GCC fiscal sustainability in light of accelerating Structural shift in the global energy industry

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الاستدامة المالية لدول مجلس التعاون في ضوء التحول الهيكلي في صناعة الطاقة العالمية

الدكتور عبـاس المجرن
جـامعة الكـويت

مؤتمر التنويع الاقتصادي في الخليج
بين الواقع والمأمول
صلالة
30 – 31 أغسطس 2022

The big transform is definitely approaching, but at what speed?

- The conference comes after $2\frac{1}{2}$ abnormal years of Covid-19 and 6 months after the Russian war on Ukraine, which makes it hard to compare recent data to older ones.
- There were not much of clear cut between real and nominal data in some of the papers presented.
- The Gulf region plays a vital role in the global energy system (abundant reserves of fossil fuels, and intermediate position between Europe & Asia, the two main importing regions of oil & gas).
- Tougher policies to combat **climate change** including carbon charges through stimulus packages and regulations lead to lower demand on fossil fuel. However, there is a discrepancy in the degree of adherence to international treaties aimed at reducing greenhouse gas emissions.

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- Part of the disparity is resulted from the **influence of energy industry**. Their countries are becoming less keen on regulating greenhouse gas emissions. This is evident in the impact on the growth of the electric car industry, as the US lags China and Europe in terms of stimulus policies related to the production and marketing of electric cars, and even the spread of charging stations.
- Adding the developing nations make the speed and limit of shift towards cleaner energy sources uncertain.

The big transform is definitely approaching, but at what speed?

- Increasingly, customers do not need to visit points of sale in person. Most businesses are mechanizing and digitizing their services. Soon, many **business building, offices, stores and branches** will become part of the past century.
- Consumers are shopping more and more through their **mobiles**. Such shift in the supply and demand sides will significantly increase the need for warehouses, transport services, commercial freight, insurance, unloading and general logistics services.
- Thus, demand for gasoline goes down while demand for jet fuel and heavy fuel increases. **For transport**, biofuels and electric engines are expanding, and for **power generation** and industry, demand for natural gas (and its unconventional sources) is mounting. Demand for gas is expected to grow by 20% by 2030, compared to less than 9% for oil.

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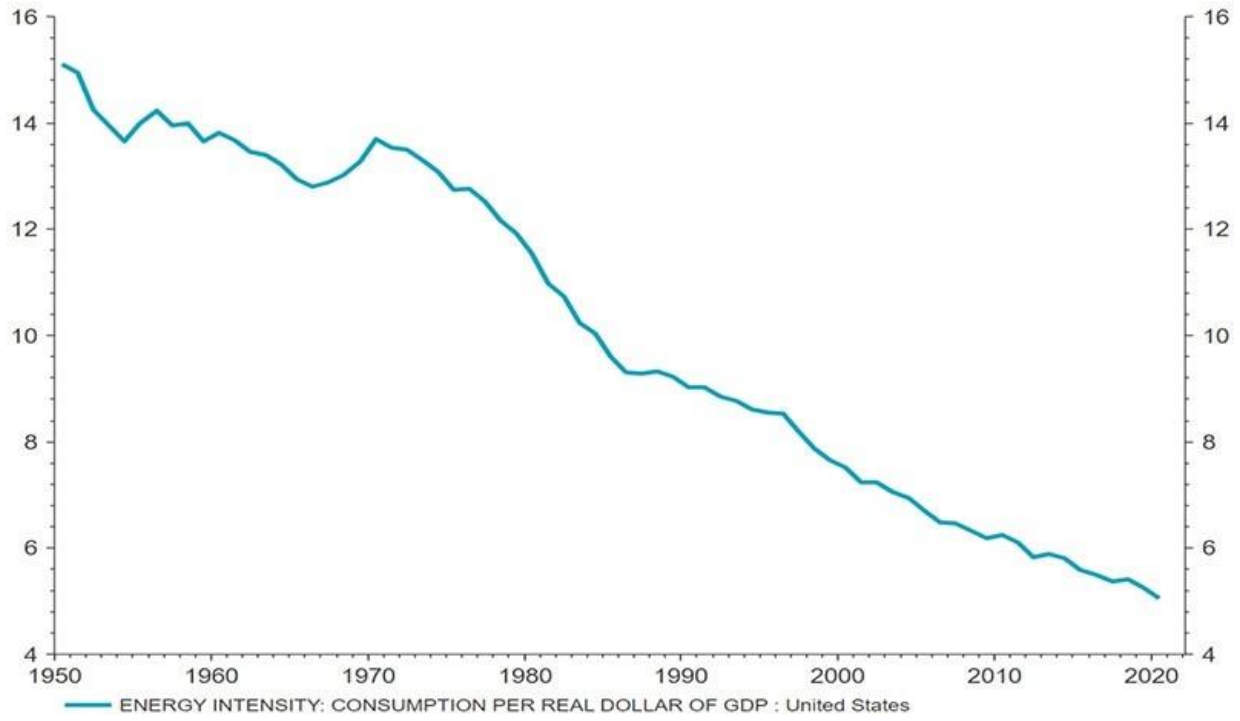
- Sustaining the growing **Metaverse** requires enormous extra energy production**.** In December 2021, Intel estimated that our global computing infrastructure needs to be 1,000 times more powerful to sustain the Metaverse (Blockchain).
- Although the steady decrease in **energy intensity** per unit of output during the past 5 decades, especially in rich economies has slowed in the past few years, it is on the verge of unprecedented growth due to development in the energy consumption control technologies.



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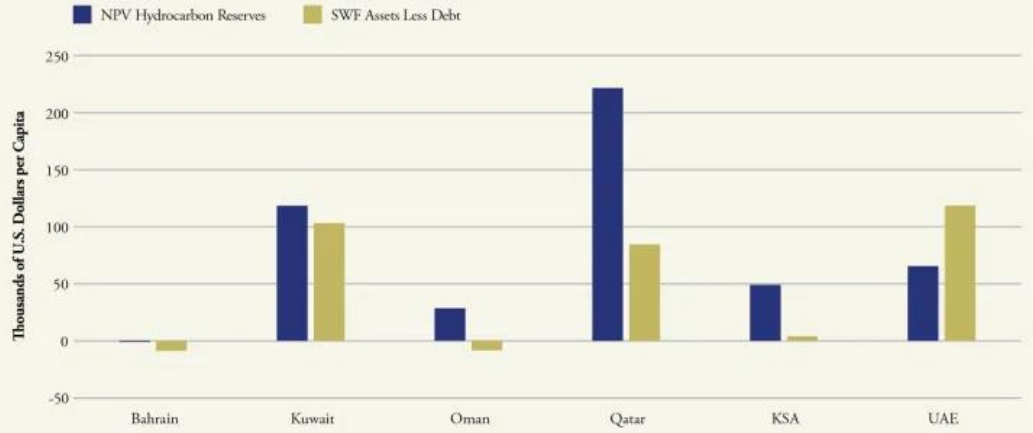
- The most important renewable energy sources (sun, wind, and water currents) **lack stability and continuity**. The development of battery technology and the expansion of its ability to store energy provides an ideal solution to this problem. By 2030, it is expected that the cost of batteries will decrease by about 50% and their capacities will improve, and this will lead to a jump in the share of renewable energies on the energy mix map.
- These are some examples that show that GCC on the cusp of unprecedented transformations in the global energy industry. This makes it imperative for the GCC, the main player in this field, and the owner of half of the world's conventional hydrocarbon reserves, to play all possible cards so as not to pin their fate on their unstable fiscal unknown, and on their public finances, which are characterized by **imbalance and high risks**.

GCC sources of instability

Figure 1: Monthly Average Brent Crude Prices

Source: Calculated by the authors based on World Bank Commodity Price Data (The Pink Sheet), "Monthly Brent Prices in Nominal US dollars, 1979 to Present," accessed January 14, 2021, https://bit.ly/3il5p2i; "Short-Term Energy Outlook: Real Prices Viewer," U.S. Energy Information Administration (EIA), accessed November 14, 2020, www.eia.gov/outlooks/steo/realprices/.

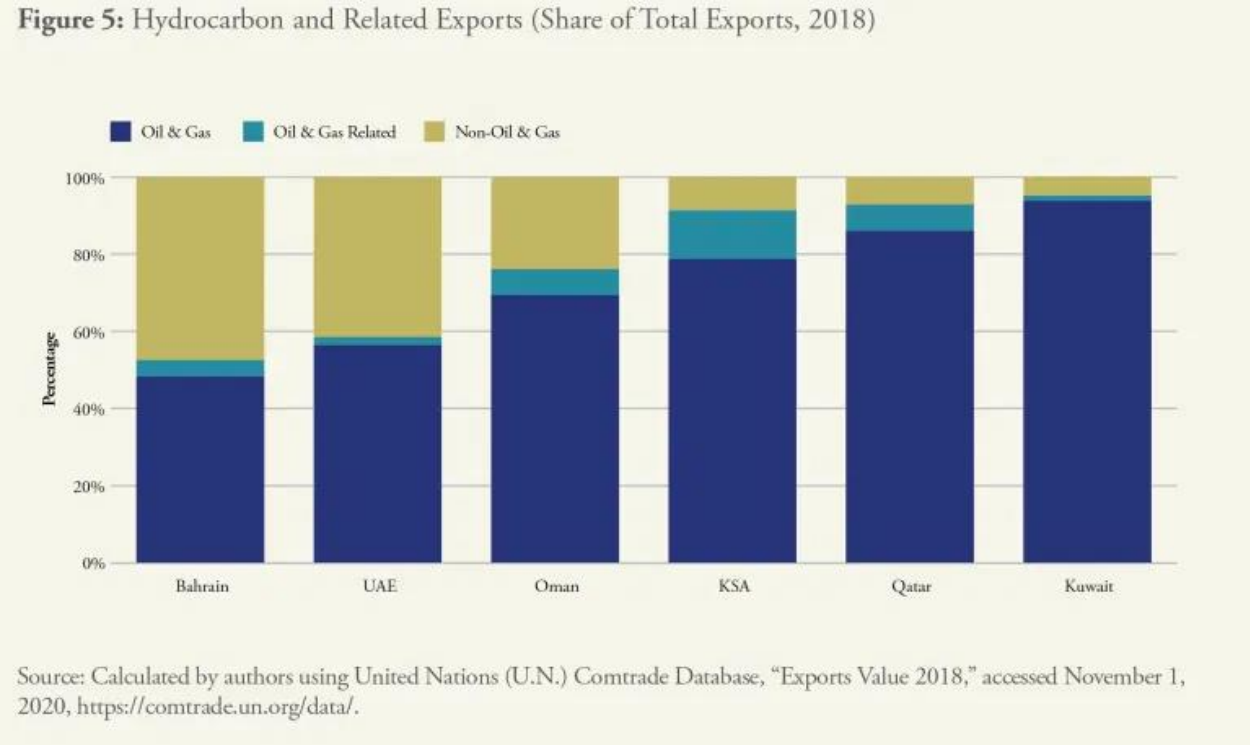
Figure 2: Per-Capita Net Present Value (NPV) of Hydrocarbon Reserves and Net Sovereign Wealth (SWF Assets Less Debt) (2019)



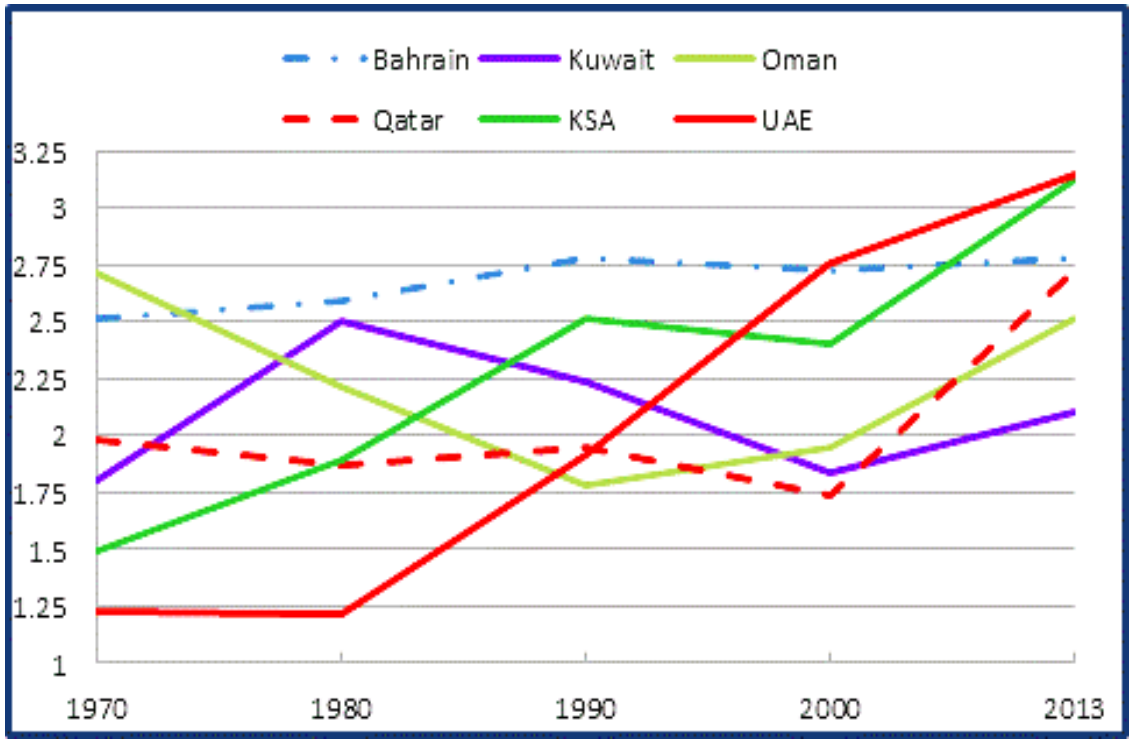
Source: Authors' calculations using British Petroleum (BP), "Statistical Review of World Energy 2020, 69th Edition," June 2020, 14–19, 32, 42, https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf; World Bank Group, "Economic Diversification for a Sustainable and Resilient GCC," Gulf Economic Update Issue 5, December 2019, 24, http://documents1.worldbank.org/curated/en/886531574883246643/pdf/Economic-Diversification-for-a-Sustainable-and-Resilient-GCC.pdf; "List of 25 Sovereign Wealth Fund Profiles in Middle East," Sovereign Wealth Fund Institute, accessed October 15, 2020, https://www.swfinstitute.org/profiles/sovereign-wealth-fund/middle-east; Gulf Labour Markets, Migration, and Population (GLMM) Programme Demographic and Economic Database, "GCC: Total population and percentage of nationals and non-nationals in GCC countries (national statistics, 2017–2018) (with numbers)," accessed October 15, 2020, https://gulfmigration.org/gcc-total-population-and-percentage-of-nationals-and-non-nationals-in-gcc-countries-national-statistics-2017-2018-with-numbers/.

Source: Kabbani, Nader and Nejla Ben Mimoune, January 31, 2021. Brookings.edu

GCC sources of instability



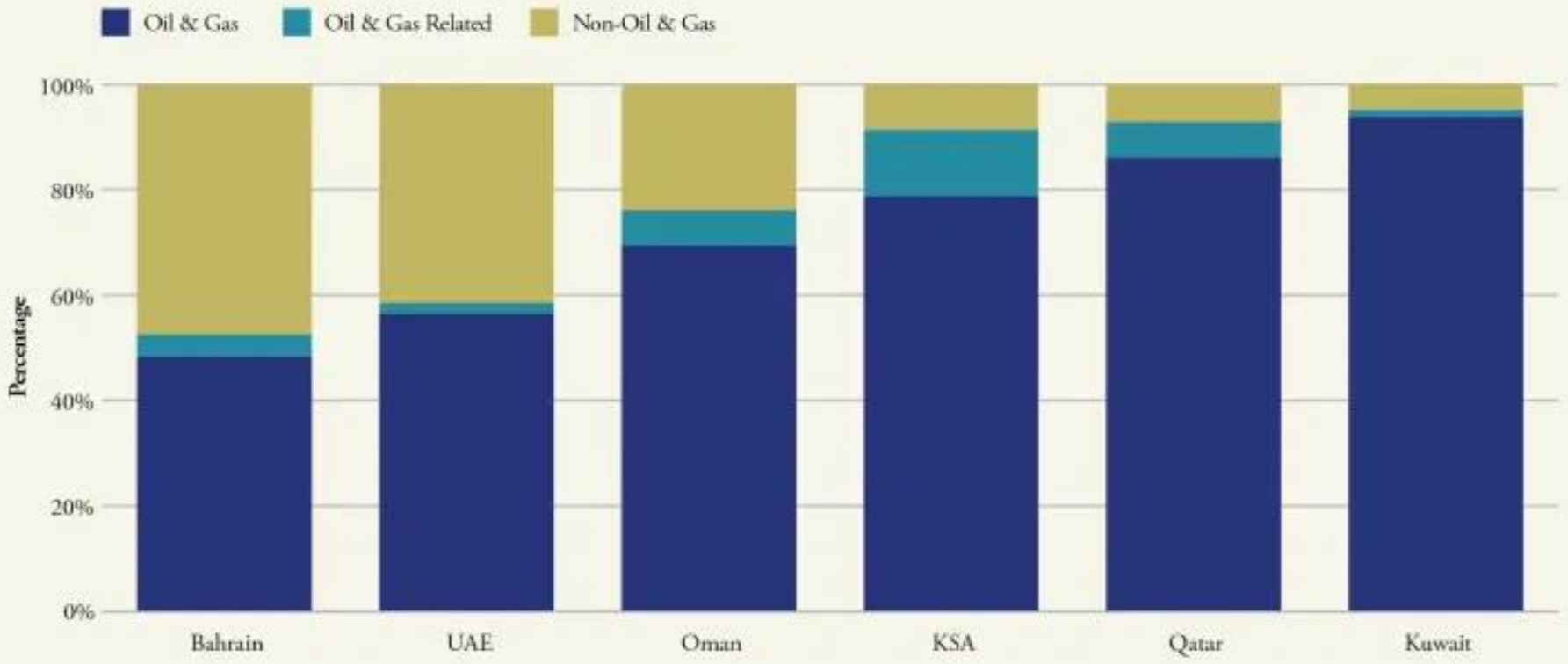
Source: Kabbani, Nader and Nejla Ben Mimoune, January 31, 2021. Brookings.edu



Source: Author's calculation, Gulf Development Forum, 2015

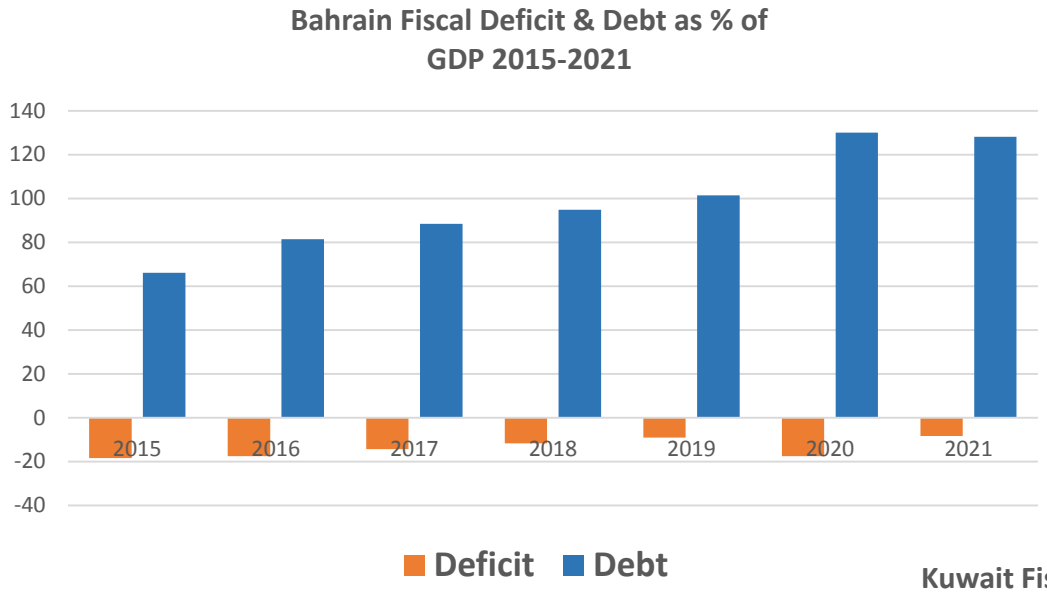
GCC sources of instability

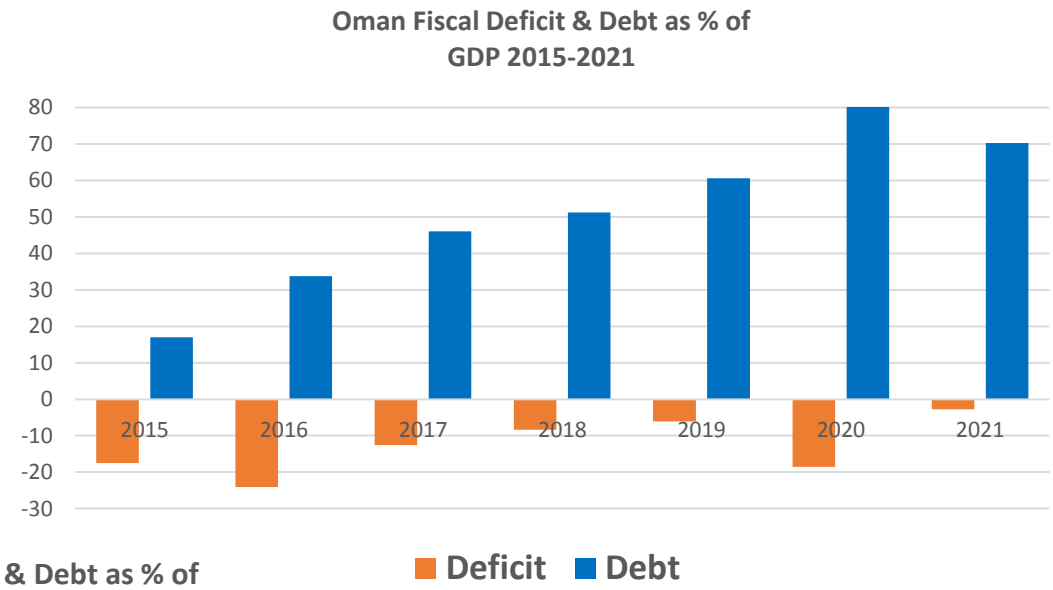
Figure 5: Hydrocarbon and Related Exports (Share of Total Exports, 2018)

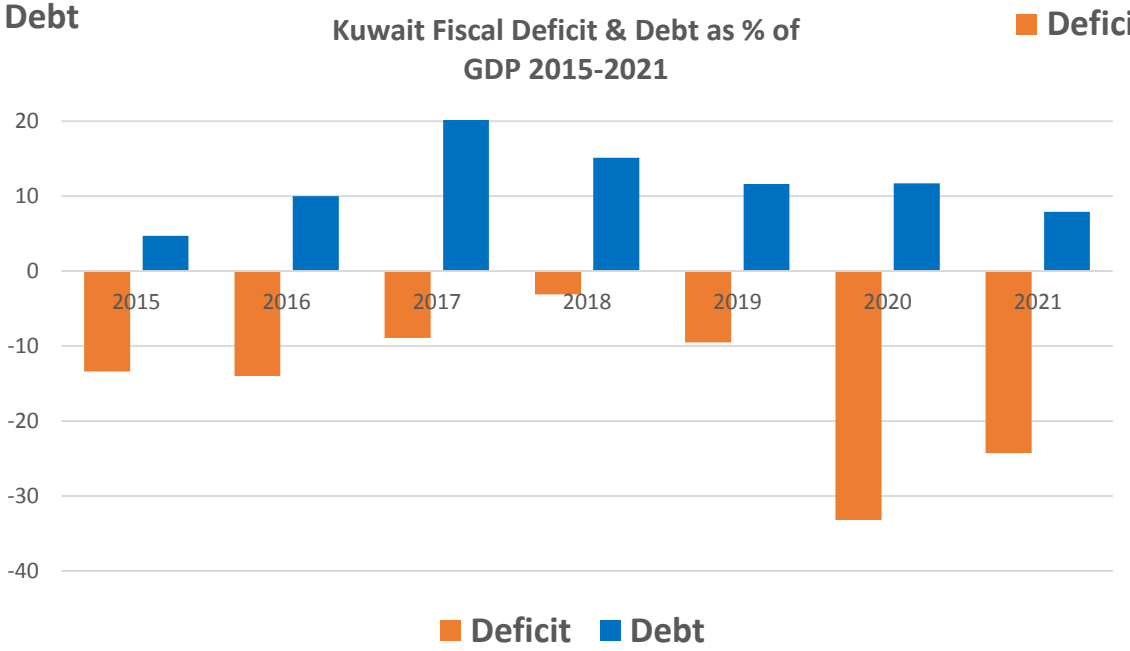


Source: Calculated by authors using United Nations (U.N.) Comtrade Database, "Exports Value 2018," accessed November 1, 2020, https://comtrade.un.org/data/.

GCC fiscal deficits & debts to GDP by country 2015-2021







Source: Author's calculation based on Gulf Investment Corporation (GIC) 2021

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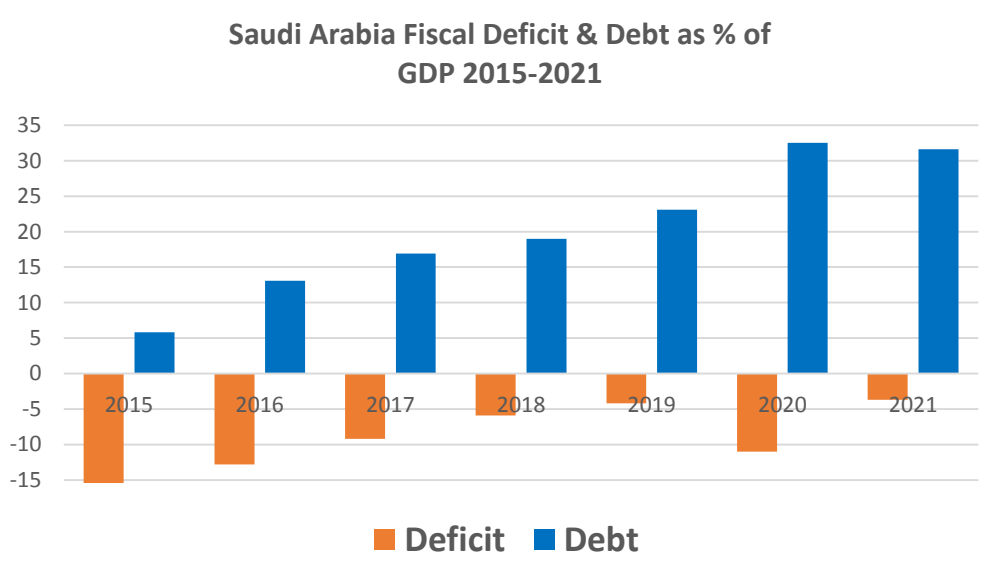
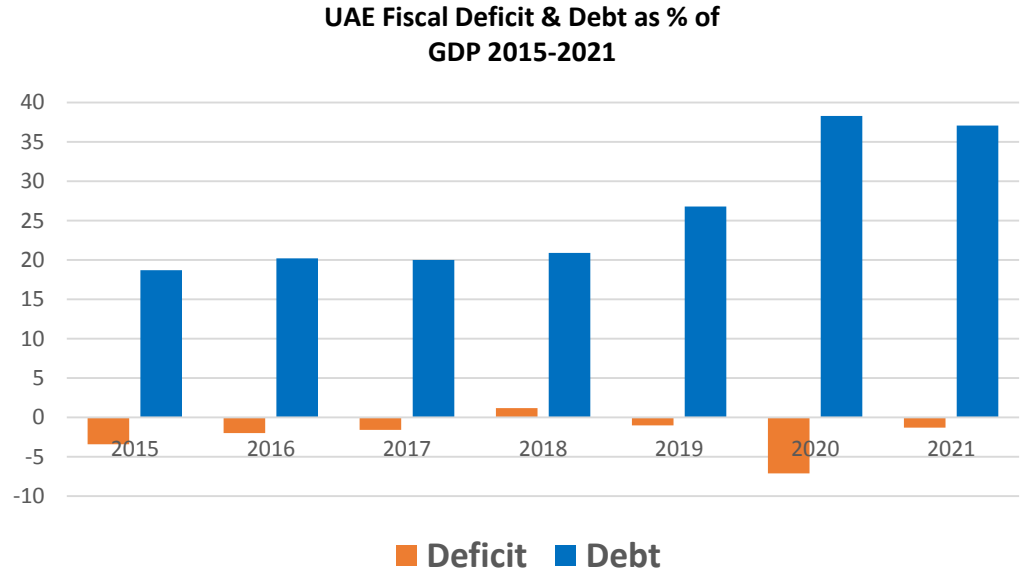
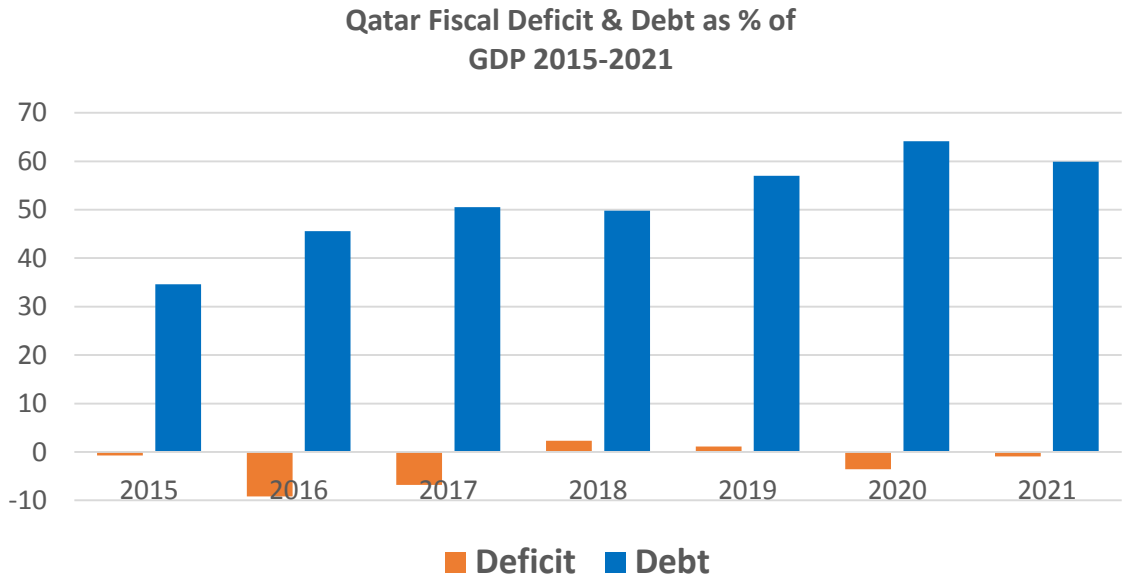
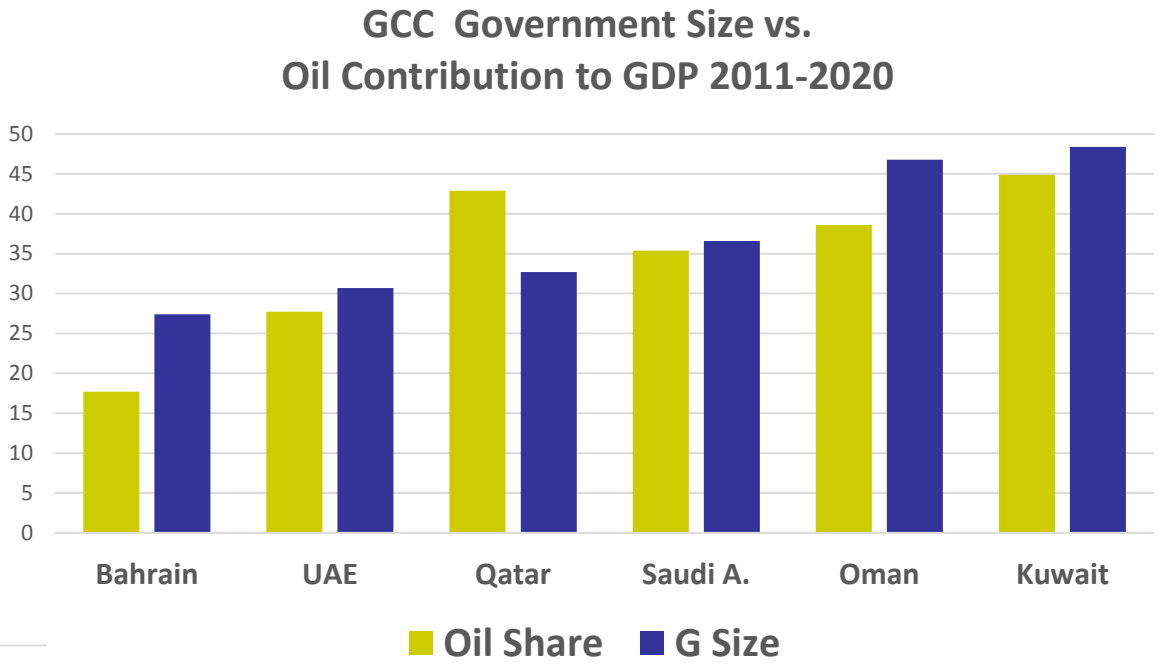
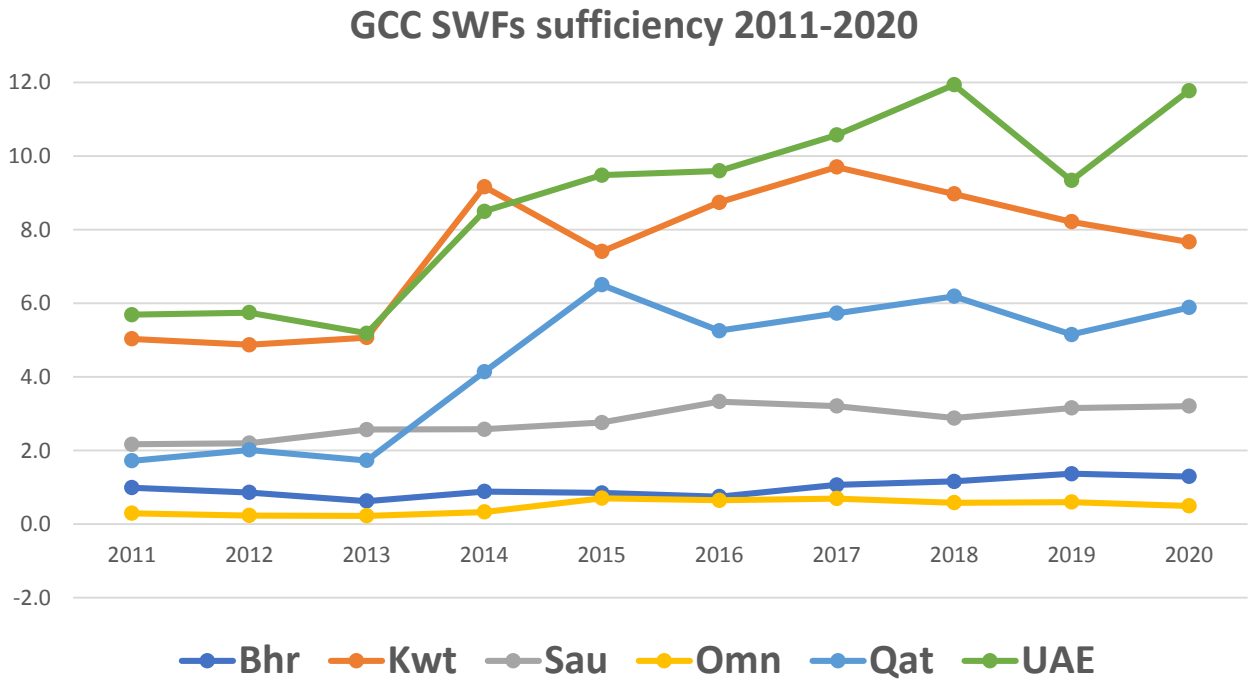






Government size is positively related to oil contribution to GDP 2011-2020





GCC SWFs sufficiency to government expenditures by time 2011-2020

GCC Cards

- **Diversification**
- **Oil-based diversification**
- **Renewable-based export**
- **Clean Crude R&D: Carbon capture, blue hydrogen**
- **Control methane leaks (EU emerging technology)**
- **Digitalization of the oil and gas fields (cloud technologies and big data)**


Thank you