

Net-Zero Policy vs Energy security: The impact on GCC countries

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Gulf Cooperation Council (GCC) countries have accumulated large oil portfolio revenues. However, much of the world economy is pursuing Net Zero policies and in turn their expected future reliance on fossil fuel resources through investments in Renewable Energy Sources (RES). At the time of writing, 131 countries covering 85% of the world’s population had committed to ‘net zero’ policies. This necessarily exposes GCC countries to long-term structural challenges associated with a world economy less dependent on oil through two primary risks: i) loss of export revenues, and ii) stranded reserves. Oil exporting nations should, and are, focusing on economic adaptation strategies (viz. fiscal diversification) in order to reduce risks by pooling uncorrelated income streams.

We construct oil portfolios for four Gulf Cooperation Council countries (Kuwait, Oman, Saudi Arabia, United Arab Emirates) and focus on their top five importing counterparties. Portfolio returns have been estimated in the period 2008–2018, computing volatility spillovers à la Diebold and Yilmaz. Effects of economic variables (including policy uncertainty, market uncertainty, renewable market shares, exchange rates and industrial production) on volatility spillover indices are estimated using different panel linear regression models.

Our modelling results find aggregate ‘quantity’ volatility spillovers are lower than ‘price’ volatility spillovers, confirming the structural rigidity of oil demand. Analysis of net contributors for price and quantity volatility suggest China is a net transmitter of quantity spillovers due to its crucial role in driving global oil demand dynamics and energy security while India seems to absorb quantity and price shocks from oil markets. We also find increasing economic and policy uncertainty in importing nations increases the volatility of oil export portfolios. This suggests political tensions increase oil market fluctuations and threaten the stability of GCC’s oil export portfolios and revenues streams. Finally, and unsurprisingly, our modelling finds climate change mitigation policies and associated increases in renewable market shares were found to reduce volatility spillovers from foreign markets, enabling the importing nation to better absorb foreign market shocks. Oil portfolio risk management will therefore become increasingly important for GCC countries. Rising renewable shares within the domestic energy production mix is therefore predictable.

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