

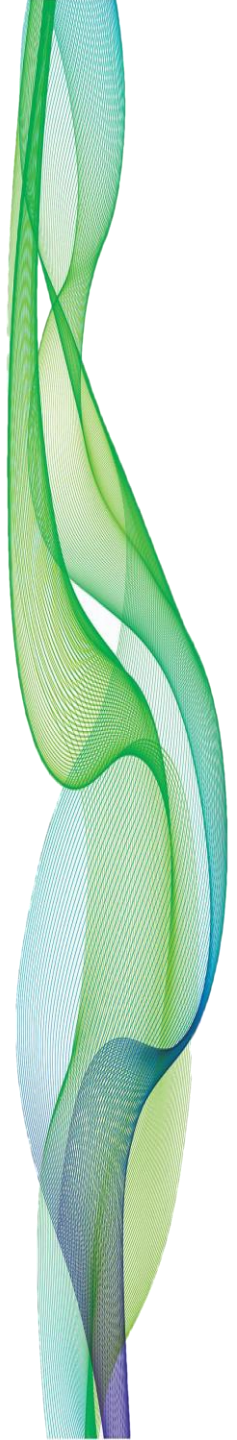
Arab Oil Exporters' Diversification Strategies in the Context of the Energy Transition

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The elusive goal of diversification





Diversification outcomes in Arab countries lags other regions

Economic diversification has been a key developmental goal

- Achieving this objective is seen as essential for economic security and sustainability.
- Although some Arab oil exporters have made progress over the last few decades in diversifying their economic base and sources of income, economic diversification remains generally low in Arab economies than in many emerging market economies, including commodity exporters.

Economic complexity index (avg.) = **0.34** (low complexity)
 Arab economies lack high-quality products or services not made elsewhere.

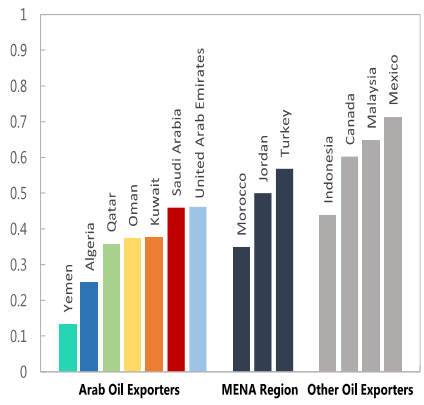
Export diversity index (avg.) = **0.25** (low diversity)
 Export revenues are driven by only a few sectors and trading partners.

Export quality index (avg.) = **0.43** (fair quality)
 Average quality within any product category based on trade price, exporter income per capita and distance between importer and exporters is fair.

Manufacturing value-added Gini (avg.) = **0.80** (great inequality)
 The energy sector still dominates in the Arab oil-exporting economies.

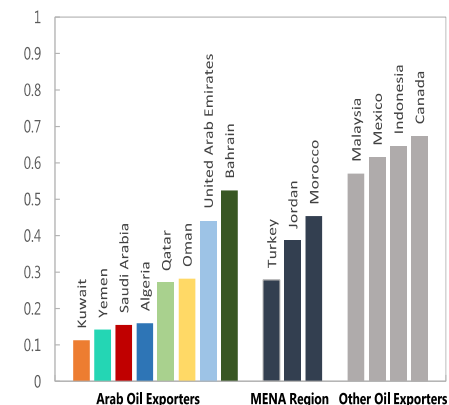
Measures of economic diversity

Economic complexity



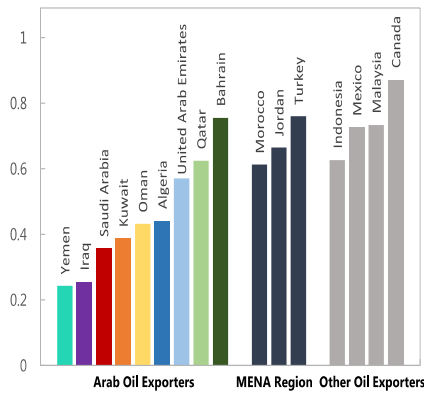
Index 1 = greater complexity

Export diversity



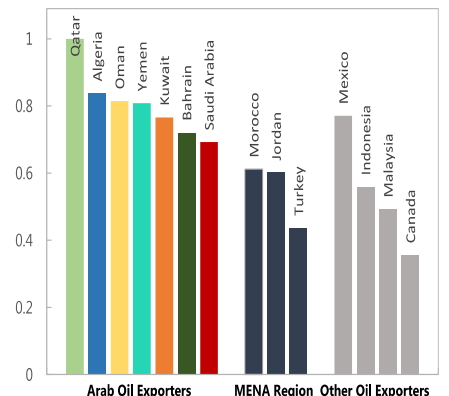
Index 1 = greater diversity

Export quality

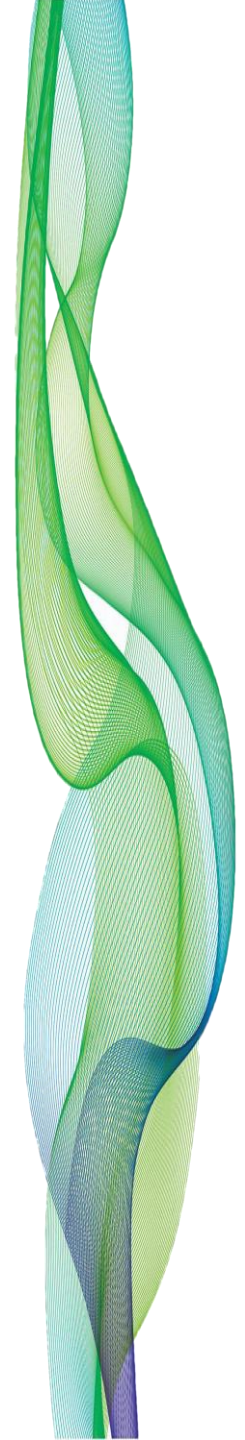


Index 1 = higher quality

Manufacturing value-added



Index 1 = greater inequality between sectors





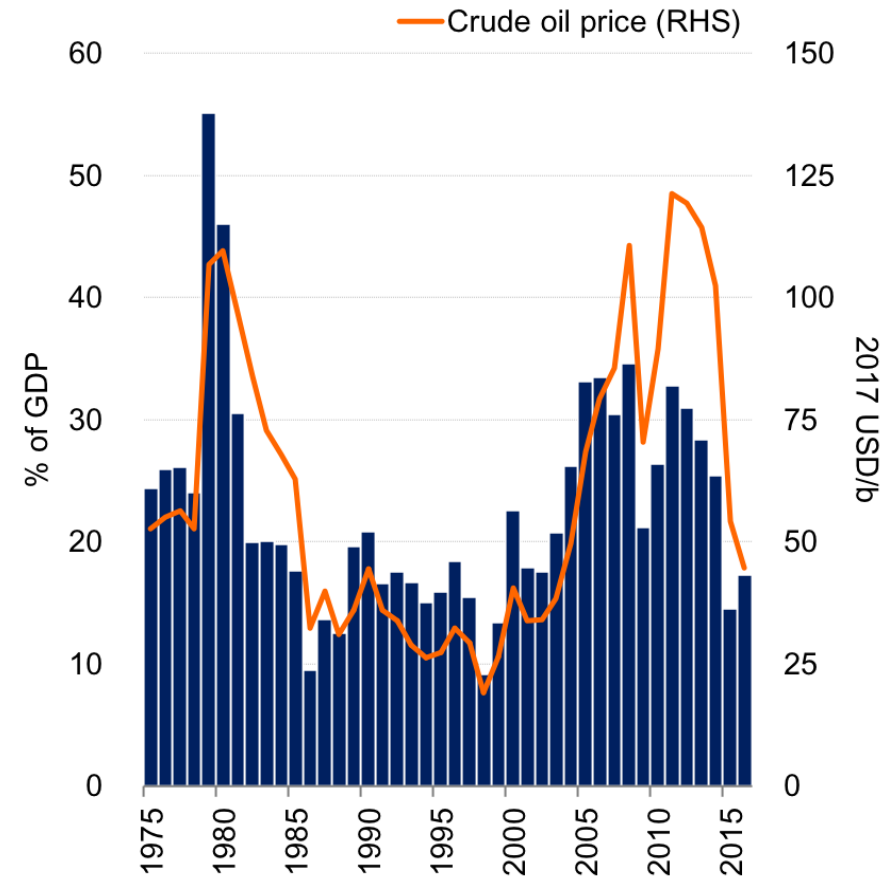
The challenges of heavy reliance on oil revenues

From the developmental perspective, multiple challenges arise

1. The oil industry does not generate a stable source of income as oil prices fluctuate widely; in some countries oil rents are not big enough to provide sufficient income for growing populations and an extensive welfare system.
2. The oil industry is capital intensive in nature and does not generate enough jobs for the hundreds of thousands entering the labour market each year.
3. There has been a paradigm shift about the future prospects of global oil demand; the concept of peak oil demand is now more widely accepted, albeit no one really knows when or whether demand will peak.

But regardless of when oil demand may peak, the debate places the topic of diversification into a new context.

Oil rents in the Arab World, 1975-2016





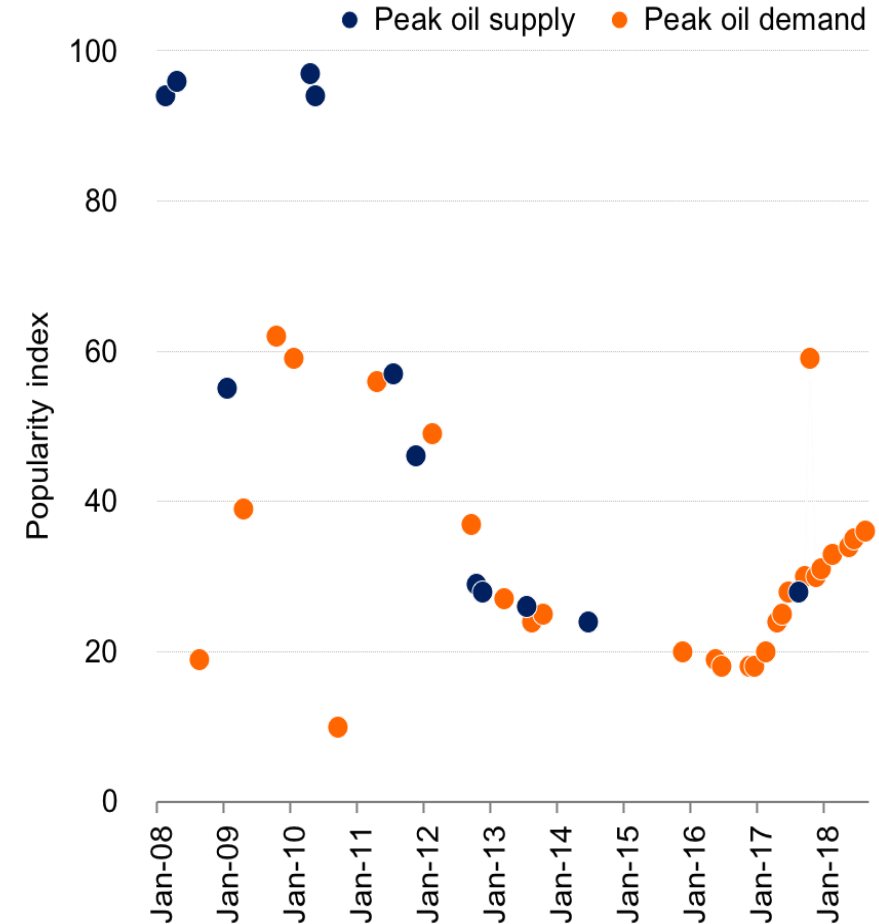
Peak oil demand and the shift in perceptions

Shifts in perception impact the behavior of market players

1. A shift of perceptions from oil scarcity to oil abundance; in a carbon-constrained world, there are growing concerns that countries with vast amount of oil reserves are now faced with the possibility of stranded assets.
2. The concepts of scarcity premiums, the effectiveness of rationing oil supplies in an inter-temporal framework, and the idea that oil kept underground today will command a higher price in the future need to be critically assessed.
3. Global oil markets will become increasingly competitive and margins in the oil industry will decline.

These shifts in perception are already changing the behaviour of the market participants; in oil exporting countries the urgency of reform and diversification has intensified.

Worldwide news headlines trend, Jan 08 – Aug 18



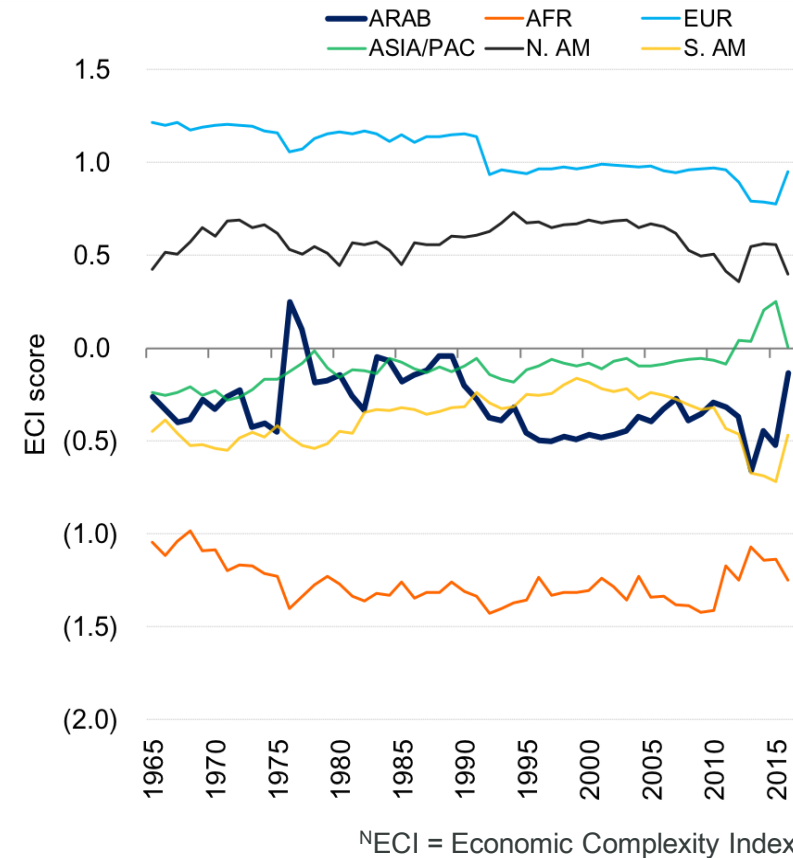


Key questions to be addressed

These issues throw up three important questions

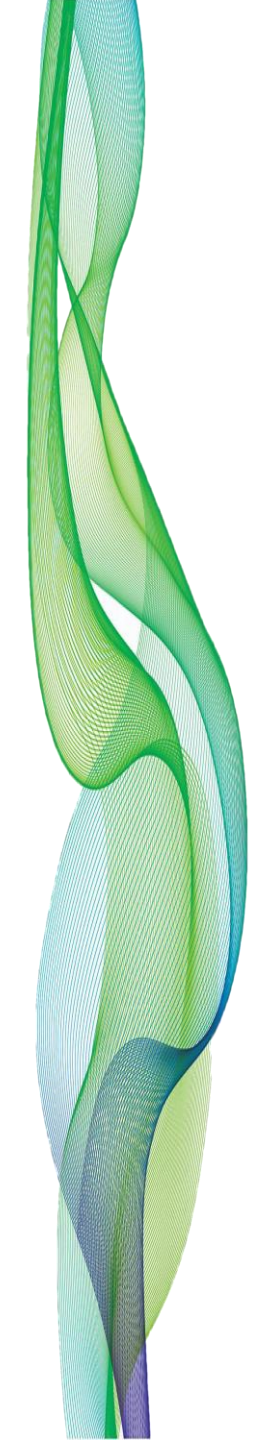
1. How soon can we expect 'peak oil demand' to occur, or to be more precise, how fast is the current energy transition ?
2. What kind of economic future should the Arab oil exporters be planning for ?
3. How does the emergence of renewable energy, as a competitive source, impacts economic diversification strategies in these countries ?

Oil exporters diversification by region, 1965 – 2016





Peak demand and the speed of the energy transition





Peak oil demand (?)

Some general observations

- **Range of uncertainty is very high:**

Projections are highly sensitive to underlying assumptions such as GDP, population, efficiency gains, carbon pricing, the interactions of various technologies.

- **Possibility of multiple peaks due to rebound effects:**

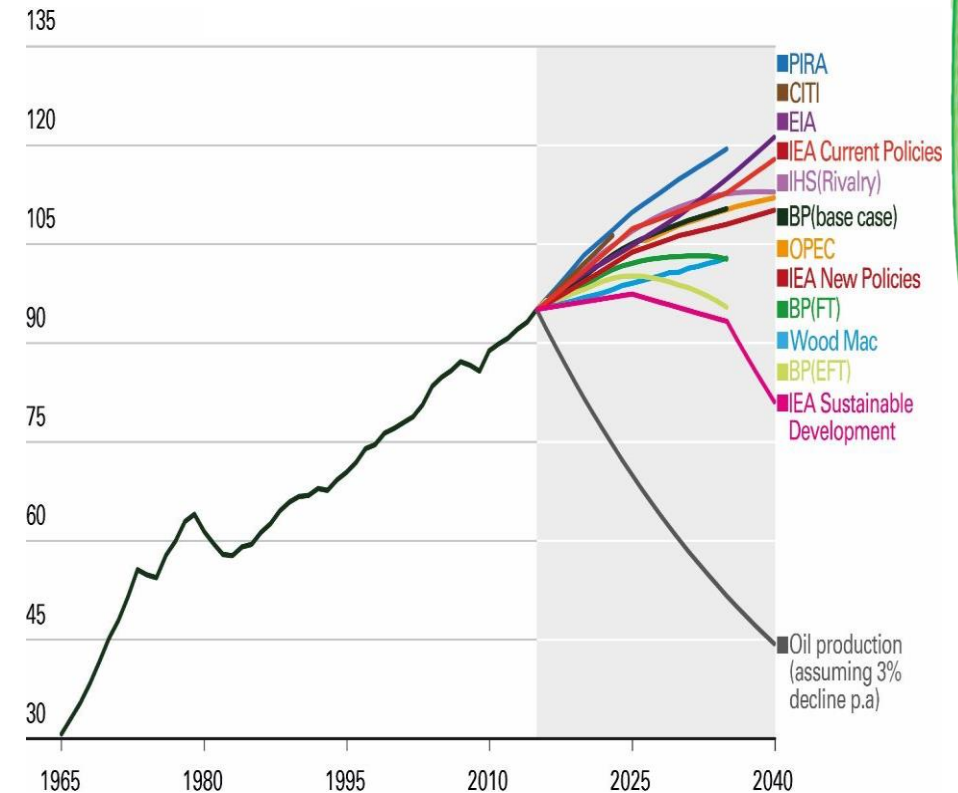
A peak in oil demand could cause oil prices to fall, triggering higher demand from consumers.

- **No sharp fall in oil demand:**

Oil will continue to be an important part of the energy mix for the foreseeable future.

Fast transitions rarely happen, but the possibility of a fast transition cannot be entirely discounted.

Global oil demand projections, 1965 – 2040E





Slow versus fast transition

Slow transition

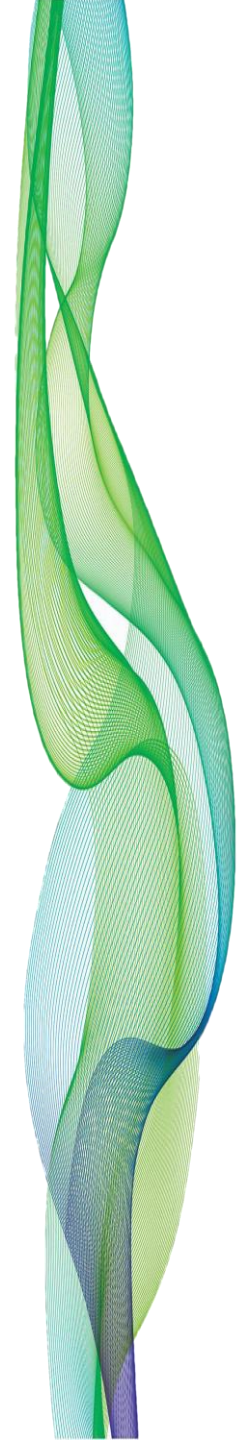


Fast transition

- Historical data (coal over centuries, oil for decades).
- Opportunity-driven; interfuel substitution.
- Massive infrastructure built around the fuel.
- Lock-in and path dependency.
- Huge sunk costs create inertia and economic incentives to utilise infrastructure until it is written-off.
- Incumbents “fight back” and delay the transition.

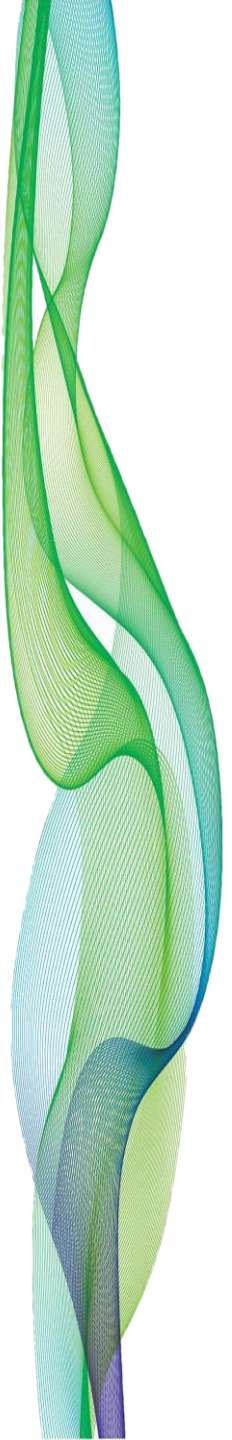
- Some previous “fast” historical transitions (country- and industry-specific, seen in end-use technologies).
- Problem-driven, managed or incentivised: **policy play a key role.**
- Speed likely to differ across sectors and regions.
- Not just influenced by changes in the energy sector; draws on synergistic advances (e.g. blockchain, computing, materials science etc.).

Difficult to draw firm conclusions about the speed of the current energy transition.





How should Arab oil exporters adapt to the current energy transition the speed of which is highly uncertain?





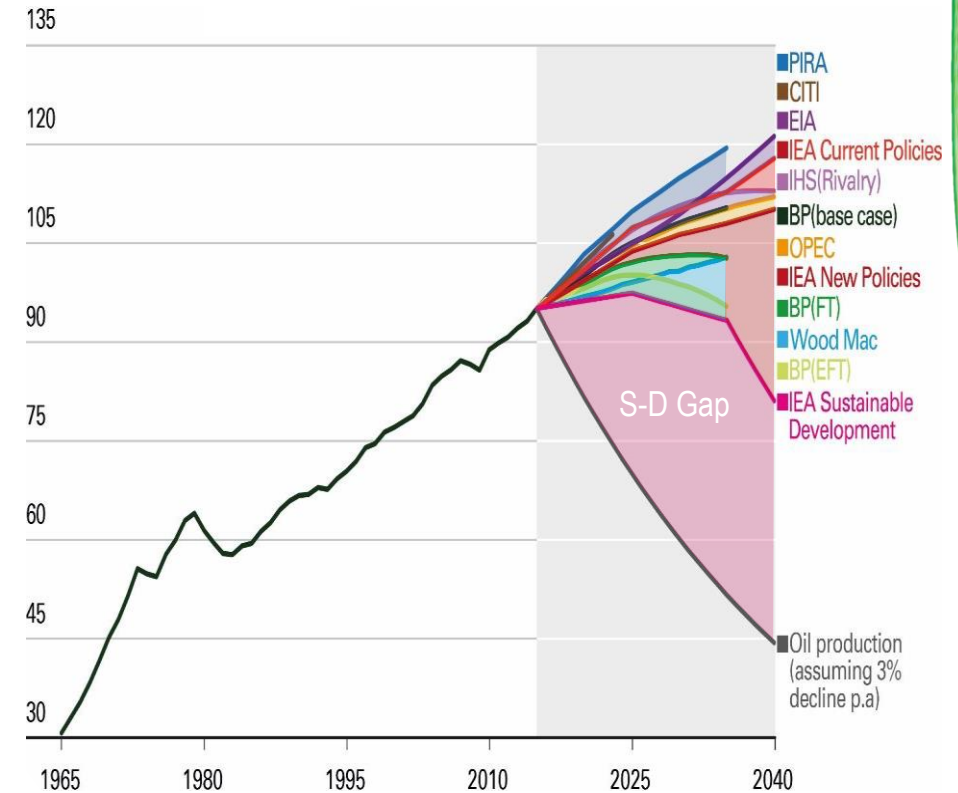
Investment in the oil sector needed

Consolidation of three key trends

1. Global oil liquids demand is unlikely to increase strongly over the next few decades.
2. Large investments will still be needed in the oil sectors of the Arab world to fill the gap in supply.
3. Renewables are at an inflection point and there is virtual consensus among forecasts that the share of renewables in the energy mix will rise.

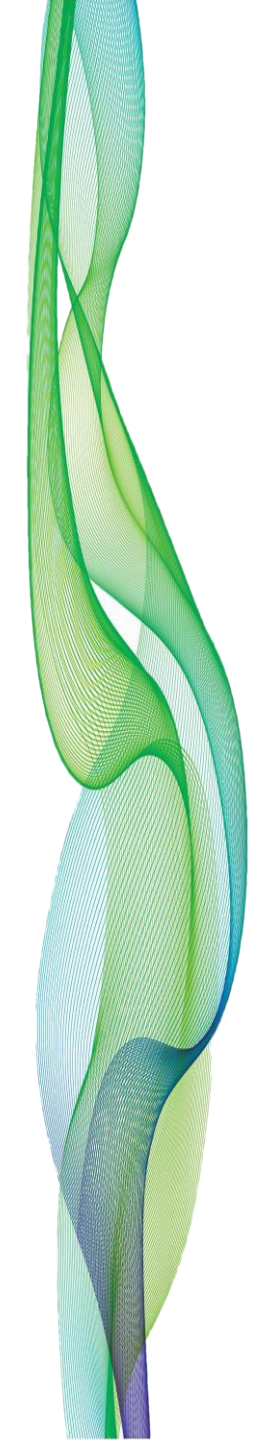
The Arab oil exporters must feed these trends into their strategic thinking and economic diversification agendas; but how?

Global supply-demand prospects under no upstream investments scenario, 1965 – 2040E





The strategic role of the energy sector in the transition





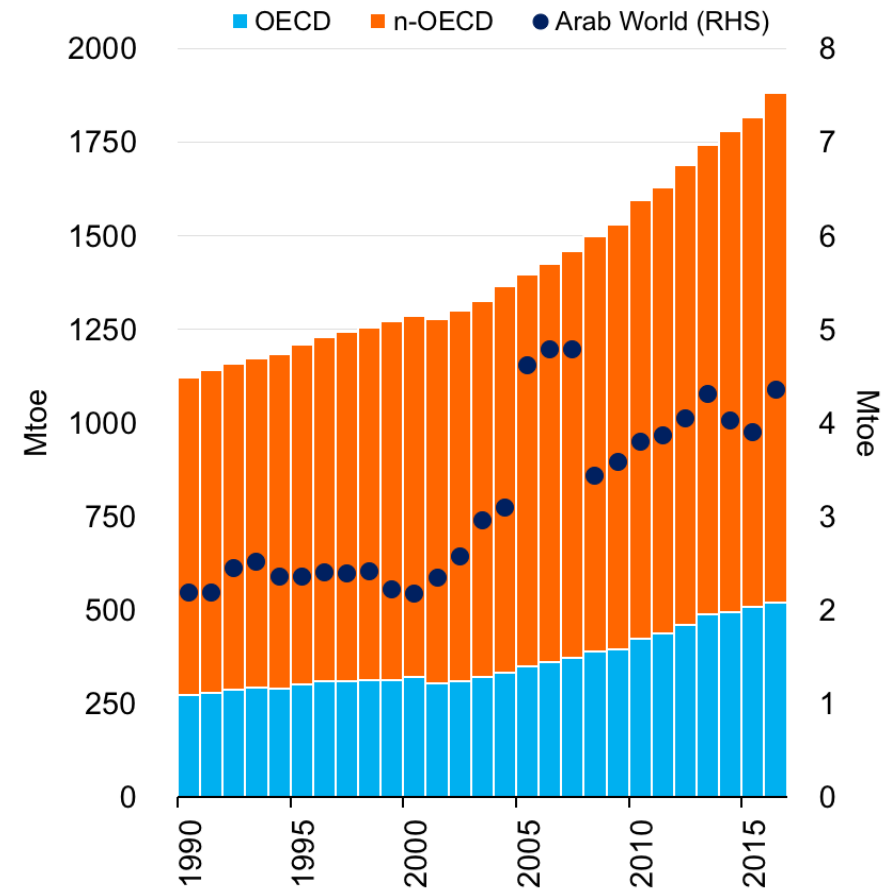
Energy sector to play a more active role in the diversification process

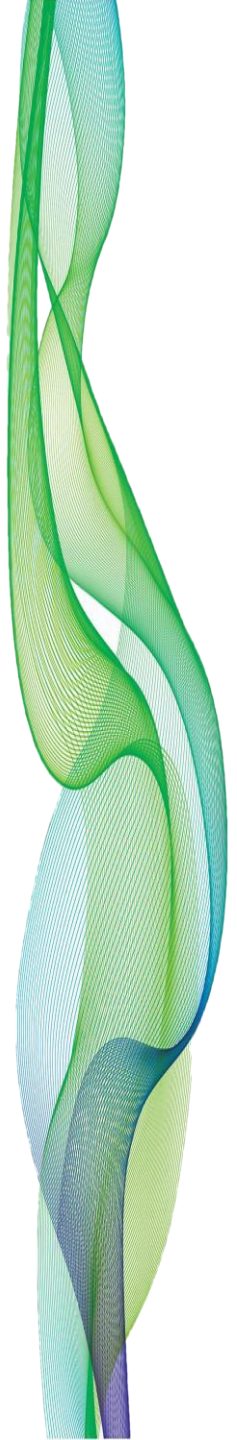
Integration, optimization, adaptation

1. The oil sector will continue to dominate the Arab oil-exporting economies but it needs to play a much more active role in the diversification process.
2. Governments should pursue measures to optimise the resource base, especially in a carbon-constrained world.
3. The Arab countries should not miss out on the renewable 'revolution' and renewable energy should complement the economic diversification strategies.

In the long-term, diversification of the Arab oil-exporting economies, which requires deep structural reforms, remains the main adaptation strategy that these countries need to pursue.

Total primary energy supply by total of renewable energy sources, 1990 – 2016



 | Oil policy matters



Maximizing revenue during the transition

Oil policy and monetization strategies will remain key

● Is it rational for Arab producers/exporters to monetise reserves as quickly as possible and squeeze out high-cost producers to gain market share?

➔ If all low-cost producers adopt this strategy in the face of slowing demand growth it could lead to a massive fall in oil prices and revenues, derailing social and economic stability and the diversification agenda.

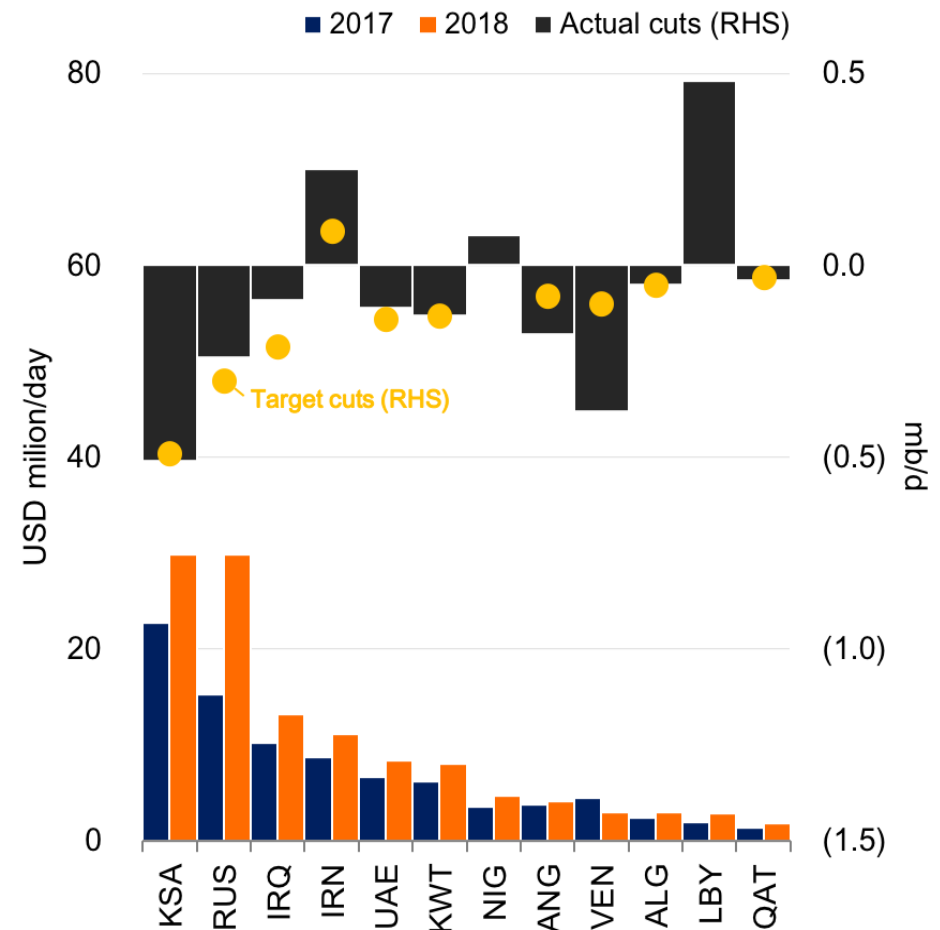
● Heavy reliance on oil revenues places a constraint on how fast Arab oil exporters can shift to a more competitive world where prices converge to marginal cost of production.

● Cooperation has to take a different shape to the past.

➔ Producers should not only be concerned with low oil prices, but also be proactive when prices are too high, as high oil prices include strong supply and demand responses.

As long as the Arab oil-exporting economies are not diversified, the alternative of non-cooperation is not sustainable.

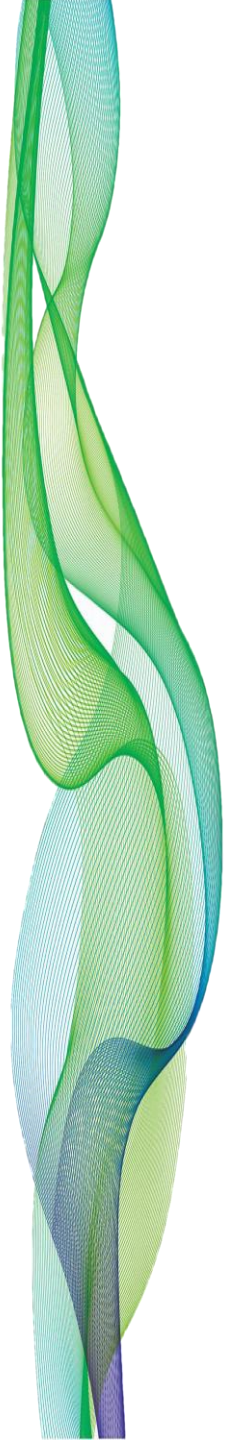
Direct impact of the Declaration of Cooperation on gross oil revenues, y/y change





Conclusion:

The co-dependence between economic diversification and the global energy transition



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Oxford Institute for Energy Studies

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