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Combined Generalized Hubbert-Bass Model Approach to Include Disruptions When Predicting Future Oil Production

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ABSTRACT

In a previous study [1] the authors had developed a methodology for predicting global oil production. Briefly, the model accounted for disruptions in production by utilising a series of Hubbert curves in combination with a polynomial smoothing function. Whilst the model was able to produce predictions for future oil production, the methodology was complex in its implementation and not easily applied to future disruptions. In this study a Generalized Bass model approach is incorporated with the Hubbert linearization technique that overcomes these limitations and is consistent with our previous predictions.

KEYWORDS

Generalized Bass Model, Hubbert Curve, Oil Production

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References

[1] S. H. Mohr and G. M. Evans, "Mathematical Model Forecasts Year Conventional Oil Will Peak," Oil and Gas Journal, Vol. 105, No. 17, 2007, pp. 45-50.

[2] A. S. Al-Jarri and R. A. Startzman, "Worldwide Petro-leum-Liquid Supply and Demand," Journal of Petroleum Technology, Vol. 49, No. 12, 1997, pp. 1329-1338.

[3] D. L. Greene, J. L. Hopson and J. Li, "Have We Run out of Oil Yet? Oil Peaking Analysis from an Optimist ' S Perspective," Energy Policy, Vol. 34, 2006, pp. 515-531.

[4] S. H. Mohr, "Projection of World Fossil Fuel Production with Supply and Demand Interactions," Ph.D. dissertation, the Uni-versity of Newcastle, Australia, 2010. http://dl. drop-box.com/u/8223301/Steve%20Mohr%20Thesis.pdf

[5] I. S. Nashawi, A. Malallah and M. Al-Bisharah, "Forecasting World Crude Oil Production Using Multicycle Hubbert Model," Energy and Fuels, Vol. 24, No. 3, 2010, pp. 1788-1800.

[6] K. S. Deffeyes, "World ' s Oil Production Peak Reckoned in Near Future," Oil and Gas Journal, Vol. 100, No. 46, 2002, pp. 46-48.

[7] H. W. Parker, "Demand, Supply Will Determine When Oil Output Peaks," Oil and Gas Journal, Vol. 100, No. 8, 2002, pp. 40-48.

[8] P. R. A. Wells, "Oil supply challenges – 2: What Can OPEC Deliver?" Oil and Gas Journal, Vol. 103, No. 9, 2005, pp. 20-30.

[9] P. R. A. Wells, "Oil Supply Challenges-1: The Non-OPEC Decline," Oil and Gas Journal, Vol. 103, No. 7, 2005, pp. 20-28.

[10] S. M. Al-Fattah and R. A. Startzman, "Forecasting World Natural Gas Supply," Journal of Petroleum

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Technology, Vol. 52, No. 5, 2000, pp. 62-72.

[11] A. Imam, R. A. Startzman and M. A. Barrufet, "Multicyclic Hubbert Model Shows Global Conventional Gas Output Peak-ing in 2019," Oil and Gas Journal, Vol. 102, No. 31, 2004, pp. 20-28.

[12] C. J. Campbell and J. H. Laherrere, "The End of Cheap Oil," Scientific American, Vol. 278, No. 3, 1998, pp. 78- 83.

[13] M. H??k and K. Aleklett, "Historical Trends in American Coal Production and A Possible Future Outlook," International Journal of Coal Geology, Vol. 78, No. 3, 2009, pp. 201-216.

[14] W. Zittel and J. Schindler, "Crude Oil the Supply Outlook," Technical Report EWG-Series No 3/2007, Energy Watch Group, 2007.