

Title of article: Investment Decision and Profitability Analysis in an Upstream Petroleum

Author(s): Enebeli E. E., Orodu O D., Peng Y., Xu L.

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Abstract

The decision to invest is based on the evaluation of the project profitability. Profitability in an upstream petroleum sector however depends on many factors including the market price of hydrocarbons, the costs of finding, developing, and producing hydrocarbon reserves; taxation and fiscal regimes, research and development that results in technical progress. We applied the concepts of net present value, internal rate of return, payback period and Monte Carlo simulation to project selection, to determine investment profitability and value optimization in the upstream petroleum sector. We applied these concepts first on choice between two mutual alternative projects based on their economic profitability. Secondly, by using Monte Carlo Simulation technique we varied some factors of production that enhance profitability to determine the probabilities of attaining more effective and efficient exploitation of resources that will maximize future profit.