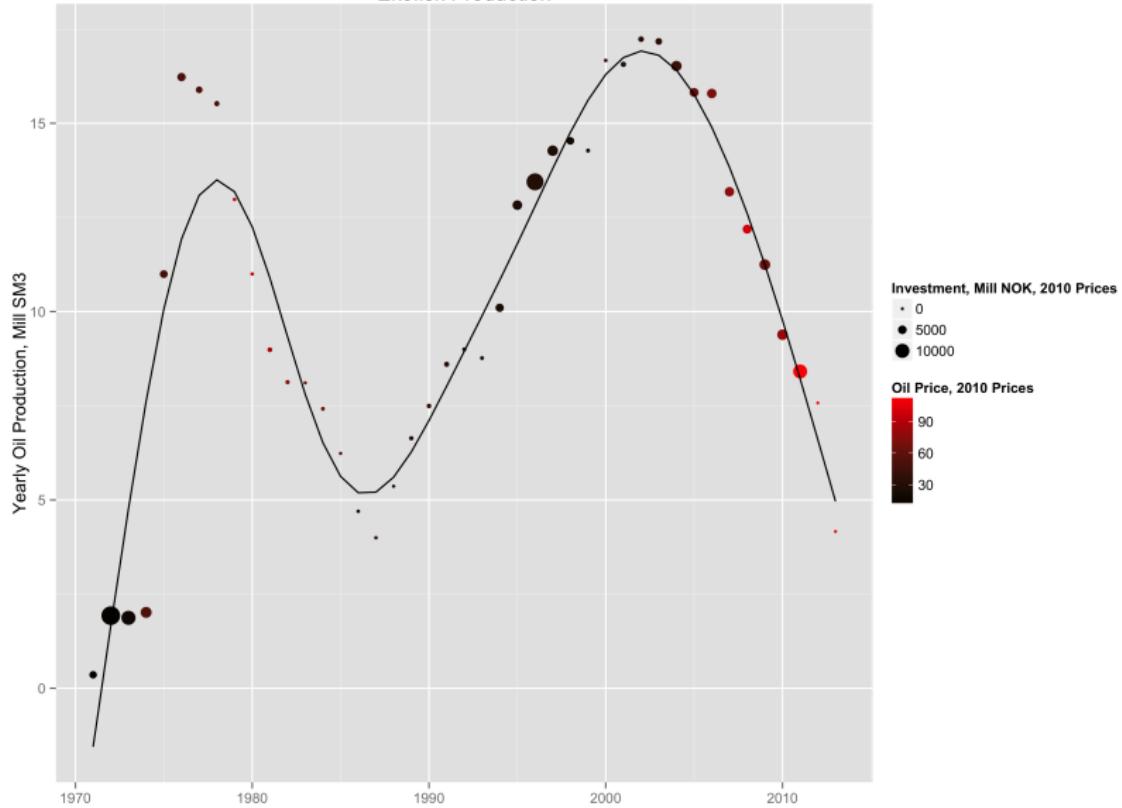
Statfjord Production



$$Production_{statfjord,t} = f(\text{time}) + \epsilon$$

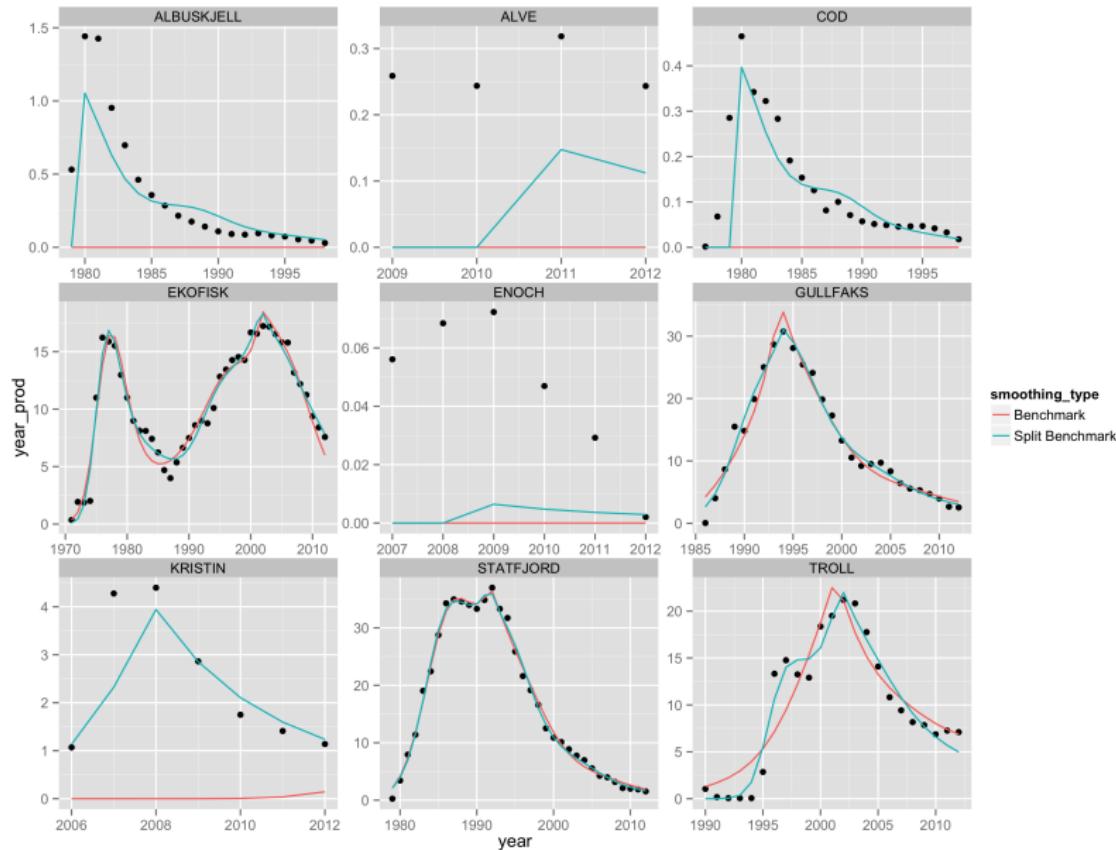


Ekofisk Production

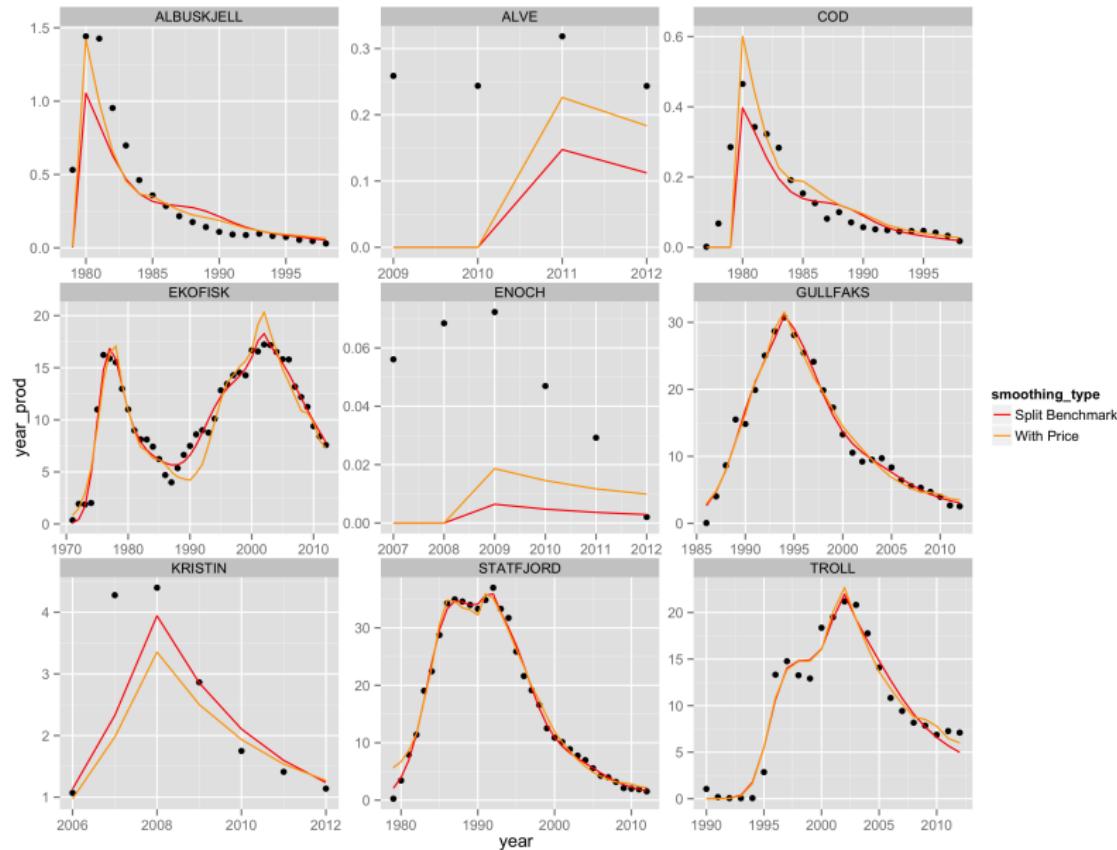


$$\begin{aligned} \text{Log}(Production_{i,t}) &= f(\text{time_to_peak}_{i,t}, \text{total_recoverable_oil}_i) \\ &+ f(\text{peak_to_end}_{i,t}, \text{total_recoverable_oil}_i) + f(\text{year}_{i,t}) + \epsilon \end{aligned}$$

$$\epsilon \sim \text{Normal}(0, \sigma^2)$$



$$\begin{aligned} \text{Log}(Production_{i,t}) = & f(\text{time_to_peak}_{i,t}, \text{total_recoverable_oil}_i) \\ & + f(\text{peak_to_end}_{i,t}, \text{total_recoverable_oil}_i) \\ & + \beta_1 \text{oil_price} + \beta_2 \text{oil_price_l1} + \dots + \epsilon \end{aligned}$$
$$\epsilon \sim \text{Normal}(0, \sigma^2)$$



$$\begin{aligned} \text{Log}(Production_{i,t}) = & f(\text{time_to_peak}_{i,t}) + f(\text{peak_to_end}_{i,t}) \\ & + f(\text{total_recoverable_oil}_i) + \epsilon \end{aligned}$$

$$\epsilon \sim \text{Normal}(0, \sigma^2)$$

