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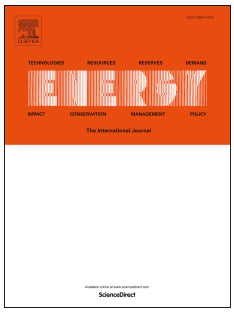

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PII: S0360-5442(18)30812-0

DOI: 10.1016/j.energy.2018.04.187

Reference: EGY 12826

To appear in: *Energy*

Received Date: 2 February 2018

Revised Date: 25 April 2018

Accepted Date: 4 May 2018

Please cite this article as: de Albuquerquemello ViníPhillipe, de Medeiros RK, da Nóbrega Besarria Cá, Maia SinéFernandes, Forecasting crude oil price: Does exist an optimal econometric model?, *Energy* (2018), doi: 10.1016/j.energy.2018.04.187.

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ACCEPTED MANUSCRIPT

Forecasting crude oil price: does exist an optimal econometric model?

Vinícius Phillipe de Albuquerquemello[a,*], Rennan Kertlly de Medeiros[b], Cássio da Nóbrega Besarria[c], and Sinézio Fernandes Maia[d]

[a,b,c,d]*Graduate Program in Applied Economics, Paraíba, Brazil.*
[*]*Corresponding author: Vinícius Phillipe de Albuquerquemello, email: vinicius.phillipe@hotmail.com, address: Jardim Cidade Universitária, CEP - 58.051-900, João Pessoa, Paraíba, Brazil.*

Abstract

The drastic reduction in oil prices after 2014 rekindled its stochastic characteristics of not settling around a mean and having unexpected high volatility. Thus, creating a branch of empirical literature devoted to the study of structural breaks in oil price longitudinal data, its treatment and forecasting. In that regard, this paper estimate and compare the accuracy measurements of different methodologies and propose the use of a Self-Exciting Threshold Auto-regressive - SETAR model. This approach automatically allows for regime switching after a threshold, hence achieving a Root Mean Square Error - RMSE of 2%, in contrast to 10% of other models commonly used. Moreover, the comparison with previous studies pointed out that the SETAR model surpasses most of the oil price prediction methods in relation to its accuracy, or because of its simplicity, since it does not require great computational effort or difficult analytical skills.

Keywords: Forecasting; Oil prices; Accuracy; VAR; SETAR.

JEL Classification: C53, Q41, Q43

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