## OIL! OR WILL THERE?

The Decline of Norwegian Oil

## Johannes Mauritzen

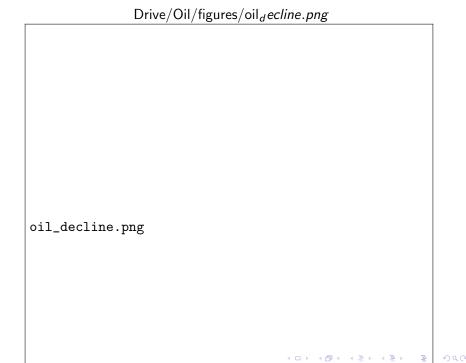
Department of Business and Management Science NHH Norwegian School of Economics johannes.mauritzen@nhh.edu

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sinclair.png

 ${\sf Drive/Oil/figures/sinclair.png}$ 

## Drive/Oil/figures/there\_will\_be\_blood\_ver4.jpg there\_will\_be\_blood\_ver4.jpg



or...

Naive Modeling of Oil Field Data

or...

Naive Modeling of Oil Field Data

or...

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

or...

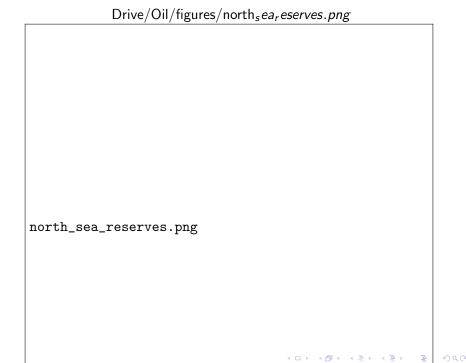
Naive Modeling of Oil Field Data

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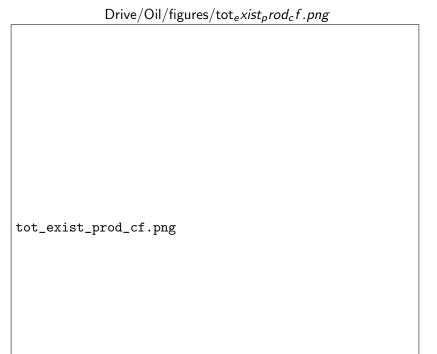
A top-dow-bottom-up multilevel non-parametric generalized additive model of oil field production in the Norwegian continental shelf

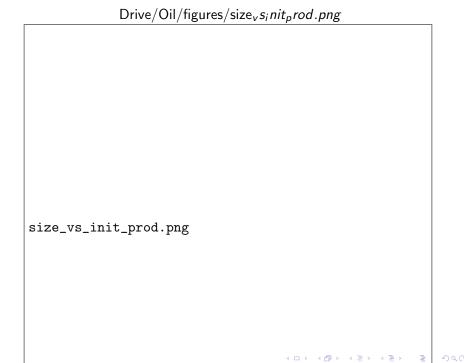
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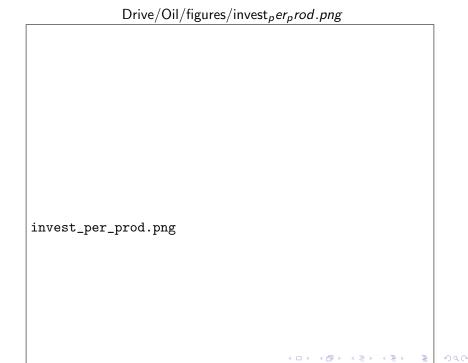
Oil Price Does Not Seem to Matter (Much) for Production in Existing Fields

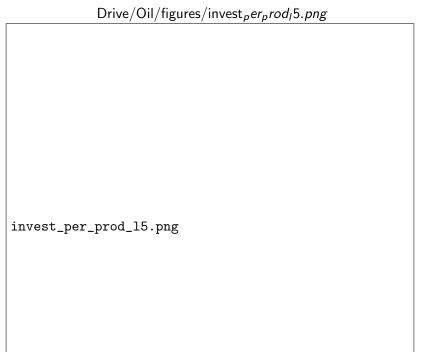




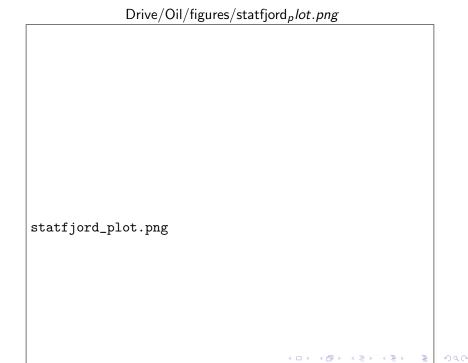


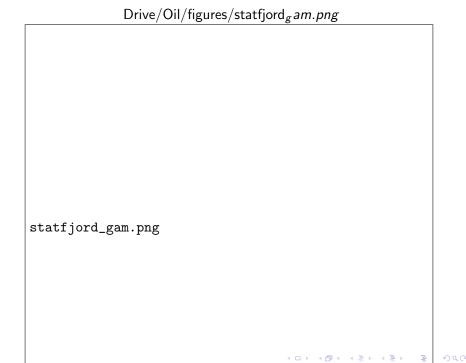


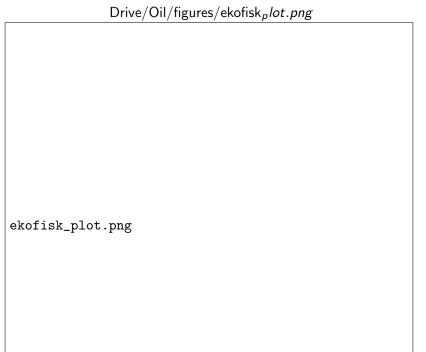




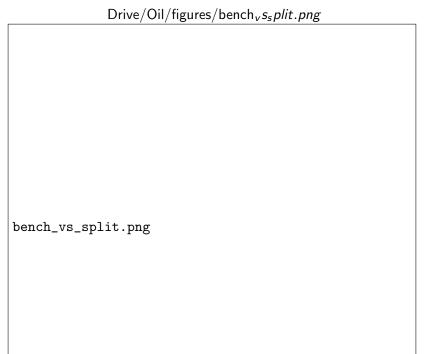
## Drive/Oil/figures/investwithoilprice.png invest\_with\_oil\_price.png







$$\label{eq:log_peak} \begin{split} Log(\textit{Production}_{i,t}) &= f(\textit{time\_to\_peak}_{i,t}) + f(\textit{peak\_to\_end}_{i,t}) \\ &+ f(\textit{year}_{i,t}) + f(\textit{total\_reserves}_i) + \epsilon \end{split} \tag{1}$$



$$Production_{i,t} = f(time\_to\_peak_{i,t}) + f(peak\_to\_end_{i,t}) + f(year_{i,t}) + f(total\_reserves_i) + \epsilon$$
 (2)

