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UNITED ARAB EMIRATES

SELECTED ISSUES

December 2025

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November 11, 2025

Approved By
Middle East and Central Asia Department

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CONTENTS

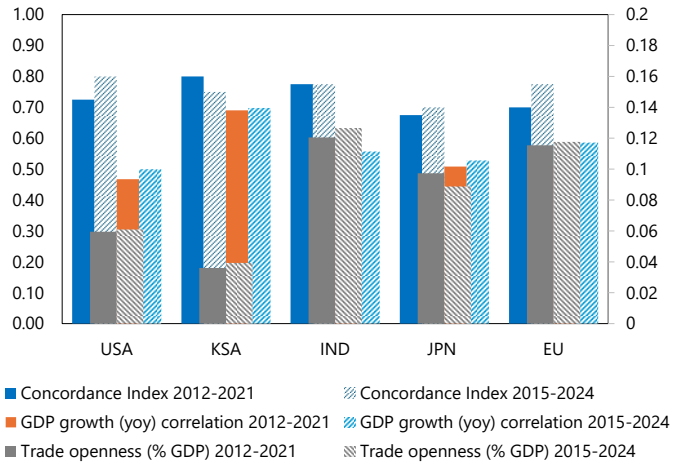
THE UAE ECONOMY: ECONOMIC AND FINANCIAL RESILIENCE[1]

The economy has demonstrated broad resilience to global policy changes, including US dollar and interest rate movements, and volatility surges. The impact of global shocks on the UAE financial markets and capital flows has been smaller than for GCC and EM indices, reflecting strong investors' confidence. The response of credit and GDP to US monetary policy shocks has been relatively weaker in recent years, particularly during interest rate tightening cycles and periods of abundant liquidity. The impact of heightened global and regional uncertainty on tourism and trade has been limited, with resilience further supported by expanding international agreements.

A. Introduction

1. Over the past decade, the UAE's economic activity has become more synchronized with the global business cycle (Text Figure 1). This reflects the country's deepening integration into the global economy through financial, investment, and trade linkages. Concordance indices (the proportion of time that two countries are in the same phase of the business cycle) with main systemic countries increased over time, while the synchronization with regional partners (Kingdom of Saudi Arabia) has declined. GDP growth correlations and the UAE trade openness with main systemic economies also indicate increased synchronization, reflecting the economy's exposure to external demand and global financial conditions.

Text Figure 1. The UAE Business Cycle Convergence
(2012Q1-2024Q4)



Sources: IMF Staff Calculations.

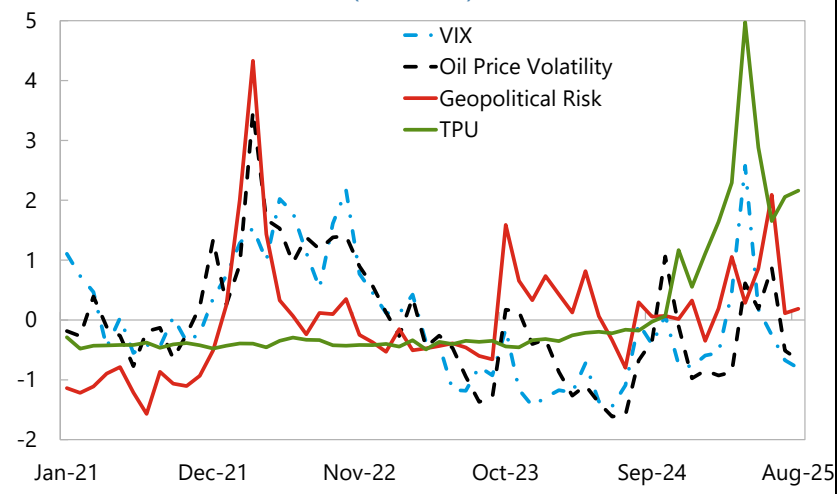
2. The UAE's open economy and strong integration into global markets expose it to a wide range of external shocks. As a major oil exporter, the country remains sensitive to fluctuations in global oil prices through fiscal revenues and external balances. At the same time, the UAE's role as a financial and trade hub makes it vulnerable to shifts in global financial conditions, investor sentiment, and geopolitical developments. Surges in global interest rates and risk premia can affect capital flows, financing, and asset prices, while heightened trade tensions or supply chain

[1] Prepared by Sebastiano Dell'Acqua, Rana Fayez, Koralai Kirabaeva, and Michele Marcaletti.

disruptions could weigh on trade flows, including re-exports. Regional geopolitical risks can further affect financial and tourism flows.

3. In this paper, we examine the impact of global uncertainty and market volatility, as well as changes in oil prices, US dollar index, and movements in US Treasury Yields. We focus on the impact of four measures of uncertainty and volatility: (i) The Trade Policy Uncertainty (TPU) index by Caldara et al. (2020) measures the share of news articles discussing uncertainty about trade policy, and is highly correlated with other uncertainty indices such as the Global Economic Policy Uncertainty and World Uncertainty indices; (ii) The Geopolitical Risk Index (GPR) by Caldara and Iacoviello (2021) provides a measure of adverse geopolitical events based on a tally of newspaper articles covering geopolitical tensions; (iii)The VIX (30-day option-implied volatility of the S&P 500 index) reflects investors' expectations of stock market volatility[2] and is commonly used as a proxy for financial uncertainty and investor risk sentiment; and (iv) The Oil Price Volatility index (OVX) captures uncertainty related to oil prices.[3] While all four indices (TPU, GPR, VIX, and OVX) tend to exhibit some co-movements, there are notable periods of divergence, for example, in the recent months (see Text Figure 2).

Text Figure 2. Measuring Uncertainty: Selected Indicators
(Z-Scores)



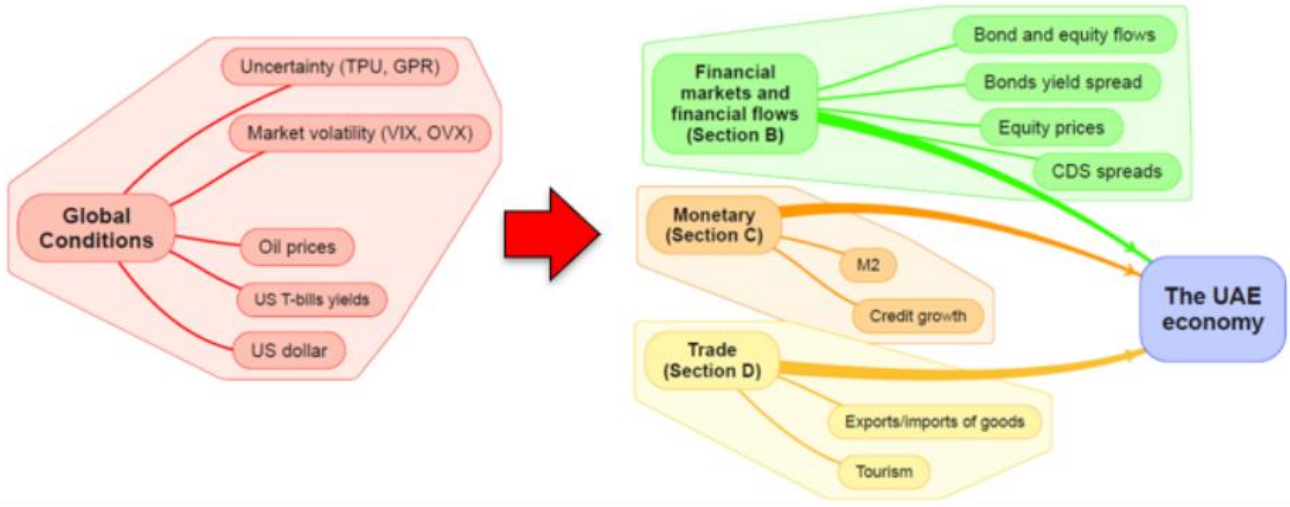
Sources: Caldara Iacoviello (2022), World Uncertainty Index, CBOE.

4. Global shocks could be transmitted to the UAE through multiple channels (Text Figure 3). Financial markets transmit uncertainty and volatility-related shocks rapidly through bond yields, CDS, and stock market returns. Monetary conditions are affected through credit growth and broad money (M2), which respond to shifts in liquidity and capital flows. External demand shocks, meanwhile, are transmitted through trade in goods and services, particularly non-oil exports and tourism, which are generally sensitive to global growth and geopolitical stability. In the paper we discuss how global uncertainty and shocks affect the UAE's financial markets and financial flows (Section B), monetary policy transmission (Section C), and external trade linkages (Section D).

[2] Another bond-market based measure of investor sentiment is the Excess Bond Premium by Gilchrist and Zakrajšek (2012).

[3] Another oil price volatility index is the Oil Price Uncertainty Index (OPU) which is highly correlated with OVX, but is not available with daily frequency.

Text Figure 3. Exposure to Global Shocks



B. Financial Resilience to Global Shocks

5. The UAE financial markets and financial flows have demonstrated resilience to global shocks, with some selected shock-specific sensitivities. Empirical analyses using the local-projection method[4], presented in accompanying charts, quantify the impact from a one-standard deviation shock increase across various indicators. Estimates for financial variables, based on daily data from January 2021 to July 2025, reflect immediate cumulative impacts over five days.

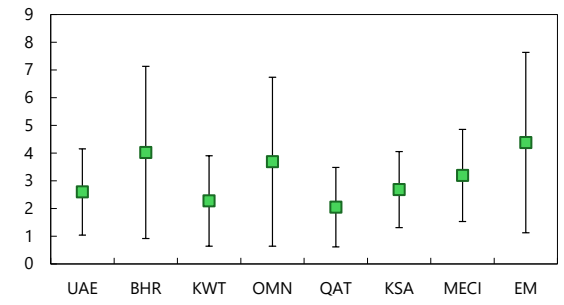
6. Uncertainty-related shocks have statistically significant but moderate effects on bond and equity markets, primarily through global financial volatility. The VIX has dominant effects on financial markets compared to other shocks. The UAE's financial markets generally outperform EM benchmarks across most shocks and instruments. They are most sensitive to the VIX and USD movements, with some sensitivity to changes in US 10-year yields, oil prices, and oil price volatility (OVX). Stock market returns show statistically significant responses to oil prices, USD movements, and volatility indices (VIX and OVX). CDS spreads show higher sensitivity to VIX and OVX, compared to EMs.

- Sovereign yield spreads are most sensitive to changes in the U.S. interest rates, VIX, and OVX, although the UAE shows greater resilience compared to the composite indices for EMs and for the Middle East (Text Figure 4a). The TPU shows selective significance for some other GCC countries, with modest effects, while GPR shocks are not statistically significant. The USD movements have statistically significant effects for EMs but not for the UAE yield spreads.

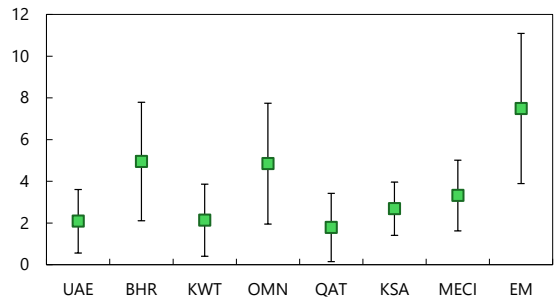
[4] See Jordà (2005). Estimation and inference of impulse responses by local projections. American Economic Review.

Text Figure 4a. Bond Yield Spreads

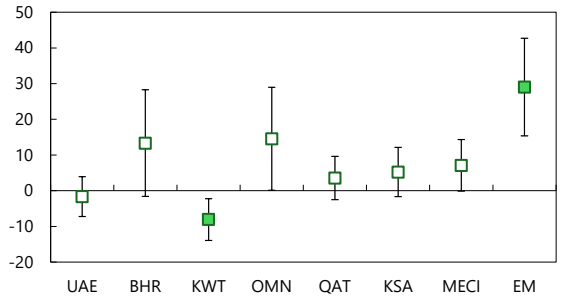
Oil Price Volatility
(Basis Points)



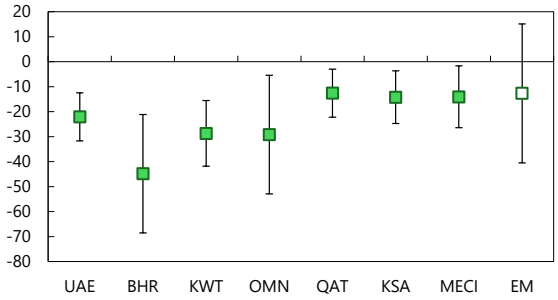
Financial Uncertainty Index (VIX)
(Basis Points)



Dollar Index
(Basis Points)



US 10Y
(Basis Points)

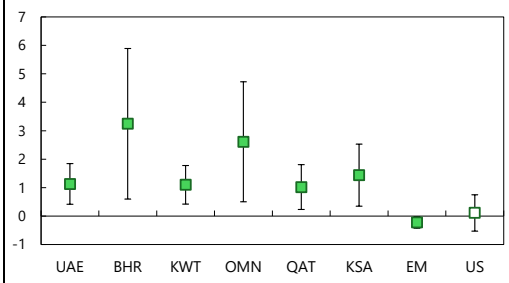


Source: Bloomberg, IMF Staff Calculations.

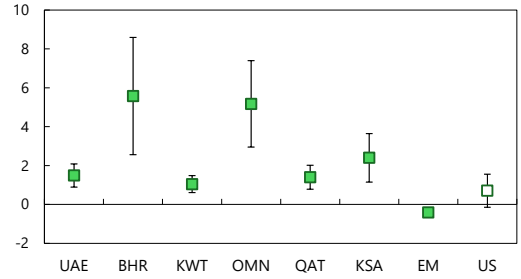
- CDS spreads rise in response to changes in the VIX, OVX and the USD movements, with stronger reactions compared to the EM composite (Text Figure 4b). Differences in reactions between CDS and sovereign yield spreads to the same shocks can be explained by structural differences between the two markets, including market liquidity and investor base composition, in addition to movements in U.S. Treasury yields. Generally, the higher sensitivity of sovereign yield spreads versus CDS is in line with the empirical literature on excessive sovereign bond premia. The TPU and GPR shock do not have statistically significant effects for the UAE and most GCC countries.

Text Figure 4b. CDS Spreads

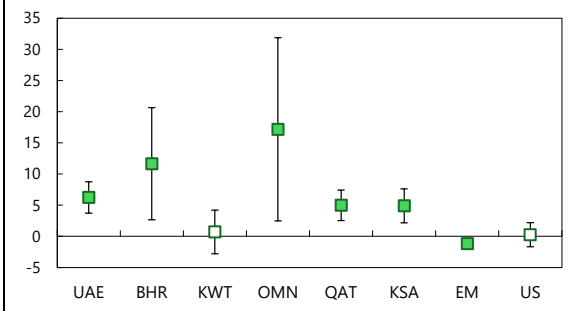
Oil Price Volatility
(Basis Points)



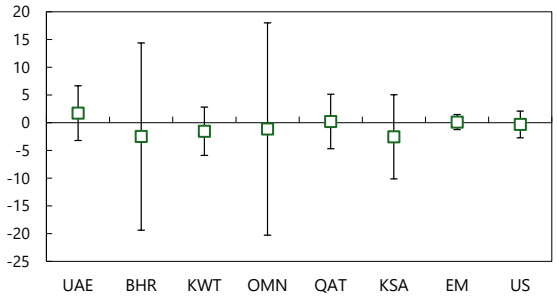
Financial Uncertainty (VIX)
(Basis Points)



Dollar Index
(Basis Points)



US 10Y
(Basis Points)

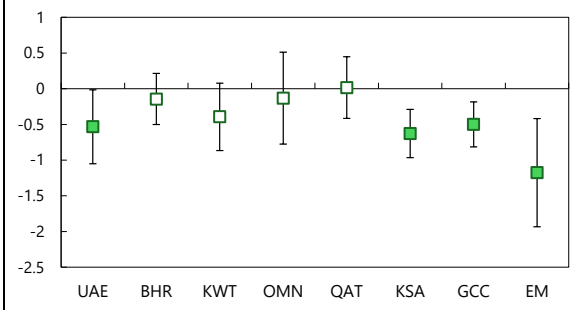


Sources: Bloomberg, Haver Analytics, IMF Staff Calculations.

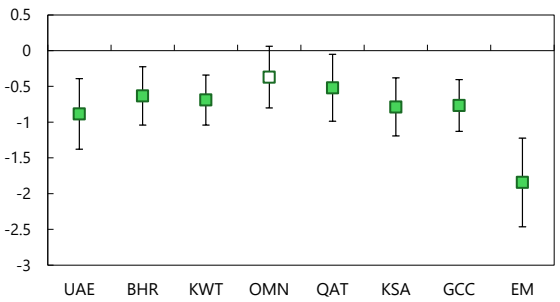
- Stock markets also show statistically significant sensitivity to the VIX, OVX, and the USD changes, although less than the EM composite (see Text Figure 4c). The impact from changes in oil prices is also significant, while the effects of TPU and GPR are not significant.

Text Figure 4c. Stock Market Performance

Oil Price Volatility
(Percentage Points)

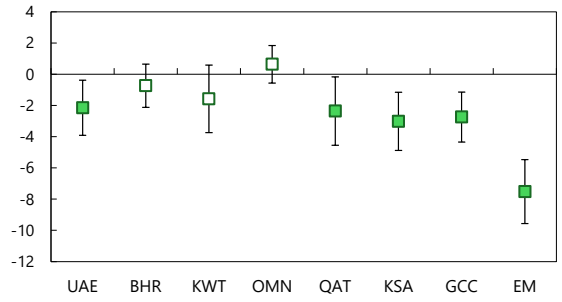


Financial Uncertainty (VIX)
(Percentage Points)

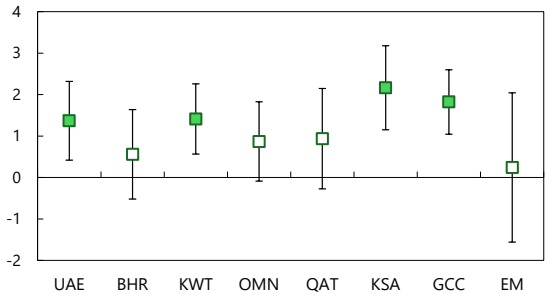


Text Figure 4c. Stock Market Performance (concluded)

Dollar Index
(Percentage Points)



Oil Price
(Percentage Points)

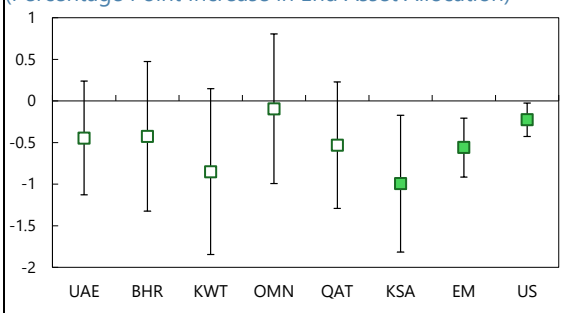


Sources: Haver Analytics, IMF Staff Calculations.

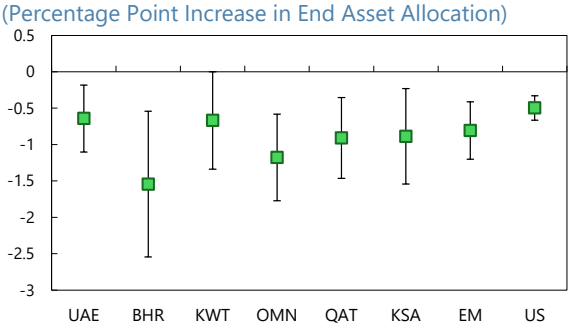
7. Portfolio investment flows in the UAE are also influenced by global shocks, though their responses vary in magnitude and timing. Portfolio flows are significantly affected by VIX and USD movements (Text Figure 5a). Bond flows additionally respond to shifts in US Treasury yields, while equity flows are more sensitive to oil price volatility (Text Figure 5b).

Text Figure 5a. Bond Flows

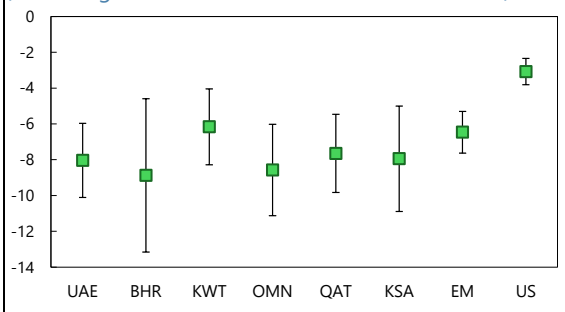
Oil Price Volatility
(Percentage Point Increase in End Asset Allocation)



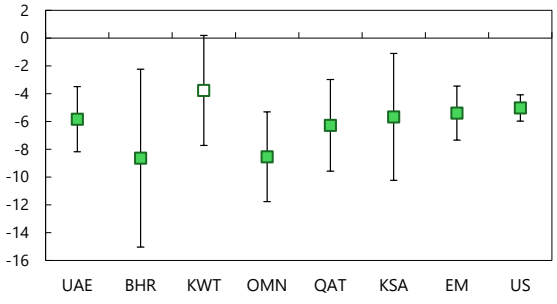
Financial Uncertainty (VIX)
(Percentage Point Increase in End Asset Allocation)



Dollar Index
(Percentage Point Increase in End Asset Allocation)



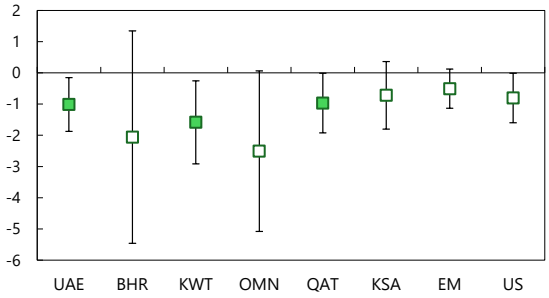
US10Y
(Percentage Point Increase in End Asset Allocation)



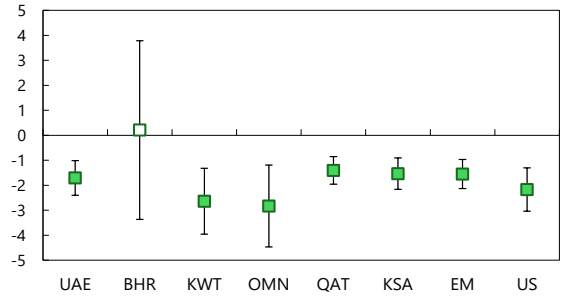
Note: Filled Boxes Indicate Statistical Significance, Whiskers Indicate the 95% Confidence interval.
Sources: Haver Analytics, IMF Staff Calculations.

Text Figure 5b. Equity Flows

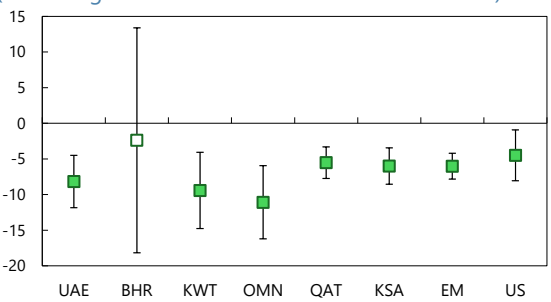
Oil Price Volatility
(Percentage Point Increase in End Asset Allocation)



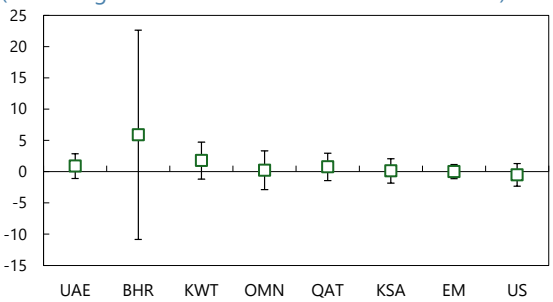
Financial Uncertainty (VIX)
(Percentage Point Increase in End Asset Allocation)



Dollar Index
(Percentage Point Increase in End Asset Allocation)



Oil Price
(Percentage Point Increase in End Asset Allocation)

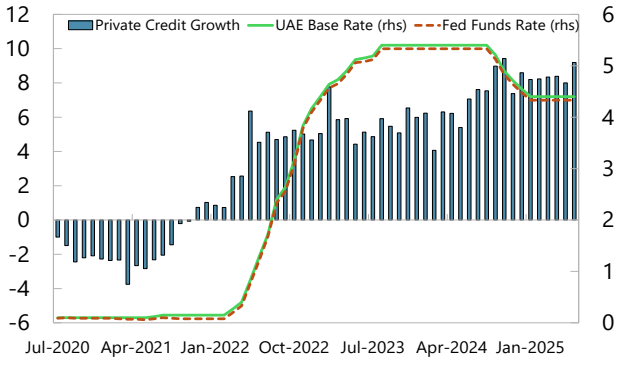


Note: Filled Boxes Indicate Statistical Significance, Whiskers Indicate the 95% Confidence interval.
Sources: Haver Analytics, IMF Staff Calculations.

C. The US Interest Rate Transmission to the UAE Economy

8. Adjustments in US interest rates can have an impact on domestic economic conditions in the UAE, although the pass-through has been limited in recent years. In March 2022, the Federal Reserve started a series of interest rate hikes, which ended in August 2023. In the same period, the policy rate in the UAE (aligned with that of the Federal Reserve) increased from 0.15 percent to 5.40 percent, with the interbank rate following a similar pattern. Policy rates then stabilized until August 2024, before declining to 4.33 in January 2025. During these periods, non-hydrocarbon growth was robust,

Text Figure 6. Credit Growth and Interest Rates



Sources: Haver Analytics.

and private credit showed consistent growth, with the pace accelerating after the Federal Reserve began reducing interest rates in 2024 (Text Figure 6). Several factors, including a dynamic domestic economic environment, sustained capital inflows, and large available liquidity, may have contributed to these outcomes despite a cycle of interest rate increases.

9. The Monetary Policy Department of the CBUAE completed a comprehensive analysis which shows limited monetary transmission. It found that, although higher policy rates are generally expected to dampen credit growth, in the UAE lending appears relatively insensitive to changes in policy rates. Similarly, the sensitivity of the deposit base to policy rate changes appears limited. The CBUAE also performed an analysis of the deposit rates and interbank rates, finding that the pass-through is effective in the case of market rates, interbank rates, and time deposit rates. Conversely, limited pass-through is observed for current accounts, savings accounts, and longer-term M-Bill yields.

10. We complement the analysis by studying the impact of US monetary policy shocks on UAE private credit and non-hydrocarbon output over different periods of time. We estimate an instrumental variable structural VAR (IV-SVAR) with Bayesian methods.[5] The VAR is estimated at the monthly frequency with 6 lags, and includes 7 variables: real private credit, real non-hydrocarbon GDP[6], inflation, oil price, US industrial production, US inflation, and 1-year EIBOR. To ensure that the estimated impulse responses are generated by truly exogenous shocks, we instrument the 1-year EIBOR with exogenous US monetary policy shocks obtained by high-frequency data.[7]

11. We perform three different estimations to assess the impact of monetary policy over different periods. The *baseline* sample starts in January 2015 and ends in September 2024[8], the *FED Hiking Cycle* sample covers periods in which the US Federal Reserve has been increasing interest rates[9], and the *Pre 2019* sample excludes the COVID recovery and the current period of large excess liquidity.

12. Private credit demonstrates a low and statistically insignificant sensitivity to US monetary policy shocks, whereas non-hydrocarbon GDP exhibits a more pronounced response (Text Figure 7). Private credit declines by 2.2 percent three months after a 100 basis points monetary policy shock in the baseline sample. The response in the *Pre 2019* sample is somewhat greater in magnitude, whereas the reaction during periods of interest rate hikes remains near zero, which aligns with the findings reported by the CBUAE. Six months after the shock, the

[5] See Miranda-Agrippino and Ricco (2016). The Transmission of Monetary Policy Shocks. AEJ: Macroeconomics

[6] Interpolation from quarterly to monthly frequency is obtained by Chow-Lin interpolation using PMI as high-frequency series.

[7] The shocks are corrected for the information component of monetary policy announcements. See Ugazio, G., & Xin, W. (2024). US Monetary Policy Spillovers to Middle East and Central Asia: Shocks, Fundamentals, and Propagations. International Monetary Fund.

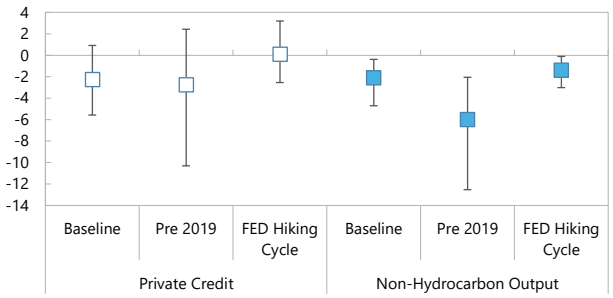
[8] We exclude March, April, and May 2020 to control for the large COVID outliers.

[9] From December 2015 to February 2019, and from April 2022 to August 2024.

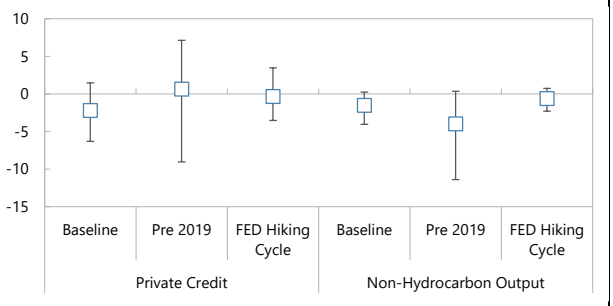
magnitude in the *baseline* sample is stable, while the response in the other samples is virtually zero. However, all the responses of private credit are not statistically significant, suggesting that interest rates do not represent one of the main credit drivers in the UAE. The impact of monetary shocks on non-hydrocarbon GDP is statistically significant in the three samples after three months. Output declines by 2.1 percent in the *baseline* sample, by 6 percent in the *Pre 2019* sample, and by 1.4 percent in the *FED Hiking* sample. The lower sensitivity during periods of interest rate increases is consistent with the dynamics in private credit, while the larger drop in output in the *Pre 2019* sample could suggest that in the last years the UAE became better insulated from external shocks. The responses after six months are all not significant.

Text Figure 7. Impact of 100 Basis Points Monetary Policy Shock

Percentage Deviation After 100 Basis Points 1-year EIBOR Shock
(3 months)



Percentage Deviation After 100 Basis Points 1 – year EIBOR shock
(6 months)



Sources: IMF staff calculations. The shock is normalized to a 100 basis points increase in the 1-year EIBOR rate. Bands represent 90 percent posterior coverage bands.

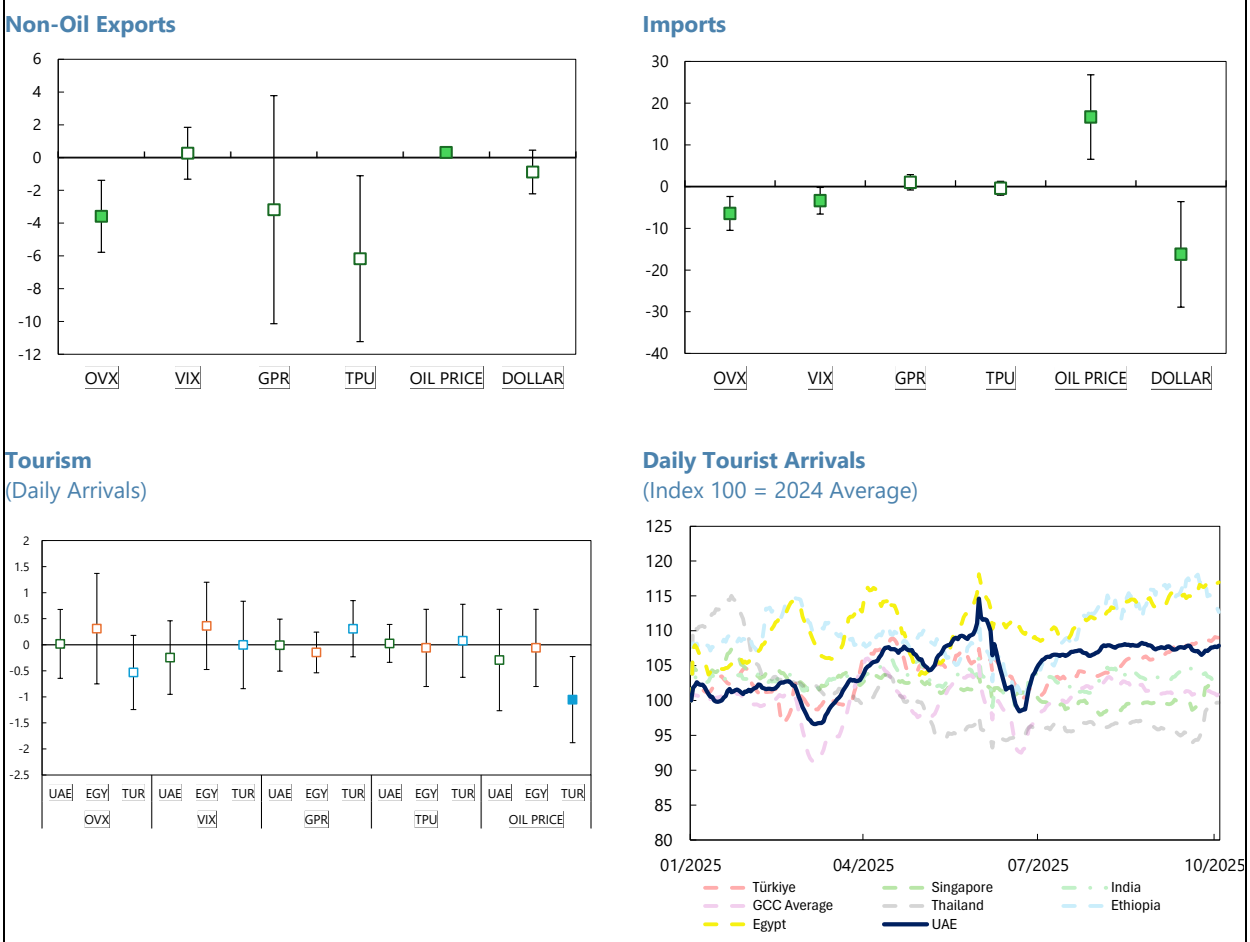
D. External Trade and Comprehensive Economic Partnership Agreements

13. The impact of global and regional shocks on tourism and trade has been limited. We use similar methodology as in the previous section to quantify the impact from a one-standard deviation shock increase across various indicators. Estimates for tourism, based on daily data from January 2021 to July 2025, reflect immediate cumulative impacts over five days. For trade variables, the analysis is based on monthly data for the period January 2018 to December 2024 and reports three-month cumulative effects. However, given the lag in data availability these estimates do not fully capture the impact of the most recent global uncertainty and volatility surges and therefore may underestimate their effects. We complement the analysis using the high-frequency Portwatch data that track trade volumes.

14. Trade in goods shows some selected sensitivity to global shocks, while tourism is resilience to all types of shocks. Non-oil goods exports are sensitive to Trade Policy Uncertainty (TPU) and oil price volatility (OVX), while the impact from oil price is statistically significant but small.

Imports of goods are negatively affected by USD appreciation, oil price volatility and financial volatility (OVX and VIX) and positively react to higher oil prices (Text Figure 8).

Text Figure 8. Impact on Trade and Tourism

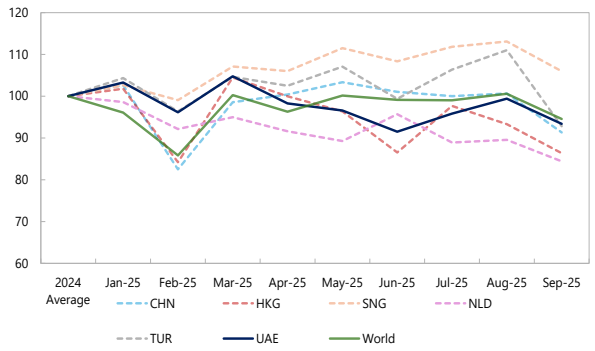


Sources: Haver Analytics, IMF Staff Calculations, Flight Radar 24.

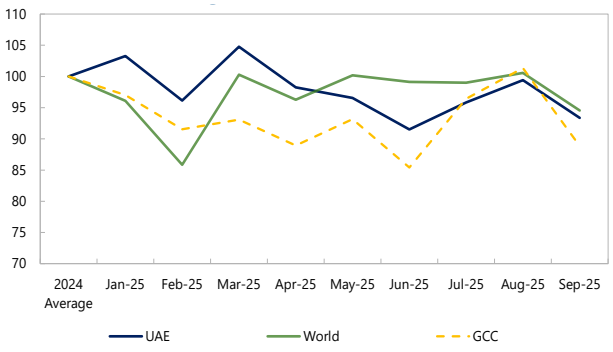
15. While the direct impact from the US tariff policy changes on the UAE is expected to be limited, downside risks include spillovers from a potential global trade slowdown. Portwatch data indicates that the global slowdown may be weighing on the volume of non-oil exports from the UAE which have seen a slight decline compared to some other trade hubs (Text Figure 9a). Additionally, the UAE has also shown agility in the face of trade disruptions in the Strait of Hormuz in June 2025, Portwatch data shows an uptick in trade in ports outside of the Strait, compared to those inside (Text Figure 9b).

Text Figure 9a. Impact on Trade Volumes

Trade Tensions: Impact on Non-Oil Export Volumes
(Index 100 = 2024 Average)



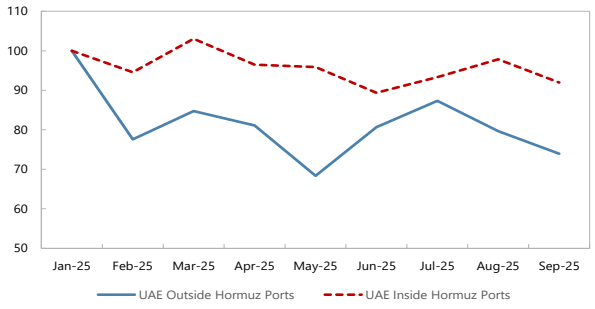
Trade Tensions: Impact on Export Volumes
(Index 100 = 2024 Average)



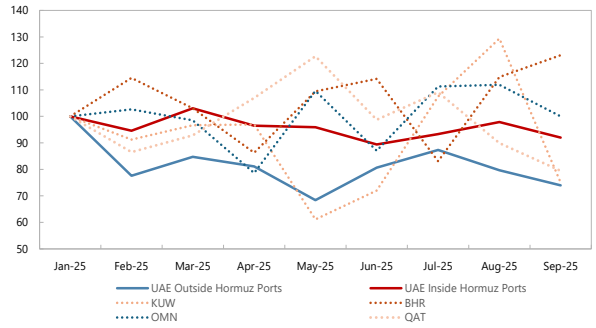
Sources: Portwatch, IMF Staff calculations.

Text Figure 9b. Trade Agility

UAE Non-Oil Exports by Port
(Index Jan 2025 = 100)



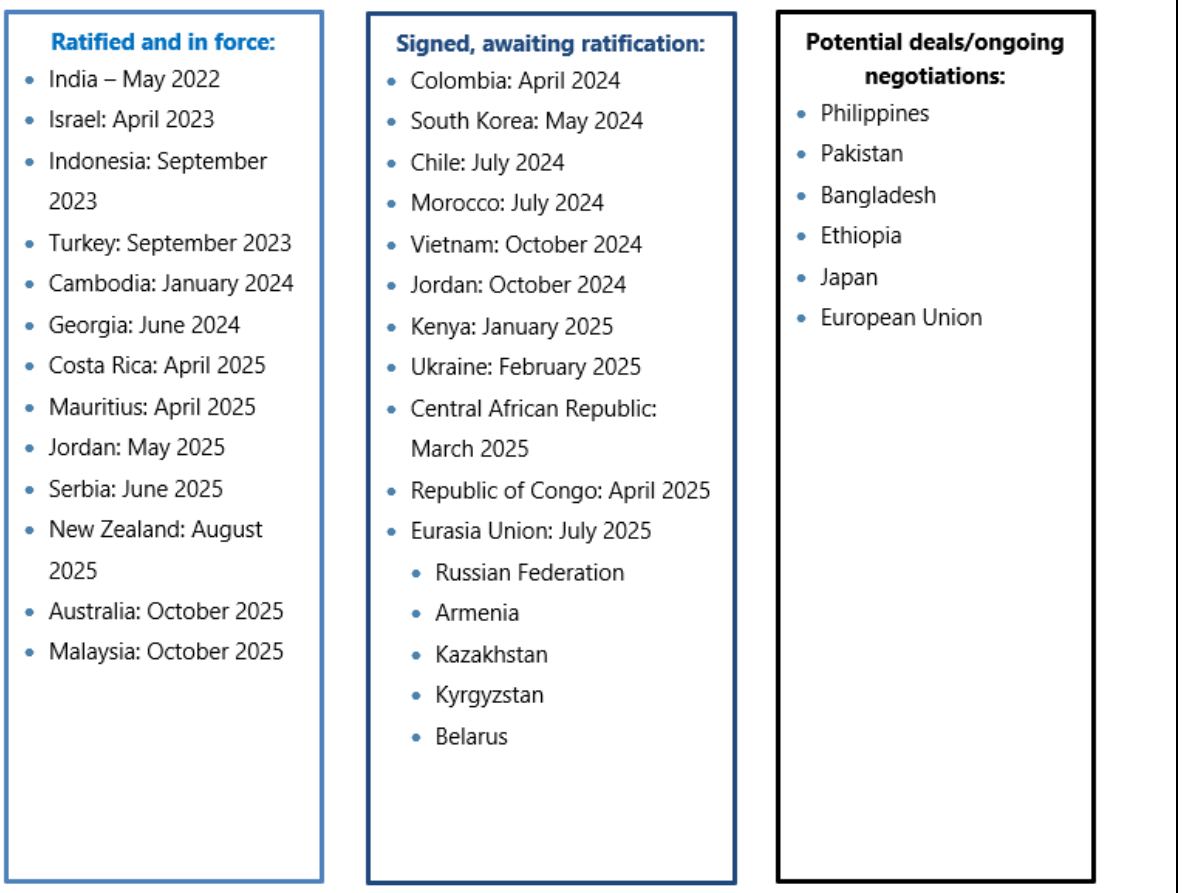
UAE Non-Oil Exports by Port
(Index Jan 2025 = 100)



Sources: Portwatch, IMF staff calculations.

16. Ongoing efforts to expand comprehensive economic partnership agreements (CEPAs) are expected to further support resilience to external shocks. CEPAs are comprehensive trade and investment deals covering a wide range of economic and financial cooperation issues, including trade in goods and services, and investment. The UAE has ratified 13 such agreements (Text Figure 10) in the last three years, the first of which was with India, signed in February 2022 and ratified in April 2023. Additional agreements have been signed and are pending ratification while negotiations for other CEPAs are ongoing. Through this expansion of CEPAs, the UAE could diversify its markets for goods and services and financial flows, reducing dependency on a limited number of partners while also strengthening supply chains through preferential access to raw materials and intermediate goods.

Text Figure 10. CEPAs
(As of October 2025, non-exhaustive list)



Sources: Comprehensive Economic Partnership Agreements | Ministry of Economy & Tourism - UAE and staff calculations.

17. CEPAs are also an important instrument for enhancing economic ties between countries, boosting trade and FDI. By fostering economic interdependence, these agreements create incentives for countries to maintain stable and constructive relations. A World Bank Working Paper concluded that the East Asia Pacific Regional Comprehensive Economic Partnership (RCEP) could help cushion the negative effects of shocks (such as COVID-19) on economic growth by supporting regional trade and value chains while increasing members' resilience in the medium term.[10] While it is still too early to comprehensively assess the impact of the ratified CEPAs on trade and FDI in the UAE as some were only ratified earlier this year or the previous year, there are preliminary indications of CEPAs boosting trade and FDI, specifically when looking at India (Box 1).

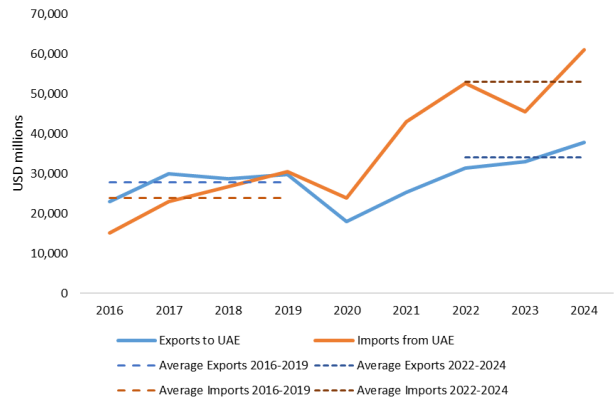
[10] Estrades Pineyrua, Carmen; Maliszewska, Maryla; Osorio-Rodarte, Israel; Seara E Pereira, Maria Filipa. *Estimating the Economic and Distributional Impacts of the Regional Comprehensive Economic Partnership (English).* COVID-19 (Coronavirus) | Policy Research working paper | no. WPS 9939 Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/485751644957468051

Box 1. Spotlight on India CEPA

The earliest CEPA to come into force was with India in May 2022. A preliminary analysis indicates an increase in both trade and FDI between the two countries. Although results on trade should be treated with some caution as one of the main traded commodities between the two countries is gold, and the recent evolution of the price of gold is likely partially impacting the increase in total values traded.

The CEPA grants more certain and expanded access for both UAE and Indian exporters to each other's respective markets through simpler customs procedures, the removal or reduction of tariffs on a significant portion of traded products. The UAE estimates that the CEPA could unlock $100 billion in non-oil bilateral trade within five years of its ratification.[1] The agreement also facilitates trade in 11 service sectors. The composition of traded goods does not seem to have changed much since the ratification of the CEPA; crude oil, gold, petroleum products, gold jewelry, pearls, precious and semi-precious stones and telecom instruments continue to be the main traded items.

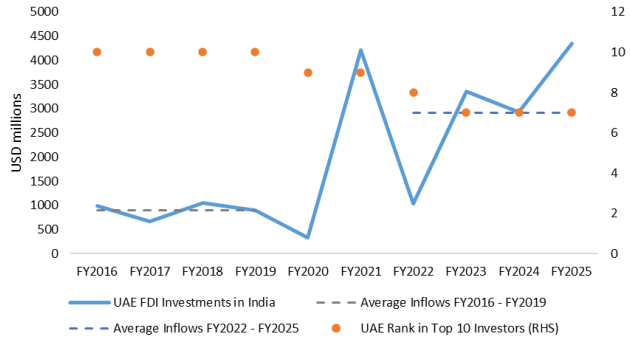
Box 1. Figure 1. India Merchandise Trade with the UAE Seems to Have Increased Following the Ratification of the CEPA



Source: India Ministry of Commerce and Industry, Department of Commerce, IMF staff calculations.

While investment cooperation is more comprehensively covered in the UAE-India Bilateral Investment Treaty signed in 2024, the CEPA references the Treaty and encourages mutual investments through the establishment of the UAE-India Technical Council on Investment with the objective of promoting and facilitating trade. There seems to be an increase in UAE investments in India coinciding with the signing and ratification of the CEPA. While there is limited data on Indian investments in the UAE, the UAE has reported that in 2023 India was its second largest investor and that in 2024, it was the largest investor in Dubai, with the highest announced greenfield investments into the UAE (13.7 percent of total announced greenfield investments). [2]

Box 1. Figure 2. UAE Investments in India Seem to Have Increased Following the Ratification of the CEPA



Source: India Ministry of Commerce and Industry, Department for Promotion of Industry and Internal Trade, IMF staff calculations.
N.B. Fiscal year from April to March of the following year.

[1] The UAE-India CEPA Handbook.
[2] UAE Ministry of Investment, UAE Foreign Direct Investment Report 2024 and 2025.

E. Conclusion

18. Even though closer global integration has increased exposure to shifts in external conditions, the UAE has continued to demonstrate strong financial and economic resilience.

This includes broad resilience to external shocks, including movements in the U.S. dollar, interest rates, and global volatility, with limited pass-through to domestic activity. Financial markets and capital flows have been less affected by global shocks than the regional peers and other EMs, reflecting strong investor confidence. The transmission of U.S. monetary policy to domestic credit and growth has been limited in recent years, particularly during tightening cycles which coincided with periods of ample liquidity in the UAE. The impact of global and regional uncertainty on trade and tourism appears contained, with resilience further supported by expanding Comprehensive Economic Partnership Agreements and ongoing diversification efforts.

FEDERALISM AND FISCAL OPERATIONS IN THE UAE[1]

A. Introduction

1. The fiscal structure of the UAE is shaped by its federal system, in which each of the seven emirates has full fiscal autonomy. Within this decentralized framework, emirates pursue independent fiscal policies and diversification strategies, with activities of sovereign wealth funds (SWFs) and government-related entities (GREs) also supporting developmental and diversification objectives. With the currency peg, fiscal policy is the main tool for macroeconomic management and must balance multiple objectives, namely (i) in the short term, maintaining macroeconomic stability and protecting against adverse economic shocks and oil price volatility; and (ii) in the medium to long term, ensuring debt sustainability, managing fiscal and quasi-fiscal risks, while promoting intergenerational equity in natural resource use, and advancing diversification and developmental goals.[2]

2. The UAE's high degree of fiscal federalism raises the importance of well-coordinated fiscal management. Fiscal cooperation among the various fiscal authorities can be supported by (i) more coordinated Medium-Term Fiscal Frameworks (MTFFs) to ensure consistent fiscal planning across government levels, (ii) greater coordination in fiscal risk analysis and management to identify and mitigate potential vulnerabilities and spillovers, and (iii) enhanced information sharing on fiscal operations, debt, and contingent liabilities. The Fiscal Policy Coordination Council provides an institutionalized platform for fiscal coordination between the federal and emirate governments and could play a more active role in further advancing alignment of fiscal policy and medium-term fiscal planning.

B. Fiscal Structure of the UAE

3. The UAE is a federation of seven emirates, each with autonomy over natural resource management, fiscal operations, and debt issuance. The federal government accounts for only around 15 percent of total public spending, making the UAE one of the most fiscally decentralized federations globally. Each emirate has autonomy over revenues generated within the emirate, including from oil. In addition to its fiscal operations autonomy, each emirate has discretion over revenue transfers between the emirates, GREs, and SWFs (see Text Figure 1), except for VAT[3] and CIT collections that are based on a revenue sharing agreement between the federal and the local governments. Spending decisions of the individual emirates are guided by strategic developmental priorities, linked to specific targets and key performance indicators (KPIs) to monitor progress. Expenditures on education, health, housing, local infrastructure and other social spendings are shared and managed between the

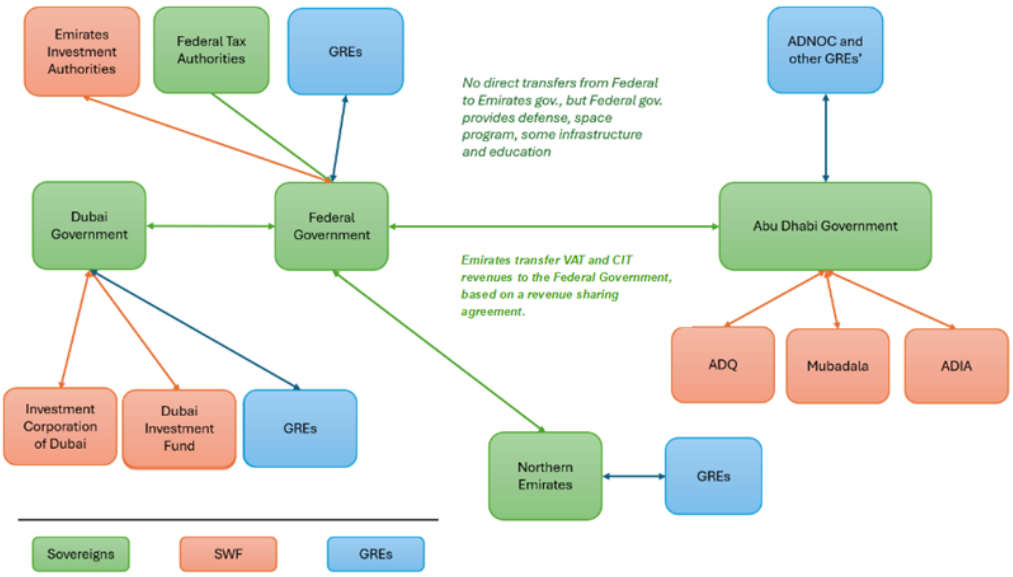
[1] Prepared by Karim Badr, Koralai Kirabaeva, Charlotte Sandoz, and Amanda Sayegh.

[2] Mirzoev, Tokhir N., and Zhu, Ling. Rethinking Fiscal Policy in Oil-Exporting Countries. IMF Working Paper, 2019, and Eyraud, Luc, William Gbohoui, and Medas, Paulo A. A New Fiscal Framework for Resource-Rich Countries. International Monetary Fund, 2023.

[3] The current revenue sharing agreement for VAT is that each Emirate transfer all its collected VAT proceeds to the federal government. The federal government then, retains 30 percent of each Emirate's collection and transfers back the remaining 70 percent to the respective Emirate.

federal and the local governments.[4] Spending on local security and some local infrastructure are split between the federal and local governments. The federal government plays a significant role in the provision of housing, education and health care which constitute the largest share of its expenditures. Within each emirate, capital and infrastructure spending are also allocated across local government entities and GREs in line with strategic objectives.

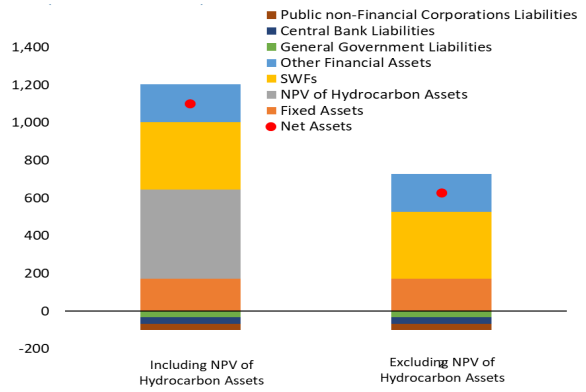
Text Figure 1. Fiscal Structure



Source: IMF Staff.

4. Multiple SWFs operate in the UAE, each with distinct mandates and allocation frameworks. SWFs and GREs are capitalized through transfers of fiscal surpluses, asset injections, and equity stakes from the emirate-level governments, reflecting their role in managing public finances and advancing development priorities. Subsequently, these entities channel profits and dividends back to their respective emirates, supporting fiscal revenues and contributing to public sector balance sheet. While specific modalities for allocating fiscal savings to SWFs are not publicly disclosed, total estimated assets exceeded 1200 percent of GDP in 2023

Text Figure 2. Public Sector Balance Sheet, 2023
(Percent of GDP)



Note: Assets and liabilities of public financial corporations, except CBUAE, are excluded to avoid double counting.
Sources: Country authorities, Bloomberg, BvD Orbis, S&P database, SWFI, and IMF staff calculations. IMF AIV Staff Report, 2024

[4] Few expenditures have different arrangements, for example Nafes program is funded by Abu Dhabi while beneficiaries are Emirati nationals nationwide. Also, the federal government cover the interest subsidies for the housing program in Sharjah.

(including hydrocarbon wealth), of which over 45 percent were financial assets. Liabilities are estimated at about 100 percent GDP in 2023.[5]

- Abu Dhabi and Dubai operate the major SWFs in the UAE. According to the US Department of State Investment Climate Statement (2024), *Abu Dhabi Investment Authority (ADIA)*, the largest SWF, manages assets of about $1 trillion, invests exclusively abroad, and allocates nearly half of its portfolio to the U.S. *Mubadala Investment Company* holds assets of around $300 billion, with approximately 40 percent invested in the U.S. and 20 percent domestically. *Abu Dhabi Development Holding Company (ADQ)* manages diversified holdings across strategic sectors of about $200 billion in assets. *Investment Corporation of Dubai (ICD)* and *Dubai Investment Fund (DIF)* oversee the emirate's investments, with about $400 and 100 billion in assets, respectively. ADIA, Mubadala, and ICD adhere to the voluntary Santiago Principles on transparency and accountability for SWFs.[6]

- SWF's investment decisions generally reflect federal and emirate-level priorities related to economic diversification and development, sustainable long-term returns to benefit future generations, and prudent risk management. SWFs are increasingly engaging in partnerships and collaborative initiatives that facilitate the exchange of technology and expertise. Abu Dhabi established the G42 to advance AI development and application, including through collaboration with Microsoft, while Mubadala has been scaling up its investments in semiconductors and advanced technology.

5. GREs play an important role in the UAE's economic model. The Abu Dhabi National Oil Company (ADNOC) remains of strategic importance, serving as a major revenue source for the Abu Dhabi government and a key provider of foreign exchange for the UAE economy. Other prominent SOEs include Emirates Airlines and Etisalat, the largest domestic telecommunications operator, and Dubai Holding and Emaar in the real estate development sector. While activities by GREs support government priorities and help advance development objectives, they operate on commercial basis to generate financial returns. For example, under the "Make it in the Emirates" initiative, ADNOC committed to localizing production of over 100 additional products and to procuring $30 billion of goods from domestic manufacturers by 2030. In both Abu Dhabi and Dubai, GREs have been instrumental in diversification efforts across construction, hospitality, transport, banking and financial services, logistics, and telecommunications. Emirates Investment Authority (EIA) is the only SWF owned by the federal government and plays an important role in the economy. EIA has strategic ownership in some GREs such as Etisalat.

[5] 2024 Article IV Staff report estimated liabilities to be 100.9 percent of GDP in 2023 which include 32.4 percent liabilities on general government, 35 percent liabilities on GREs, and 33.5 percent liabilities on the Central Bank of UAE.

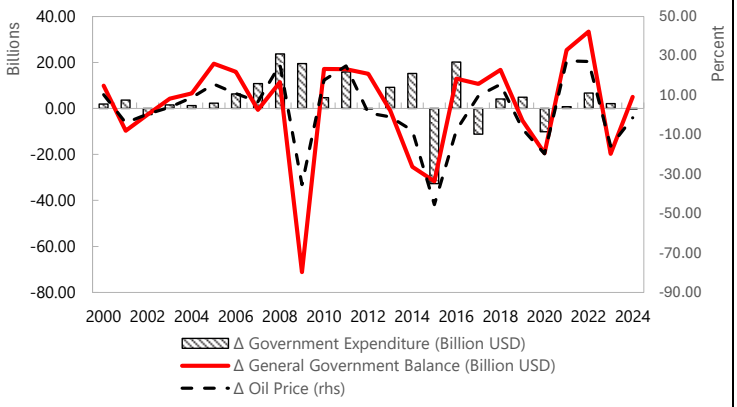
[6] Investment Climate Statement: United Arab Emirates. US Department of State. 2024.

C. Fiscal Policy Objectives and Challenges

Short-term Fiscal Policy Objectives

6. Fiscal outcomes can be significantly affected by oil price volatility through government revenues. Global energy prices have historically experienced large and persistent swings and hydrocarbon revenues account for a sizable share of the UAE's consolidated government income. As a result, fiscal policy has exhibited some procyclicality with spending rising more during booms and facing pressures in downturns.

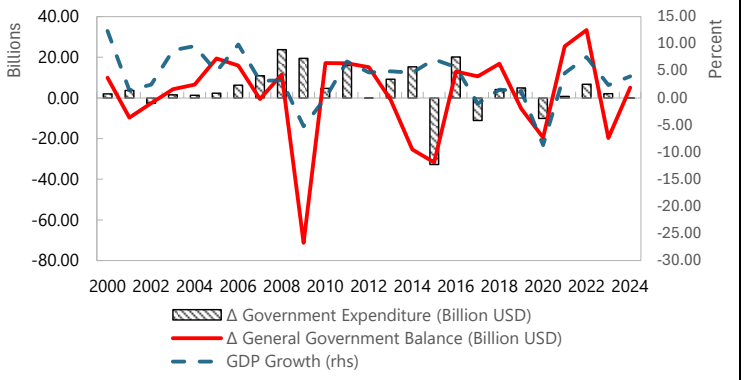
Text Figure 3. Fiscal Balances and Oil Price Dynamics
(USD, Year on Year Difference)



Sources: IMF Staff Calculations Based on Data Received from Authorities.

7. With the fixed exchange rate regime, fiscal policy is the primary lever for macroeconomic stabilization. With the dirham pegged to the U.S. dollar, domestic interest rates closely follow U.S. monetary policy, constraining the UAE's ability to use monetary tools to counteract domestic economic fluctuations. This magnifies the importance of maintaining fiscal space, building resilience to oil price volatility, and ensuring that fiscal policy can effectively respond to short-term shocks while supporting the UAE's diversification and development goals.

Text Figure 4. Fiscal Balances and GDP Growth
(USD, Year on Year Difference)



Sources: IMF Staff Calculations Based on Data Received from Authorities.

8. Conservative annual budgets by federal and larger emirates help to protect against small and temporary shocks. Oil price assumptions used for forecasting revenues to inform budget decisions are set below market forecasts, and non-hydrocarbon tax revenues are projected conservatively. This could potentially act similar to an automatic stabilizer: under normal circumstances, revenues tend to overperform, generating fiscal surpluses, while during downturns, budget targets can be met without any abrupt fiscal adjustment. This prudent approach could help smooth expenditure over the cycle and limit procyclicality.

9. In addition to conservative budgeting, ample fiscal buffers and flexible financing allow governments to manage large adverse shocks. In the event of temporary shocks, fiscal policy can draw on reserves and debt issuance, supported by postponement of selected projects and expenditure efficiency measures. Under more severe or prolonged shocks, governments can rely on

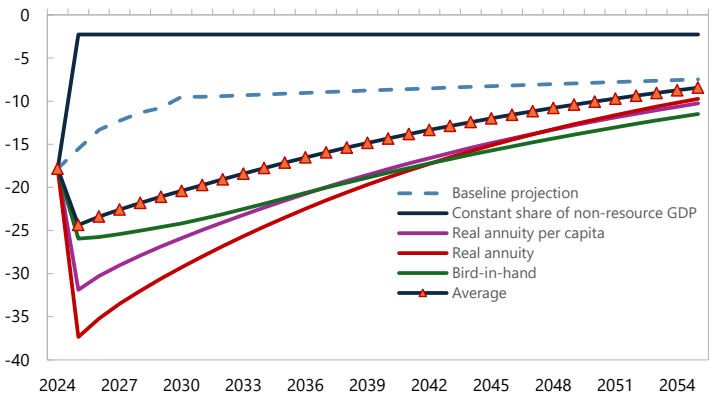
additional support from SWFs, adjust dividend policies, and gradually rationalize subsidies while reallocating spending toward priority areas. Consideration should also be given to establishing a framework for timely and targeted interventions including potential financial support across different governments in response to crises and severe shocks. Given the heterogeneity in debt levels and fiscal space across emirates, such framework could facilitate coordinated cross-government transfers and interventions if needed.

Medium and Long-Term Fiscal Policy Objectives

10. Diversification of revenue sources is key for addressing long-term fiscal sustainability and intergenerational equity challenges stemming from the exhaustibility of hydrocarbon resources and the global energy transition. While the UAE holds substantial reserves, production will eventually decline, and the global energy transition could reduce global demand for oil and gas. These risks are further compounded by the uncertainty surrounding future oil prices, extraction costs, reserve estimates, and climate policy developments.

11. The UAE fiscal position remains sustainable and aligned with intergenerational objectives. While the level of indebtedness varies among the emirates, the UAE's general government debt is sustainable over the foreseeable future, underpinned by continued accumulation of fiscal surpluses. Additionally, the UAE has accumulated large financial assets that provide ample buffers against potential shocks. Furthermore, the analysis based on various definitions of the Permanent Income Hypothesis[7] (including Bird-in-Hand approach) indicates that general government fiscal balances do not face additional constraints from intergenerational equity considerations.[8] Compiling comprehensive public sector debt statistics, including GREs debt and associated contingent liabilities, would further strengthen fiscal risk monitoring and strengthen medium term fiscal planning.

Text Figure 5. Non-resource Primary Balance
(Percent of non-resource GDP)



Source: IMF Staff Calculations.

[7] Designing fiscal framework based on PIH has some limitation including (i) difficulty to predict oil prices and other macroeconomic variables in the far future, (ii) difficulty in incorporating shocks to oil prices in the future that would require change in spending, (iii) not including physical assets, and (iv) not having a full coverage of public spending outside the general government budget (through GREs and SWFs).

[8] Assessing fiscal space: an update and stocktaking. IMF Policy Paper, 2018

D. Strengthening Fiscal Policy Framework

12. Beyond the challenges posed by the volatility and uncertainty characterizing resource revenue, fiscal federalism raises the importance of well-coordinated fiscal management. Individual emirates set and implement fiscal policies independently; however, their economic cycles are highly correlated reflecting strong interlinkages, exposure to common shocks, and cross-emirate spillovers. While there is high-level information sharing and coordination on strategic policy planning at the leadership level, institutionalizing and enhancing it at operational levels would be desirable. Given that part of public capex is delivered via GREs and SWFs and their significant contributions to revenues, assessing the fiscal position from a comprehensive public sector perspective would help to strengthen consistency and accountability, improve regular monitoring of fiscal operations, and calibrate the overall fiscal stance on an annual basis.

13. Building on the notable progress in sharing fiscal outcome data, there is a scope to further strengthen fiscal policy coordination and cooperation across government entities. The UAE's transition toward accrual-based accounting and IPSAS-aligned reforms, supported by cooperation between the Ministry of Finance and emirate-level entities such as Sharjah,[9] continues to enhance transparency, comparability, and the integrity of public-sector reporting. Further strengthening MTFFs of each emirate and the federal government, along with enhanced information sharing and cooperation across emirates would help ensure greater consistency and more effective policymaking. This includes through routine sharing of information on medium-term fiscal projections, government budgets, balance sheets, and fiscal risks. International experience shows that in decentralized systems, strong MTFFs and fiscal coordination can successfully balance autonomy with more effective fiscal policymaking. See Annex for case studies outlining arrangements for fiscal coordination in Spain and Australia.[10]

More Coordinated Medium-Term Fiscal Frameworks

14. MTFFs are a useful tool for promoting fiscal sustainability and better-informed fiscal decisions. These frameworks typically span a three-to-five-year period and include a fiscal strategy, medium-term macro-fiscal projections, fiscal risks, and an aggregate expenditure ceiling to guide the preparation of annual budgets. Within the decentralized system, strengthening and coordinating the MTFF in each Emirate and at the Federal level would improve fiscal planning (Box 1). While uniformity in budget preparation processes is not required to achieve this, there is merit for all jurisdictions to base their multi-annual fiscal forecasts on consistent macroeconomic assumptions where relevant.

[9] UAE Ministry of Finance – Financial Framework (Public Finance Section)

[10] The case studies represent countries with a high degree of fiscal decentralization, with autonomy at subnational level. Both cases have their specific challenges, however, the coordination mechanisms, harmonization of reporting frameworks, and rules-based frameworks for managing revenue transfers provide relevant examples for the UAE.

Box 1. Core Objectives and Elements of an MTFF[1]

A well-designed MTFF extends the fiscal horizon beyond the annual budget, linking short-term policies to medium-term objectives for stability, sustainability, and efficiency.

The main elements of an MTFF include:

- **Medium-term projections** for the key macroeconomic variables and main fiscal aggregates (revenue, expenditure, debt, and deficit).
- **A fiscal strategy**, which clearly states the government's fiscal objectives and targets for the main fiscal aggregates over 3-to-5-year period and how the government policies will contribute to fiscal sustainability and macro-economic stability.
- **A comprehensive assessment of fiscal risks** which leads to a better understanding of their potential impact on government finances.

Implementation of an MTFF involves establishing a credible institutional process where the ministry or department of finance sets multi-year fiscal targets and expenditure ceilings based on consistent macroeconomic projections, integrating them into the annual budget. Over successive cycles, the framework should be refined by strengthening the macro-fiscal unit, improving forecasting accuracy, and using published fiscal strategy statements to enhance transparency and accountability.

Source: Curristine et al., "How to Develop and Implement a Medium-Term Fiscal Framework", 2024

[1] Prepared by Fritz Bachmair (FAD)

15. In recent years, both federal and emirate governments have developed medium-term fiscal or budget frameworks supported by a set of fiscal rules. The Federal Ministry of Finance (MoF) adopted a five-year budget cycle (2022–2026), covering the central government only, anchored in balanced budget objectives and national policy priorities, with expenditure ceilings set on a sectoral basis and performance indicators applied. It plans to transition to the three-year cycle (for 2027-2029) to be able to better adjust to evolving economic conditions in a highly uncertain global environment. Abu Dhabi's internal MTFF, based on the five-year cycle, incorporates a conservative oil price path, gradually expanding non-oil revenues, and indicative expenditure ceilings. Dubai applies a rolling three-year internal budget framework with a surplus stance, aimed at supporting strategic priorities and strengthening fiscal sustainability, and supported by a set of fiscal rules. There are, however, no consolidated medium-term macro-fiscal forecasts prepared for the general government sector.

16. A well-coordinated fiscal framework would include several key features:

- Shared analysis of global and domestic economic and financial developments, prospects and risks to inform understanding of the overall economic outlook and common macroeconomic assumptions, where appropriate (for example, oil prices). Although ultimately, each jurisdiction would retain discretion in setting their assumptions.
- Preparation of MTFFs by each emirate and the federal government consistent with the macroeconomic outlook and which would form the basis for annual budget formulation.

- Medium-term fiscal objectives should be defined by each government, considering short-term macroeconomic objectives, medium-term economic and social development goals and long-term sustainability and intergenerational equity considerations. While expenditure allocation and prioritization are determined by each jurisdiction, these should reflect both national policy objectives and the policy priorities specific to each jurisdiction.

- A consolidated multi-annual fiscal framework for the general government should be compiled, incorporating projections from all jurisdictions. This will require a timely and standardized exchange of fiscal forecasts and spending plans.

- MTFFs should be supplemented with additional information on the fiscal operations of GREs given their significant role in the economy, and eventually their coverage expanded to the broader public sector over time.

17. Achieving well-coordinated fiscal framework would benefit from several technical and institutional preconditions: (a) Strengthening macro fiscal forecasting capacity, including upgrading tools, analytical capabilities, and understanding of inter-jurisdictional spillovers; (b) Robust medium-term expenditure planning mechanisms to support credible and realistic fiscal planning; (c) Clear and coordinated timeline for information sharing of fiscal forecasts, budgets, and borrowing plans; and (d) addressing any outstanding data limitations (see Section on Fiscal Statistics).

More Coordinated Fiscal Risk Analysis and Management

18. Fiscal risks stem from macroeconomic volatility, government borrowing and contingent liabilities such as government guarantees, PPPs, GREs, and financial sector liabilities. In addition, climate adaptation and developmental priorities add to the long-term fiscal pressures. Ongoing efforts to regularly monitor and assess potential fiscal cost of all these factors would help to inform policy decisions, complementing continued progress in strengthening macro-fiscal frameworks across the federation.

19. Broadening the coverage of fiscal risks would further enhance the government's capacity to manage them. The federal government has issued Fiscal Risk Management Guidelines which set out practices for identifying, assessing, and mitigating the different sources of fiscal risks. The guidelines outline good practices to be followed, and are currently in the process of being formalized through regulation at the federal level. The MoF is also currently preparing guidelines to integrate fiscal risks from climate change into the framework. At the emirate level, authorities have continued to strengthen fiscal risk management frameworks. The Government of Dubai maintains a centralized registry of public debt and government guarantees and oversees GRE borrowing and debt governance. GREs are required to submit annual financial statements, projections, and borrowing plans for review, based on which the Public Debt Management Office (PDMO) conducts risk assessments of wholly owned entities to monitor contingent liabilities and provides recommendations to the Supreme Fiscal Committee (SFC) for consideration and approval of GRE borrowing plans. Abu Dabi's Executive Committee has similar controls on loan guarantees. Several

jurisdictions have also adopted regulatory frameworks governing the approval and management of PPPs. [11]

20. Further enhancing fiscal risk analysis and management across federal and emirates levels would reinforce economic and financial resilience. Developing alternative macro-fiscal scenarios, conducting routine debt sustainability analysis and assessing fiscal sustainability implications of the long-term economic trends as well as periodic stress testing of public finances could complement the MTFFs. Such analysis would help individual jurisdictions better understand their own fiscal risk exposures, while enhanced sharing and assessment of aggregate risk would provide a more comprehensive view of potential spillovers, interactions between risks, and aggregate fiscal risk exposures. Possible areas for enhancement could include (a) sharing regular information on GREs financial positions and financial indicators, (b) sharing aggregate information on government borrowing and debt portfolio risks, government guarantees, and other material contingent liabilities, and (c) and conducting alternative macro-fiscal scenarios of general government fiscal forecasts.

Fiscal Policy Coordination Council and Enhanced Information Sharing

21. The Fiscal Policy Coordination Council (FPCC) provides a forum for fiscal coordination and sharing of fiscal data. The council was established in 2008. The mandates of the council includes as indicated in the cabinet decree No. 24 for 2015 are: (i) oversight over public finance reports, (ii) oversight over preparation of fiscal strategies, (iii) consultation on budgets and expenditures, (iv) coordination on revenue mobilization policies, (v) coordination on sources of finance for projects, (vi) coordination on issues related to sovereign ratings of the federal and local governments, (vii) coordination on issues related to competitiveness and government efficiency measures, and (viii) coordination on new fiscal issues relevant to economic development.[12] It is chaired by MoF with representatives from local governments and the Central Bank of the UAE. The Council is supported by a Fiscal Coordination Department within the MoF, and meets regularly (three times a year). Emirate governments report fiscal outturn data quarterly to the MoF to support the compilation and reporting of general government fiscal statistics, although only covering the statement of Government Operations. While the Council's legal mandate is broad, its operations have focused on fiscal reporting and project-related discussions, suggesting scope for a more active role in strengthening fiscal policy collaboration. Coverage of the GREs and SWFs falls outside of the FPCC mandate.

22. The FPCC could play a more prominent role in facilitating fiscal policy coordination across different levels of government. Its existing mandate is already quite broad, and could accommodate many of the functions relevant to fiscal coordination: in particular, discussions on fiscal developments, the macroeconomic and fiscal outlook, budget plans, expenditure and tax policy developments, coordination of fiscal strategies and aspects that may impact sovereign ratings

[11] See for example Federal Law No 12 of 2023 Regulating Public Private Partnerships.

[12] Cabinet Decree No 24 of 2015 on The Fiscal Coordination Council. Ministry of Finance website.

such as borrowing plans and fiscal risk exposures. This may require enhanced technical capacity and greater role of the MoF's Fiscal Coordination Unit, along with a clear roadmap for strengthening macro-fiscal frameworks, information sharing, and fiscal risk analysis and management.

E. Fiscal Statistics

23. Significant progress has been made recently in data compilation and reporting. Fiscal reporting practices and accounting standards differ across emirates, though fiscal statistics are compiled under GFSM 2014. Compilation of disaggregated data on revenues (including oil), expenditures, and net transactions in fixed assets has been standardized across government entities including emirates and GREs, and a list of GREs at the general government has been established to compile public debt.

24. Timely and comprehensive fiscal information is important for effective policymaking. Continued improvements in quality, coverage, and granularity of fiscal data would help enhance understanding of macroeconomic implications of fiscal operations and support more effective fiscal coordination and risk management. More broadly, a comprehensive and updated public sector balance sheet that incorporates fiscal accounts for the general government, financial and non-financial corporations will help better monitoring of fiscal and quasi-fiscal operation, potential risks and consistency in fiscal accounts. Progress in the adoption of full accrual accounting systems across emirates will support the process for balance sheet compilation. Granularity of fiscal data would benefit from further breakdown of revenues (including hydrocarbon revenues), expenditures, financing and investment activities, GREs, SWF, and quasi-fiscal activities. In this regard, a comprehensive and consistent sectorization of public sector entities across all emirates will critically enhance GFS and public sector debt statistics.

25. The recommendations from IMF STA CD include further:

- Strengthening fiscal statistics by (i) ensuring all emirates are following GFSM 2014 framework and guidelines; (ii) improving the classification of revenues to hydrocarbon and non-hydrocarbon revenues; and iii) providing data on transaction in financial assets and liabilities and compiling and disseminating a consolidated financial balance sheet at the GG level.

- Enhancing fiscal sustainability and management of risk, through the compilation of public sector debt statistics (PSDS). PSDS should include information on outstanding debt, maturities, instruments, currency, residency and borrowing rates. As the capacity of the newly established public debt management office is strengthened, the frequency of disseminating PSDS should be on a quarterly basis and with clear schedule for publication.

F. Conclusion

26. Strengthening the UAE's fiscal framework could benefit from greater transparency, more comprehensive and harmonized reporting, and enhanced coordination across emirates and with the federal government. These efforts, supported by more coordinated Medium-Term Fiscal Frameworks (MTFFs) across government levels, would help ensure a consistent overall fiscal stance and more effective fiscal policy. A more active role for the Fiscal Policy Coordination Council could help advance these reforms, supporting consistent policy implementation and reinforcing the sustainability and resilience of public finances.

27. Expanding coverage to include GREs and SWFs, improving data on intra-public sector flows and contingent liabilities would provide a more comprehensive view of the public sector's fiscal position. The prominence of GREs and SWFs in the economy underscores the importance of assessing fiscal developments from a consolidated public sector perspective. Regular monitoring and systematic assessment of contingent liabilities, including government guarantees, PPPs, and potential financial exposures, would allow for more effective monitoring of fiscal risks and more efficient fiscal risk management.

Annex I. Country Case Studies on Fiscal Coordination[1]

Spain: Financial Decentralization and Fiscal Coordination

1. Spain has one of the most decentralized public sectors among OECD countries, accompanied by strong fiscal coordination across the different levels of government. The 1978 Constitution guarantees the financial autonomy of regional governments (Autonomous Communities, ACs), while also mandating coordination with the central government and fiscal solidarity among Spaniards. Since the 2011 constitutional reform (Article 135), all levels of government are bound by the principle of budgetary stability, with the central government assigned a coordinating role through national legislation. As a member state of the European Union (EU), the central government is responsible for ensuring compliance with EU fiscal rules, including those under the Stability and Growth Pact, and for consolidating and reporting the fiscal positions of all levels of government.

2. Regional governments receive shared tax revenues and fiscal transfers from the central government. Shared revenues stem from taxes partially ceded to the regions, such as the personal income tax, value added tax, and excise duties. Some ACs have limited regulatory powers over these taxes on brackets and deductions. Fiscal transfers are determined based on clear formulae defined in the Regional Financing System Organic Law (2009), aiming to ensure that regional governments can provide comparable levels of services to their citizens after considering their differing revenue capacities and expenditure needs. While shared revenues aim to address vertical fiscal gaps between central and regional capacities, equalization transfers aim to address horizontal disparities among regions. Exceptionally, the Basque Country and Navarra operate under a *foral regime* with full fiscal autonomy and a negotiated quota system, outside the common system.

3. The framework for fiscal responsibility and coordination is regulated by the Organic Law of Budget Stability and Financial Sustainability, enacted in 2012. While regional governments retain autonomy over how they allocate their budgets, the law grants the central government the authority to establish annual deficit, debt, and expenditure targets for all levels of government. These targets must be endorsed by the Fiscal and Financial Policy Council, which includes representatives from all ACs. Local governments must adhere to balanced or surplus budget rules on an annual basis and are subject to strict borrowing restrictions, including prior authorization requirements and debt limits tied to their financial health.

4. This law also sets out procedures for managing deviation from these targets and recognizes prevention and corrective mechanisms. Regional governments must submit Economic-Financial Plans, or adjustment plans, if they breach the deficit or expenditure rule, detailing corrective measures and a timeline for convergence. Regular fiscal performance reporting is also required. In instances of persistent non-compliance, the central government can impose

[1] These case studies were prepared by Almudena Fernandez and Amanda Sayegh.

sanctions, including the withholding of transfers or, or in more extreme cases, the activation of Article 155 of the Constitution, allowing for temporary financial control.

5. Spain has established two institutional mechanisms to help coordinate fiscal policy: (i) The Fiscal and Financial Policy Council is the main intergovernmental coordination body between the central government and the ACs. Chaired by the Minister of Finance and composed of the finance ministers of the ACs, it has a consultative and coordinating role. It reviews and discusses the distribution of fiscal targets, as well as matters related to regional financing, fiscal performance, and adjustment plans. Their decisions are not binding, and final approval of fiscal targets lies with the Council of Ministers and the national Parliament. The Basque Country and Navarra, which operate under the *foral* regime, are not members of the CPFF. (ii) In addition, the National Commission of Local Administration performs a similar role for municipalities.

6. The Independent Authority for Fiscal Responsibility (Spanish Independent Fiscal Institution), created in 2013, plays also a key role in monitoring compliance, producing independent macroeconomic and fiscal forecasts, and issuing non-binding recommendations and early warnings to both national and subnational governments.

7. These mechanisms have helped Spain maintain a rules-based approach to multilevel fiscal governance, though challenges remain, including periodic tensions over regional financing arrangements and the need for reform of the financial system, which was last updated in 2009.

Australia: Fiscal Federalism, Intergovernmental Financial Arrangements and Fiscal Coordination

8. Australia's system of government consists of the Commonwealth (federal government), eight States and Territories, and local governments. In Australia's fiscal system, the Federal government has a high degree of revenue raising power, while expenditure responsibilities are split between the Federal and State and Territory governments. This has resulted in vertical fiscal imbalances, with the federal government raising more revenue than it needs, and the States and Territories having more spending responsibilities than they can finance through their own revenues.

9. To address this, a comprehensive federal financial relations system has been put in place whereby the Federal Government provides funding to the State and Territory governments through the Federal Financial Relations system. This includes specific funding agreements for government services that are jointly funded, such as the delivery of public health, education, infrastructure and communal services, as well as Goods and Services Tax (GST) revenue sharing arrangements. GST revenue is provided as general revenue assistance for the state and territory governments to spend as they see fit. Overall, these arrangements account for around 25 per cent of total Federal Government expenditure and about 40 per cent of state and territory government expenditure.

10. The GST, which is levied and collected by the Federal government, is distributed entirely to state and territory governments. The distribution share is calculated by the Commonwealth Grants Commission in accordance with a transparent, rules-based formula that is designed to address disparities in the capacity of different states and territories to provide public services to its citizens. The recommended GST share is intended to allow states to deliver services to a similar standard, assuming each state made the same revenue effort.

11. States and territories have autonomy over their spending decisions within their areas of responsibility. They prepare their own budgets which are approved through their respective parliamentary bodies. Most States and Territories have their own Fiscal Responsibility Legislation governing the requirements and procedures for preparing budgets. These frameworks usually require them to present a medium-term fiscal strategy and medium-term fiscal frameworks, and to regularly report on performance against the strategy.

12. Consolidated fiscal projections for the general government are not compiled by governments. However, the Federal Parliamentary Budget Office prepares a National Fiscal Outlook Report which includes medium-term projections of and fiscal plans for the consolidated general government. Moreover, ex-post reporting of fiscal outturns for the general government sector are compiled and published by the Australian Bureau of Statistics on a quarterly and annual basis.

13. State and Territory Governments have the authority to borrow. Each has their own treasury systems and issue their own debt securities. The market therefore acts as a mechanism for providing fiscal discipline. The Federal government does not place direct restrictions on borrowing by different jurisdictions.

14. Australia has several important mechanisms to facilitate collaboration and coordination on intergovernmental financial arrangements and fiscal policy. The Council on Federal Financial Relations (CFFR), chaired by the Federal Treasurer, consists of all state and territory treasurers and oversees all intergovernmental financial matters. It has also been a key vehicle for fiscal cooperation in recent years, including on fiscal policy response to the COVID-19 pandemic and responses to the 2008 Global Financial Crisis (for example the decision to offer an opt-in guarantee state borrowing in 2009). The Council is supported by the Heads of Treasuries, comprising the Secretary of the Commonwealth Treasury and state counterparts. In addition, a National Cabinet, comprising the Prime Minister, State Premiers and Territory Chief Ministers, also collaborates on economic and fiscal policy matters that impact different levels of government.

15. In 1991, the Federal Government and States agreed a Uniform Presentation Framework, which ensures that each jurisdiction presents a common core of financial information in their budget papers. The Framework, which has been updated since its initial agreement, recognized that a uniform approach to the presentation of fiscal data would facilitate a better understanding of individual government budgets and allow for comparisons of each government's financial results and projections.

NON-HYDROCARBON PRODUCTIVITY AND ARTIFICIAL INTELLIGENCE IN THE UAE[1]

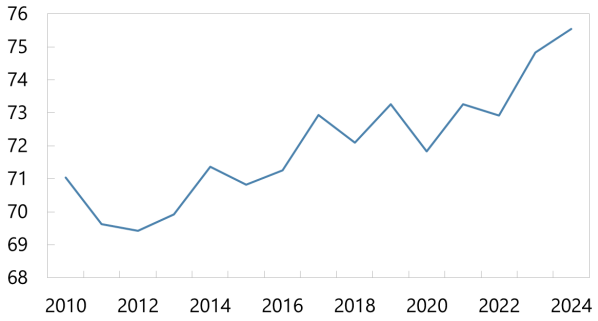
The non-hydrocarbon economy in the United Arab Emirates has grown considerably in the last two decades reflecting concerted efforts by the UAE authorities to diversify the economy. This paper sheds light on the role of total factor productivity (TFP) in driving this growth, and on the significant role that investments, improvements in regulatory quality, and technology play in improving non-hydrocarbon TFP. Given these findings, the adoption of Artificial Intelligence (AI) has the potential to enhance broad-based productivity gains. This may occur not only through improvements in labor productivity, but also by stimulating the primary drivers of non-hydrocarbon total factor productivity (TFP) identified in this study. Investment in AI can facilitate greater technology adoption within the country, improve government efficiency, and attract increased foreign direct investment (FDI). Moreover, the AI sector expansion offers further opportunities for diversification.

A. Introduction

1. The UAE's diversification efforts have been successful in increasing the importance of non-hydrocarbon GDP over the past two decades. The share of non-hydrocarbon output to total GDP in the UAE has increased from 71 percent in 2010 to 75.5 percent in 2024, supported by growth in tourism, financial services, manufacturing, construction, real estate, and wholesale trade. In recent years, with a view to further strengthening its diversification efforts, the UAE has increased its investment in digital infrastructure and has focused on expanding the development of Artificial Intelligence and its use across government agencies and many sectors.

Text Figure 1. Non-Hydrocarbon Activity

Share of Non-Hydrocarbon GDP



Source: Haver Analytics.

2. This paper aims to shed light on the main drivers of non-hydrocarbon GDP growth. We estimate the role of total factor productivity (TFP) growth and labor productivity in this regard and explore the factors influencing TFP growth. On this basis, the paper discusses how AI can help boost productivity and growth in the non-hydrocarbon sector.

B. Estimation Methodology for Non-Hydrocarbon TFP

3. To estimate TFP, we use a Solow growth accounting framework, extended to assess sector-specific TFP components. The aggregate production function follows the standard Cobb-Douglas form:

$$Y_t^n = A_t^n (K_t^n)^{\alpha^n} (L_t^n)^{1-\alpha^n}$$

[1] Prepared by Rana Fayez and Michele Marcaletti.

Where, real GDP for the non-hydrocarbon sector is denoted as Y_t^n, the capital stock K_t^n, labor input L_t^n, and total factor productivity A_t^n. α^n represents the capital share of output, and $1-\alpha^n$ represents the labor share.

4. We estimate the evolution of capital stock from 1975 to 2023 using the perpetual inventory method. We set the initial level of the capital stock using the steady state relation of the Solow Growth model. We then estimate the evolution of the capital stock from the initial period using the **perpetual inventory method**:

$$K_t^n = (1-\delta)K_{t-1}^n + I_t^n$$

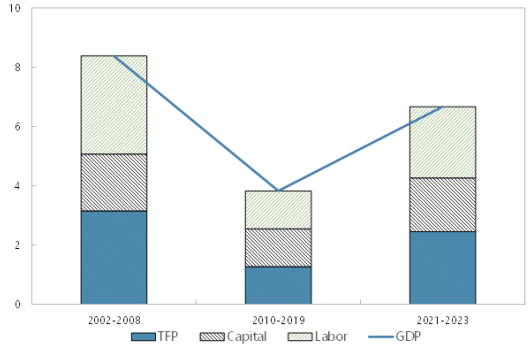
where δ is the depreciation rate and I_t^n represents real investment. The advantage of starting early enough in time reduces the importance of the starting point, which can be crucial in determining the growth rate of the capital stock and, consequently, the estimated growth rate of TFP. The labor share of income is used to calibrate α^n, and is computed using total labor compensation (which is split between hydrocarbon and non-hydrocarbon using the respective employment shares), and sectoral GDP.

5. After estimating a measure of TFP, we assess the impact of structural drivers on non-hydrocarbon TFP growth. We use local projection (LP) models[2], where the dependent variable is the log of non-hydrocarbon TFP, which is regressed on a set of explanatory variables of interest (e.g. FDIs, business environment indexes, measures capturing technology adoption), and controls (lags of the dependent and explanatory variables and non-oil GDP).

C. Results

6. Total factor productivity (TFP) and labor accounted for a significant portion of non-hydrocarbon GDP growth. Text Figure 2 shows the average contributions of TFP, capital, and labor to GDP growth for the non-hydrocarbon sector in the UAE for three subsamples: 2002-08, 2010-19, and 2021-23.[3] The largest contributions in driving non-hydrocarbon GDP growth were TFP and labor, while capital played a significant, albeit smaller role, especially in the 2002-2008 and 2021-2023 samples. TFP accounts for around one third of overall GDP growth, with labor making a slightly bigger contribution in the

Text Figure 2. Contributions of Components of Non-Hydrocarbon GDP Growth
(Percent)



Source: IMF Staff calculations.
Note: 2009 and 2020 are excluded as outliers driven by exogenous shocks (GFC, COVID) which are not related to productivity.

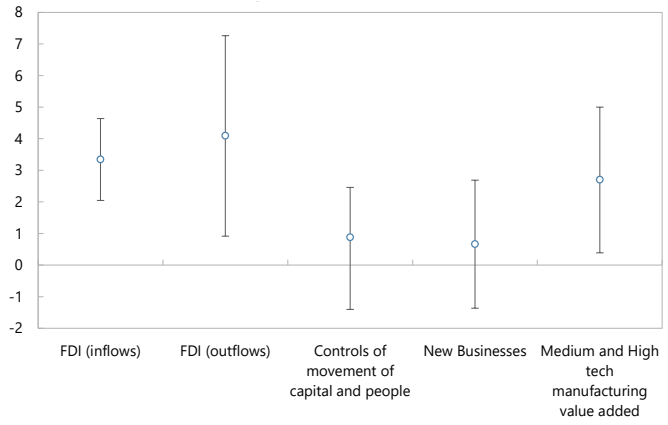
[2] See Jordà (2005). Estimation and inference of impulse responses by local projections. American Economic Review.

[3] We exclude 2009 and 2020 to correct for the impact of extreme observations due to the Great Recession and COVID-19.

2002-2008 sample. Noticeably, in the 2021-2023 sample, TFP has been the largest contributor to non-hydrocarbon GDP growth.

7. The main structural drivers of non-hydrocarbon TFP growth are FDIs, technology adoption, and improvements in regulation. In the UAE, structural transformation appears more closely linked to FDIs (both inflows and outflows), technological upgrading, and improvements in business-friendly regulations—with positive and significant non-hydrocarbon TFP responses to increases in the share of medium and high-tech value added in manufacturing. The local projection estimates suggest that FDI inflows are a robust and significant driver of non-hydrocarbon TFP growth. A one percentage point increase in FDI (as a share of GDP) raises non-hydrocarbon TFP by about 1.6 percent in the UAE, with effects peaking after two years. The dynamic responses are statistically significant and consistent with expectations of capital deepening, managerial spillovers, and enhanced competition. These findings are summarized in Text Figure 3, which shows the cumulative percentage change in non-hydrocarbon TFP 2 years after a one standard deviation shock of the relevant explanatory variable.[4]

Text Figure 3. Impact on Non-Hydrocarbon TFP
(Percent)



Sources: Haver, Economic Freedom of the World Report, IMF Staff Calculations.

D. The Role of AI in Boosting Productivity and Supporting Growth

8. The UAE's strategic focus on AI expansion and its substantial investments in digital infrastructure and technology (Box 1) present an opportunity to increase nonhydrocarbon TFP and accelerate non-hydrocarbon growth. While estimates of potential productivity gains from AI adoption, and the subsequent growth impact, vary considerably[5]—depending on sectoral automation potential and the pace of adoption—there is a consensus in the literature that with the right infrastructure and regulatory frameworks in place, AI can boost both labor and total factor

[4] FDIs are measured as a share of GDP; new businesses are measured as new registrations per 1000 people; medium and high-tech manufacturing value added are measured as the share of total value added; controls of movements of capital and people are measured as ratings from Economic Freedom of the World Report.

[5] The IMF estimates that AI, depending on how it is adopted, could boost global GDP growth between 0.1 and 0.5 percentage points per year in the medium term. In the United States, Acemoglu (2025) expresses caution that productivity gains may not meet expectations, particularly when AI is tasked with complex, context-specific functions. He argues that AI will lead to cumulative TFP gains of only around 0.7 percent over the next 10 years, hinging on 4.6 percent of tasks being replaced profitably by AI, and a 27 percent increase in productivity due to labor cost savings. Aghion and Bunel (2024) adopt a more optimistic stance, emphasizing AI's potential including automation and accelerated innovation. They estimate cumulative median 6.8 percent TFP growth over 10 years based on: (i) the share of tasks exposed to AI in developed countries estimated at 60 percent; (ii) the share of exposed tasks for which it will be profitable to use AI estimated at 50 percent; and (iii) labor saving costs induced by AI of 40 percent.

productivity (TFP) through different channels and as a result, boost growth. Table 1 outlines the different channels through which AI can enhance productivity across certain sectors in the UAE.

Box 1. AI in the UAE

National Vision, Governance Framework and AI in Government. The UAE National Strategy for Artificial Intelligence 2031 outlines eight strategic objectives aimed at positioning the UAE as one of the leading nations in AI by 2031, developing a fertile ecosystem for AI, attracting talent, enhancing research capabilities and ensuring strong governance and effective regulation—covering sectors like energy, logistics, tourism, hospitality, government services, and healthcare. The UAE created the first of its kind Ministry for AI and formed the UAE Council for AI to guide AI friendly policy, research and investment. The AI Ethics Guide (2022) and the AI Charter (2024) support a regulated expansion of the sector. The UAE has also created Regulatory Sandboxes and Innovation Labs to provide the space to test and deploy AI solutions and encourage public-private collaboration. As part of its newly launched Abu Dhabi Government Digital Strategy 2025-2027, Abu Dhabi aims to become the world's first fully AI-native government by 2027, investing AED 13 billion into digital infrastructure, sovereign cloud, and launching over 200 AI solutions for public services. The authorities began incorporating AI-based analytics into fiscal management at the federal level.

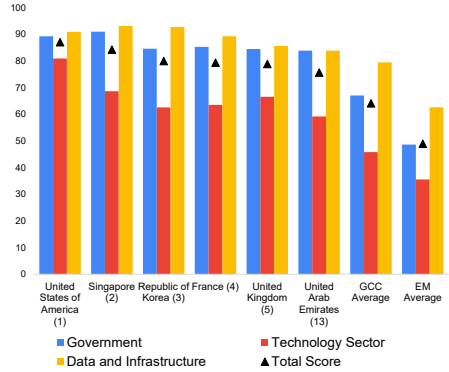
Investments and Infrastructure. Established in 2024 as a joint venture between Mubadala and G42, MGX aims to manage up to $100 billion in global AI assets. It co-founded the $30 billion Global AI Infrastructure Investment Fund with BlackRock, Microsoft, and others to fund data centers and energy infrastructure. Through partnerships with OpenAI and Oracle, MGX is investing in projects like the Stargate supercomputing initiative.

Education, Research Institutions and Innovation Hubs. Founded in 2019, the Mohamed bin Zayed University of Artificial Intelligence (MBZUAI) is the world's first graduate-level AI University. In 2025, it launched its first undergraduate AI program. To foster innovation the UAE has created several AI iLabs in leading institutions. Among them, established in 2020 under Abu Dhabi's Advanced Technology Research Council (ATRC), the Technology Innovation Institute (TII) focuses on AI, robotics, cryptography, quantum computing, and more. It is responsible for the creation and launch of the Falcon open-source language models (LLMs), including Arabic LLMs. The UAE has also launched upskilling programs, such as the "One Million AI Learners" initiative which was launched April 2025 to train one million government employees by 2027, and the "One Million Prompters" program aimed at equipping one million individuals with the skills to use AI tools. The UAE is fostering a startup ecosystem, through tech hubs such as the government-backed Hub71 hosted under ADGM to support innovation in AI, fintech, cybersecurity and healthtech.

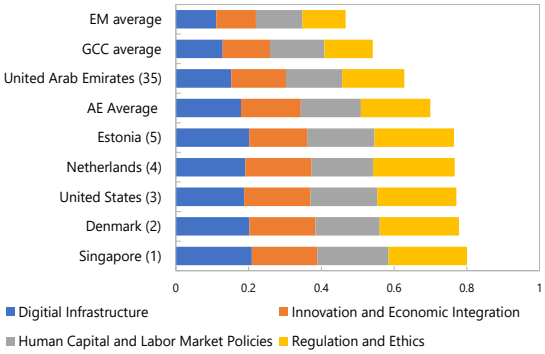
9. The UAE is well placed to capitalize on the gains from continued AI adoption in its priority non-hydrocarbon sectors. The UAE ranked 13th out of 188 countries on the Government AI readiness index, ranking highly on the government and data and infrastructure components and ranking 35th out of 174 countries in the IMF AI Preparedness Index (Text Figure 4). Thanks to its advanced digital infrastructure, its proactive policy frameworks that have created a regulatory environment that fosters innovation and its investments in AI education and talent development, the UAE has started and expects to continue to strategically deploy AI across key sectors such as health, tourism, education, financial services, logistics and manufacturing.

Text Figure 4. AI Preparedness

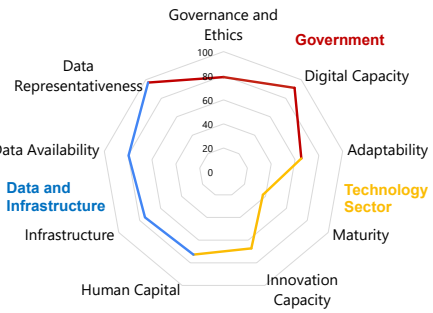
Government AI Readiness
(2024)



AI Preparedness Components
(2023)



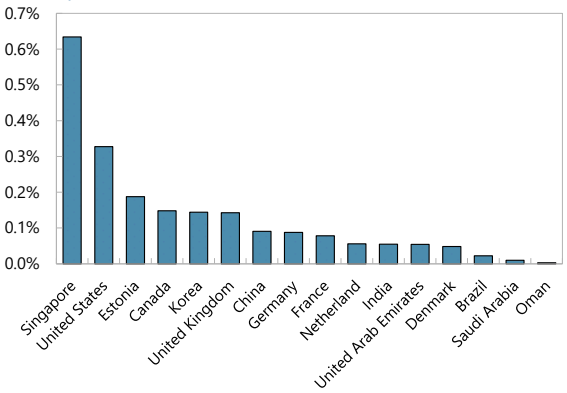
Government AI Readiness
(2024)



Sources: Oxford Insights, IMF AI Preparedness Index 2023, Government AI Readiness Index 2024 and IMF staff calculations.

10. The UAE can further benefit from AI through increased AI investments and the expansion of the sector within the UAE. Large scale investments have been the cornerstone of the UAE's AI strategy, with the public sector and G42 spearheading initiatives and projects. Continuing to attract private capital and international partnerships will be essential to sustain the expansion of the sector to further support diversification efforts and AI-driven productivity gains, especially in non-hydrocarbon sectors. In addition to the large investments, further fostering an AI startup ecosystem could help expand the sector's footprint in the economy while also attracting global AI talent. Efforts in this area could help the UAE gain more ground (Text Figure 5).

Text Figure 5. Venture Capital Investments in AI Start-ups
(Percent of GDP)



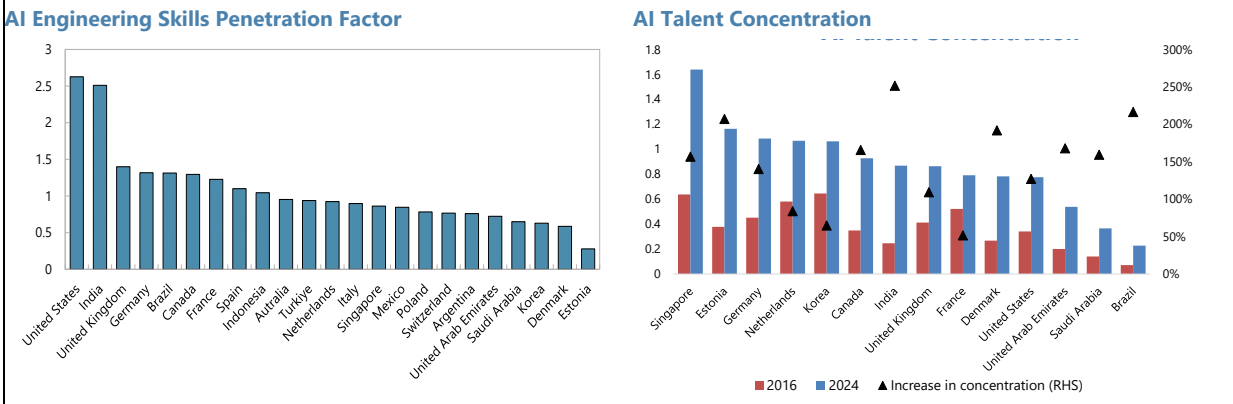
Source: OECD.AI (2025), data from Preqin, last updated 2025-07-30, accessed on 2025-08-07, https://oecd.ai/ and IMF staff calculations.

11. While AI offers opportunities for productivity and economic diversification both in the UAE and globally, it also presents a range of challenges that require proactive mitigation. One concern is the potential disruption to the labor market, as AI-driven automation could lead to job displacement while also potentially creating new jobs with new skills requirements. Addressing this will require robust re-skilling and up-skilling programs to ensure workforce adaptability and inclusion. Additionally, a rapid digitalization of the economy heightens cybersecurity vulnerabilities. Mitigating AI-related cybersecurity risks requires a multilayered approach, combining traditional security practices with AI-specific defenses. Furthermore, AI infrastructure—especially data centers and high-performance computing – is energy and water intensive.

12. To address these challenges, the UAE has been making considerable efforts, which should continue to stay ahead in the rapidly evolving AI landscape.

- **It has laid the groundwork for a future-ready labor force equipped to meet the evolving demands of an AI-driven economy ensuring that AI can help boost labor productivity.** Since launching its national AI strategy in 2017, the UAE has significantly expanded its domestic talent pool through initiatives such as government upskilling programs, AI-focused university curricula, and the establishment of the Mohamed bin Zayed University of Artificial Intelligence. These efforts, along with the considerable investments in AI have helped the UAE increase its AI talent concentration since 2016 (Text Figure 6). And, with an average penetration of AI skills lower than the world average, the UAE has space to further attract AI talent and up-skill its existing labor force (Text Figure 6).

Text Figure 6. AI in the UAE Labor Force



Source: OECD.AI (2025), data from LinkedIn Economic Graph, last updated 2025-04-07, accessed on 2025-08-07, https://oecd.ai/. This chart shows the prevalence of workers with AI skills – as self-reported by LinkedIn members from 2016-2024 – by country and against a global average benchmark. The UAE's average penetration of AI skills is 0.725 times the global average across the same set of occupations.

- **UAE has taken significant steps to mitigate cybersecurity risks in line with its National Cybersecurity Strategy (updated in 2025) focused on five key pillars: governance, protection, innovation, capacity building, and partnerships**. Key actions include the introduction of cybersecurity laws, such as the Cybercrimes Law and Personal Data Protection Law, and the establishment of the Cybersecurity Council in 2020 to ensure a secure and

sustainable digital transformation. The government enforces standards like the UAE Information Assurance Standards and uses AI-driven tools like the National Information Assurance Platform (NIAP) to monitor compliance of government entities with cybersecurity standards. Regular cyber drills, public awareness campaigns, and workforce development initiatives further strengthen the country's cyber resilience.

- **The UAE is investing in alternative power sources like solar and nuclear, and efficient desalination, while deploying smart grids and AI-driven tools to optimize energy and water use.** Data centers are being designed with advanced, low-water cooling systems and powered in part through alternative power sources. Utilities like Dubai Electric and Water Authority (DEWA) are adopting digital twin platforms and real-time monitoring to reduce waste and predict demand. The country is also enhancing water security under its Water Security Strategy 2036 through cloud seeding, efficient desalination, and smart water management.

Table 1. UAE: How Can AI Enhance Productivity in the Different Sectors of the UAE Economy?
(Share of 2024 nominal GDP, in percent)

Manufacturing (9.4%)	Healthcare (1.8%)	Wholesale and Retail Trade (12.5%)	Construction (8.3%)	Financial Services (10.2%)	Logistics and Transportation (6.5%)	Public Services (6.1%)
Automation of repetitive tasks, automation and streamlining of administrative tasks, optimizing energy use across the board.						
• Predictive maintenance. • Supply chain and inventory optimization through AI algorithms. • Waste reduction and timely delivery are especially important for the UAE as a global trade hub and as it seeks to enhance its freezones.	• Faster and more accurate diagnosis and clinical decision support using AI algorithms to analyze medical data. • Optimizing hospital operations leading to better capacity planning, reduced wait times, and more efficient use of resources.	• Demand forecasting and inventory optimization. • Personalized marketing and customer experience. • Optimized supply chain and logistics helping to reduce manual workload, improve customer engagement, and minimize operational costs.	• Project planning and scheduling optimization through AI algorithms. • Predictive maintenance, site monitoring and safety compliance • Adoption of autonomous equipment and robotics can help deliver projects faster, safer and more sustainably.	• Fraud detection and risk management through analysis of big data. • Predictive analytics and regulatory compliance and reporting, help improve accuracy and security and enable faster data-driven decisions.	• Predictive maintenance, warehouse automation and inventory management. • Route optimization and real-time fleet management. • Demand forecasting and load optimization and smart port and airport operations help improve overall efficiency, speed up cargo movement, and reduce delays and bottlenecks.	• Predictive policy and resource planning. • Smart cities and infrastructure, especially traffic management, energy optimization, and public transport systems help deliver smarter, citizen-centric services.