Economic Growth and Complexity in the UAE: Summary Report

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May 2023

About the Growth Lab

The Growth Lab's multidisciplinary team, led by Professor Ricardo Hausmann, pushes the frontiers of research on economic growth and development policy. The Growth Lab advances academic research on the nature of economic growth and conducts applied, place-based engagements that aim to understand context-specific growth processes, address key constraints, and identify promising opportunities. Key frameworks developed at the Growth Lab include Growth Diagnostics and Economic Complexity. Growth Diagnostics is a systematic methodology that aims to identify the most binding constraints to better growth outcomes, allowing policymakers to take the most impactful actions. Economic Complexity is a growing field of research that sees the economy as composed of distributed knowledge and productive capabilities that must be networked in order to be used in production and sees growth as the expansion of both the underlying knowledge and its uses. Through its research and teaching activities, the Growth Lab has become a global thought leader offering breakthrough ideas, methods, and tools that help policymakers, stakeholders, and scholars find ways to accelerate economic growth and expand opportunity across the world.

Acknowledgements

This report was produced in the context of the ongoing collaboration between Harvard's Growth Lab and the Ministry of Economy of the United Arab Emirates (UAE), which aims to produce novel research-based inputs to inform an ambitious, forward-looking economic policy agenda. The goal of this collaboration is to provide rigorous research that can support the Ministry of Economy and related policy-making entities in their mission of promoting high-quality, sustainable growth and fostering structural transformation in the UAE. All opinions, findings, conclusions, and recommendations expressed in this report are the authors' sole responsibility.

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1. Background and Context

This document summarizes high-level findings on the United Arab Emirates' (UAE) growth trajectory, economic diversification record, and future prospects. It is based on the work carried out as part of an ongoing collaboration between Harvard's Growth Lab and the UAE Ministry of Economy (MoE). This collaboration aims to produce novel research-based inputs to inform an ambitious, forward-looking economic policy agenda. Over the last year, it has entailed research on various topics. These have included documenting the country's past growth path and potential for the future, understanding UAE's short-run macroeconomic and inflation dynamics, studying trade patterns and free-trade agreements, and looking into labor markets and productivity dynamics.

This document provides a summary of some of the research stemming from the first phase of work, drawing especially on two reports: *Elements of a Growth Diagnostic: The United Arab Emirates (Brenot et al, unpublished)* and *Economic Complexity: The United Arab Emirates (Tapia et al, 2023).* These two reports together lay out research on the UAE's growth model over the last two decades and use an "economic complexity" lens to analyze where future sources of diversification and growth might come from. The *Elements of a Growth Diagnostic* report mainly focuses on the past. It examines the UAE's growth performance between 2000 and 2019 (prior to the COVID-19 pandemic) to understand the drivers of the UAE's growth model and document the changes in the UAE economy during this time. *Economic Complexity: The United Arab Emirates* looks at the performance of the UAE's exports and industrial diversification using a "knowhow" and complexity lens, pioneered by Hidalgo & Hausmann (2009), and also suggests high-potential activities for further diversification.

As part of a broader research agenda, this summary document is meant as a companion piece to more than a year of past research, but also as a starting point for the next phase of collaboration between the Growth Lab and the MoE. In addition to this summary document and the reports it draws on, there is also a companion *Inputs for Policy Design - Tools for Economic Diversification* report. The report makes a more policy-oriented contribution, discussing more in-depth three concrete tools to achieve further economic diversification: foreign direct investment (FDI), Free Zones, and Sovereign Wealth Funds (SWFs).

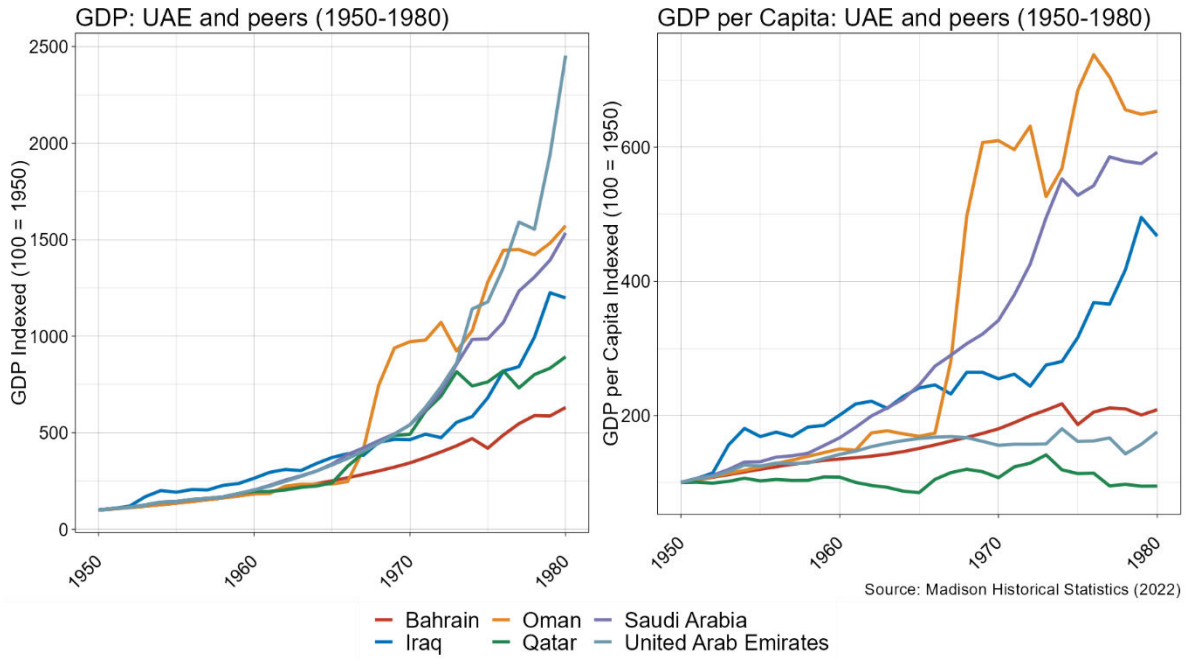
This summary document highlights the key themes and insights gathered during this past year, while also laying out a set of questions for future research. The rest of this document is structured as follows. Section 2 summarizes key themes of the UAE's past growth performance and its key drivers at an aggregate, national level. Section 3 goes deeper to describe the current state of the UAE economy by geography, and sector,

and documents the way the economy has already begun to diversify into non-oil activities. Section 4 further examines the UAE's diversification path using a complexity approach to better shed light on the UAE's future diversification prospects. Finally, Section 5 concludes with a set of key takeaways and themes for further research.

2. National Growth Performance and Growth Model

The growth performance of the UAE has been nothing short of transformational. Between the 1950s and 1980, the GDP of the region that would become the UAE would grow at an annualized rate of 11% per year. This growth was on the back of large discoveries of oil deposits in Abu Dhabi that also had spillovers in the development of the ports in Dubai and Sharjah, in conjunction with historical trading activities. Massive GDP growth would be accompanied by a large increase in the UAE's population as there were both large natural increases in the population of UAE nationals and a large influx of foreign migrant workers. By the end of this period, the UAE had grown to a population of over 1 million with a GDP of more than 120 billion (constant 2015 USD) and a GDP per capita of over 100,000 (constant 2015 USD), making it one of the wealthiest countries in the region and the world (Figure 1).

Figure 1. GDP Growth in the Region between 1950 and 1980

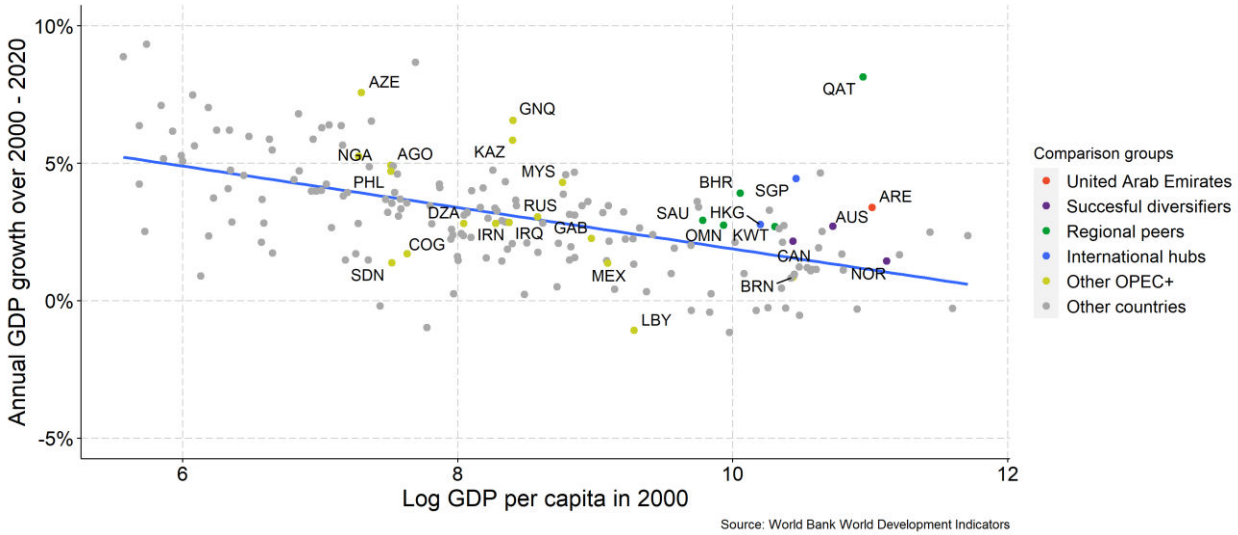


Source: Elements of Growth Diagnostics: The United Arab Emirates (2022)

The two decades between the 1980s and 2000s were a period of mixed growth for the UAE. Population continued to rise, more than tripling from over 1 million to nearly 3.5 million again driven by both large natural increases in the population and continued inflows of migrant workers at a steady pace. GDP growth was very volatile and as a whole stagnated in the first decade of this period before growing at a healthy and steadier ~4.2% per year between 1990 and 2002, according to World Development Indicators data.

The past two decades have been another period of transformational growth in the UAE. Between 2000 and 2019, the UAE economy grew at about 3.7% per year. This has meant that the economy has nearly doubled in size from about 200 billion (constant 2015 dollars) to more than 400 billion. This growth was high for the level of income and relative to other peers (Figure 2). Steady growth was in the context of a commodity boom in the first part of the 2000s but also built on a business environment that helped the country diversify into non-oil sectors and an immigration system that continued to allow more people from around the world into the country. At the same time, prudent macro-fiscal management meant that the UAE was able to implement countercyclical policies during the Global Financial Crisis (and later during Covid). The UAE continued to display very high savings rates (in excess of 40% to 50%) and was able to accumulate assets representing multiples of annual GDP in various sovereign wealth funds. Population, during this period, grew from 3.2 million in 2000 to more than 9.3 million in 2020, representing an annual growth of 5.4% per year. However, much of that population growth was especially concentrated between 2004 and 2010 when the population grew from nearly 4 million to nearly 8.5 million (i.e., 13% per year).[1]

Figure 2. Annual GDP Growth in the UAE and peers between 2000 and 2020



Source: Elements of Growth Diagnostics: The United Arab Emirates (2022)

In the past two decades, growth in the UAE has been primarily based on large increases in productive capital and the active population, though the contribution from increasing migration slowed down in the second half of the period. In the 2000s, the UAE saw a massive influx of foreign migrant labor as high oil prices increased demand in many sectors ranging from construction, real estate, finance, tourism, and retail. This

[1] Growth Lab, "Elements of Growth Diagnostics: The United Arab Emirates."

coincided with massive capital investment in infrastructure and building (especially in Dubai but also in the rest of the country) by the government and private sector. Over the period and even before, this included making large strategic bets, including in logistical capacity, real estate, the airline industry, and telecoms. In the second decade of the 2000s, migrant inflows slowed down and growth was primarily through capital investments. The measured contribution of TFP has been negative which reflects the fact that much of the labor migration into the UAE has tended to be lower education migrant labor that will work in less productive non-tradable sectors like construction, retail, or hospitality. Given that the value added per worker in these sectors is less than average for all sectors, this will mechanically result in lower "TFP growth" as the composition of the labor market moves to these non-tradable sectors. The negative TFP contribution in the second half of this period is perhaps more concerning as it is less due to the mechanical effects of increased migration and coincides with a slowdown in overall growth even before the COVID-19 shock (Figure 3 and Table 1).

Figure 3. Evolution of Factors of Production in the UAE (1975-2020)

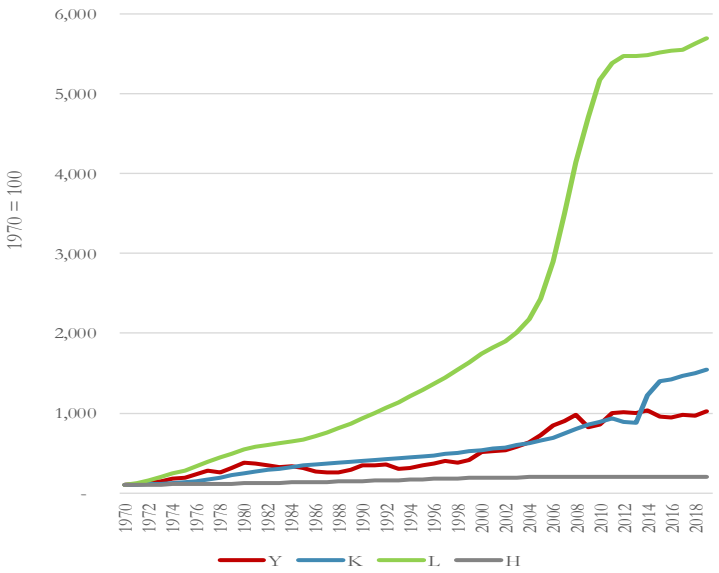


Table 1. Growth Decomposition by Period

		contribution from			
	Y	**K**	**L**	**H**	**TFP**
2000-2009	5.4%	4.0%	2.9%	0.1%	-1.6%
2009-2019	2.2%	4.2%	0.6%	0.0%	**-2.7%**
2000-2019	**3.7%**	**4.1%**	**1.8%**	**0.1%**	**-2.3%**

Source: Elements of Growth Diagnostics: The United Arab Emirates (unpublished)

Besides achieving robust levels, growth has also been shown to be less volatile and more resilient to shocks. High savings, fiscal surpluses, and accumulation of assets in sovereign wealth funds allowed the UAE to engage in counter-cyclical fiscal policies both during the GFC and Covid-19 shock. In addition, compared to previous periods, growth in the UAE has been less volatile and less correlated with the oil cycle, though oil prices still impact overall growth dynamics. Our research shows that this has been due in part to the government's ability to engage in counter-cyclical fiscal policies even as oil prices declined. Specifically, because the UAE was more prudent in saving and accumulating assets during the oil boom years compared to its peers, it did not see the same decline in government expenditures post-2014 that some of its peer countries in the GCC experienced.

High commodity prices and the resumption of global travel and tourism have led to a robust recovery since 2022. Forecasts suggest that the UAE can expect a large increase in oil revenues and travel and tourism as the world continues to reopen and resume regular activities. In the first half of 2022, over 7 million international tourists visited Dubai returning tourism close to pre-pandemic levels.

The overall growth performance of the UAE over the last twenty years highlights both the strengths and weaknesses of its growth model. It is difficult to overstate the type of transformation that the UAE has seen in the last twenty years during which its economy has more than doubled and population more than tripled. The growth model has been one of using oil revenues to make investments at home and abroad and finance activities like construction, services, tourism, and other sectors while allowing many foreign workers to come to the UAE as migrant labor. Especially, in the first decade of the 2000s while oil prices were high, this led to substantial economic growth. However, growth based on factor accumulation alone may run out especially if such accumulation remains based largely on oil exports. With a population of nearly 10 million people, it is an open question how much the UAE economy can expand through more migration, which has fueled high growth in the past. Post-2010 low oil prices and low migration meant that factor accumulation and this GDP growth slowed down. Capital accumulation was not enough to keep GDP growth at high levels, and we saw growth slow down as oil prices fell in 2016 and 2017. Even before the COVID-19 shock, the UAE had seen several years of slower growth.

Barring additional large-scale migration and/or a global commodity boom, growth in the UAE will need to come from productivity increases. The analysis presented suggests that the UAE's high growth has partly come from oil exports driving up domestic spending and financing factor accumulation, especially of workers from abroad. This has allowed many sectors like tourism, construction, retail, wholesale trade, and others to

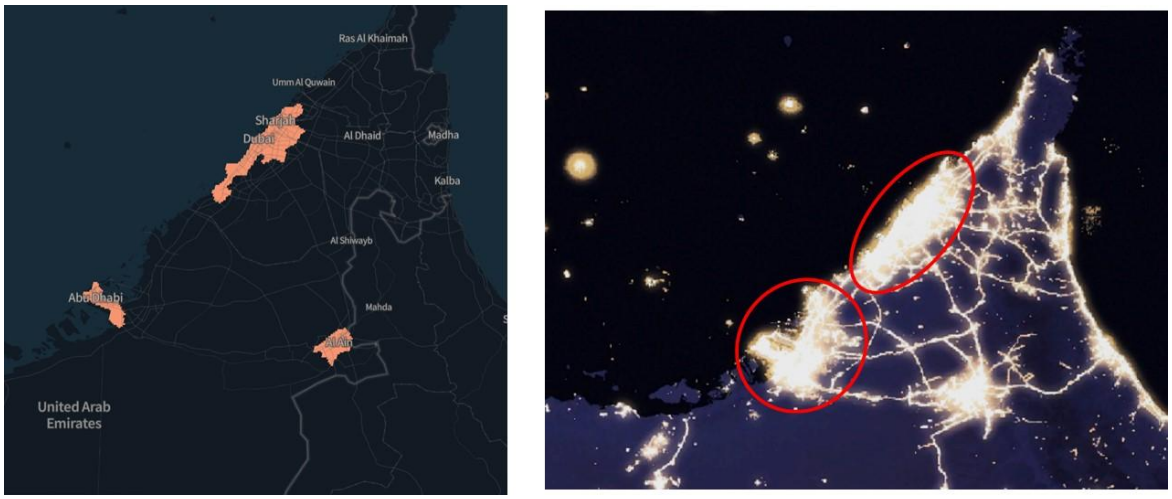
expand as well. However, there has been much less productivity growth within firms. A study by the IMF has suggested that productivity in private firms and government-related enterprises has stagnated in the past decade (Bukhari *et al.*, 2022). This somewhat shows itself in a negative TFP growth in the UAE, even as the mechanical effect of low-skill labor migration had diminished. In a context where the outlook for the oil and gas sector is at best unclear, finding a more productivity-based growth engine may become even more crucial.

In the case of the UAE, productivity increases may rely on attracting and growing new high-productivity activities more than on purely redeploying existing production factors. A typical angle is to consider ways that R&D and innovation can connect with existing firms to make them more productive. However, research on productivity suggests that beyond firm-level productivity it is critical to think about the allocation of factors of production, especially labor, across sectors and space, and about the generation of productive knowhow and capabilities through R&D and diversification (Hidalgo and Hausmann, 2009). This policy challenge may present itself differently in the UAE than in most countries, due to the transience of the labor force and the ability of the country to finance the attraction of high-productivity firms and individuals. In many countries, increases in total factor productivity (TFP) come from slowly moving labor and capital from less productive sectors to more productive ones. The UAE does have a large migrant workforce that is in relatively less productive non-tradable activities. Thus, one strategy might involve thinking about the other more productive sectors that such labor might be able to operate in. However, given that many of these workers are temporary, another angle would be to think about how the UAE might attract other workers with different skills to work in more complex industries. Any of these two strategies will need to examine the knowhow that the UAE already has and what additional knowhow it can attract or develop.

3. Sub-national and Sectoral Growth

The UAE's national growth story hides nuances by geography and economic sector. There are marked differences in the economic dynamics and performance by geography (especially between the Abu Dhabi and Dubai-Sharjah-Ajman agglomerations, Figure 4) and by broad economic sector (e.g., oil, non-oil non-tradable goods and services, non-oil tradable goods and services). Fully understanding the growth experience of the UAE means also understanding the differences and interplay between these different segments. The *Elements of Growth Diagnostics* report pays close attention to these differences and nuances.

Figure 4. UAE's Main Urban Agglomerations

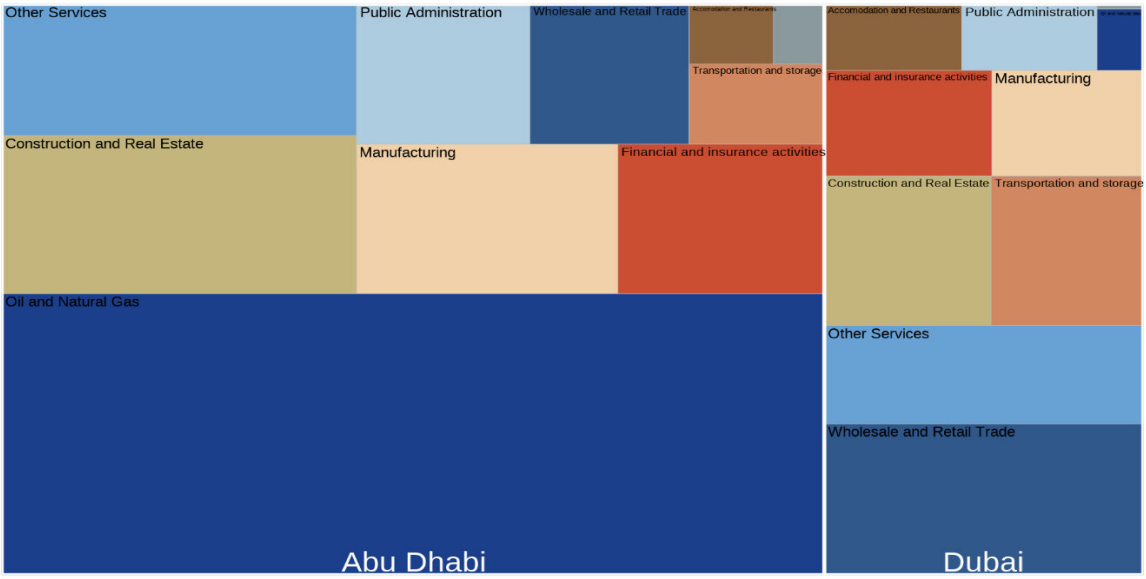


Source: Harvard Metroverse (LHS); Google Earth (RHS)

The economies of the two largest urban agglomerations in the UAE (those of Abu Dhabi City and its surrounding areas and that of the combined Dubai-Sharjah-Ajman) differ substantially from one another. These two urban agglomerations have a total population of over 7.4 million (~5.6 million in Dubai-Sharjah-Ajman and ~1.8 million in Abu Dhabi) and thus represent nearly 80% of the UAE's entire population and the large majority of its economic output. These two areas differ greatly from one another, as is visible when using Emirate-level economic composition as a proxy for the agglomerations (Figure 5). The economy of Abu Dhabi is somewhat dominated by oil and activities related to the oil industry, though it has also seen growth in non-tradable services like construction and some non-oil manufacturing activities. Dubai's economy is dominated by services, especially wholesale and retail trade but also transportation and logistics as well as some professional services. Despite having a smaller population, the Abu Dhabi economy has a much larger output because of its oil and natural gas production.

The differences between these two agglomerations have meant some divergence in the face of historical economic conditions and external shocks. Dubai's services sectors like construction, real estate, and tourism allowed it to grow much more rapidly in the oil boom of the early 2000s, but it was also hit much harder by the GFC than Abu Dhabi which was able to implement more aggressive counter-cyclical fiscal policy even as oil production was cut. Declines in oil prices after 2014 hit the Abu Dhabi economy more (pushing it into recession) than the Dubai-Sharjah-Ajman economy whose non-oil sectors continued to grow at 3% per year until COVID.[2] During this period, Dubai also saw its diversification into new sectors like professional services and ICT help it to continue to grow. Both regions were also hit by the COVID-19 shock but in different ways. The shock hit Abu Dhabi across many sectors and the recovery came from the manufacturing of metals and petrochemicals, whereas Dubai's logistics, wholesale and retail trade, and tourism industries were hit hardest, and these were also the sectors that led its recovery.

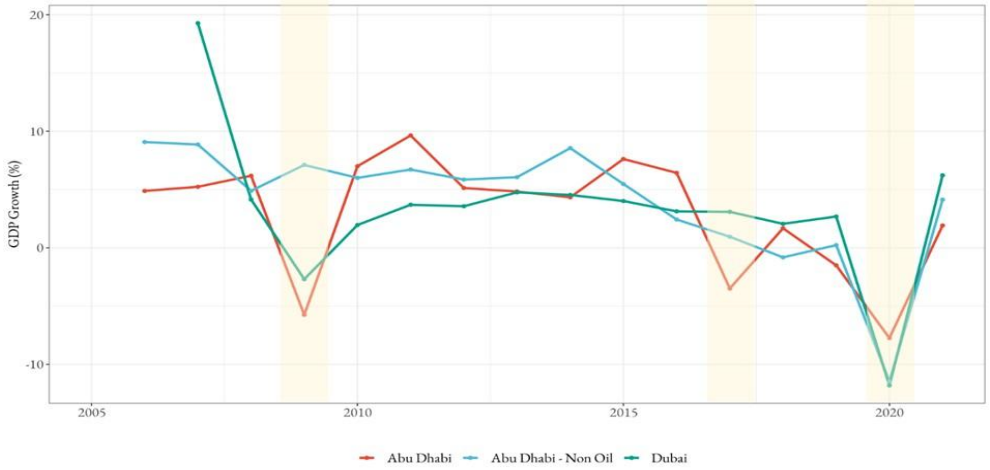
Figure 5. GDP Composition in Abu Dhabi and Dubai (2019)



Source: Elements of Growth Diagnostics: The United Arab Emirates (unpublished)

[2] Growth Lab, "Elements of Growth Diagnostics: The United Arab Emirates."

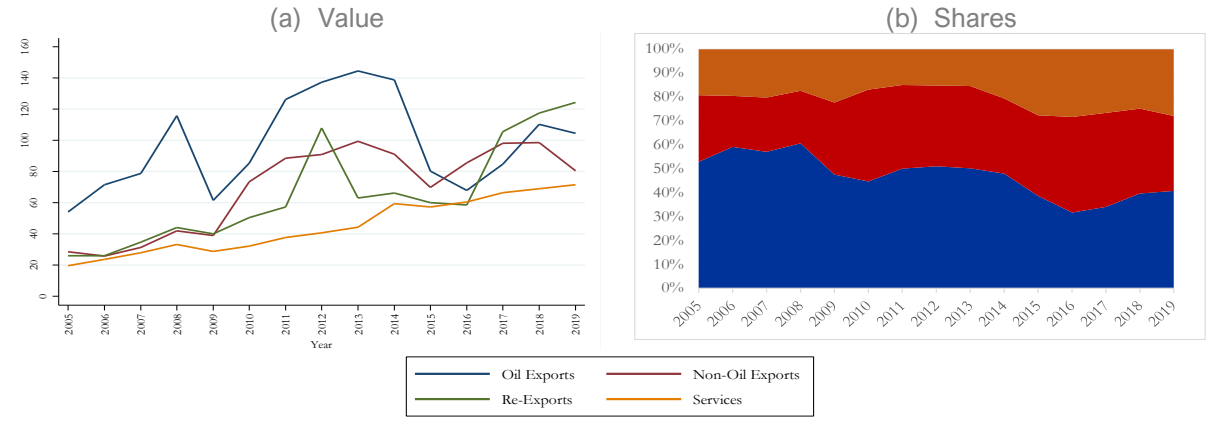
Figure 6. GDP Growth in Abu Dhabi and Dubai (2005-2021)



Source: Elements of Growth Diagnostics: The United Arab Emirates (unpublished)

Despite the continued importance of oil in the UAE's export basket and overall growth dynamics, the past twenty years have seen substantial progress in diversification especially in exports. The UAE has seen some success in growing its non-oil exports. From 2005 to 2019, non-oil goods exports grew at a brisk 7.7% per year. The diversity of these exports also improved with the UAE entering some new products. Non-oil service exports have grown even stronger during this time at 9.7% per year, growing by a factor of 3.5. Performance across this period is not uniform. From 2005 to 2012, all export sectors saw robust growth. Between 2012 and 2016, oil, non-oil, and re-exports all fell or stagnated. Non-oil non-re-exports are still stagnant overall. On the other hand, services exports have seen steady and consistent growth during the entire period.[3]

Figure 7: Exports by Type, inc. Re-Exports (2005-2019) - UAE



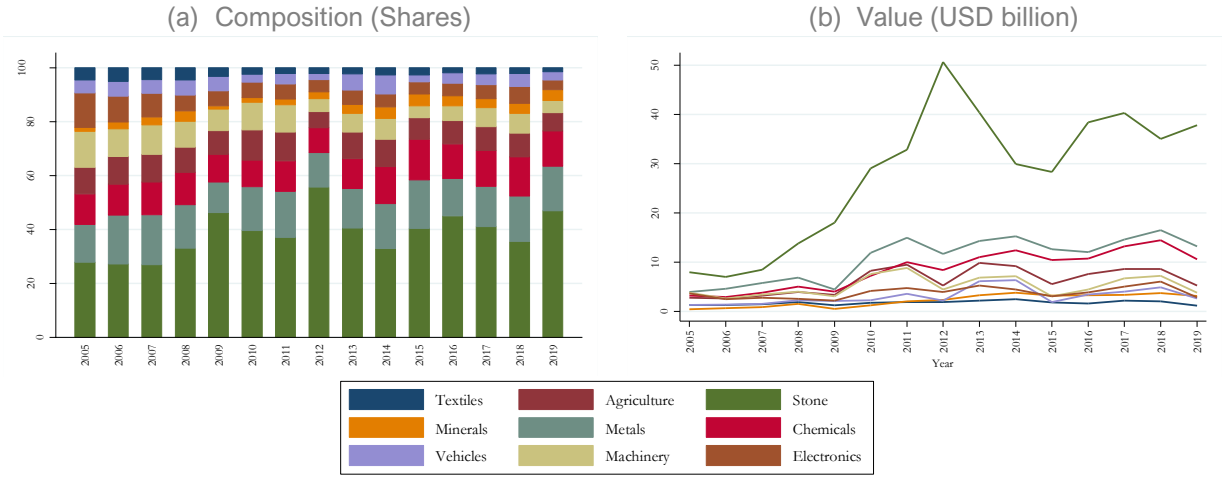
Source: Elements of Growth Diagnostics: The United Arab Emirates (2022)

[3] See Growth Lab, "Economic Complexity: The United Arab Emirates." for a more granular breakdown of the UAE's export performance in the last 20 years.

On the goods side, the UAE has become a major shipping and logistics hub allowing it to be one of the largest re-exporters in the world. Re-exports make up 40% of the UAE's total goods exports, with a heavy representation of electronics, vehicles, and textiles. There has also been substantial growth in re-exports of gems, stones (e.g. gold), and diamonds. The UAE's strength as a re-exporter comes from its location but also the fact that it is often easier and more effective to send goods to the UAE first before they make their way to their final destination in markets such as Saudi Arabia, Iran, or India.[4]

Outside of re-exports, the UAE's performance in other non-oil goods exports has been positive but also more mixed since 2012-2013. Non-oil and re-export goods exports have grown a little more than 5% per year between 2005 and 2019. Much of this growth has been concentrated in stone exports, especially between 2005 and 2012 (Figure 8). There has also been strong growth (albeit from a low base) in chemicals and metals, again the bulk of this growth coming between 2005 and 2012. Post 2011-2012, we can see that most non-oil goods sector exports have more or less stagnated.[5] In addition, our analysis finds that many of these export sectors are in fact energy intensive and so may themselves be reflective of the UAE's low energy costs. This in turn may make a continued comparative advantage in heavy industries dependent on an ambitious domestic energy generation decarbonation agenda.

Figure 8: Composition and Value of Non-Oil Goods Exports by Section (2005-2019) - UAE



Source: Elements of Growth Diagnostics: The United Arab Emirates (2022)

The UAE has seen massive growth in its service exports, albeit from a low base and concentrated in a few sectors. In 2019, according to the WTO, the UAE's service exports

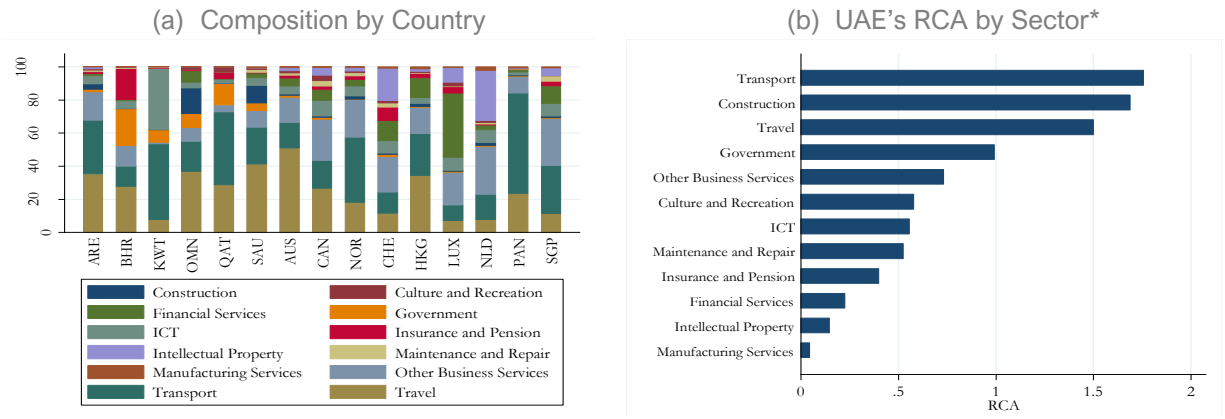
[4] Ibid.

[5] The Elements of Growth Diagnostics: The United Arab Emirates (unpublished) goes into much finer detail on the performance of specific goods sectors at a more granular level

stood at around USD 70 billion (3.5 times the value in 2005). Three broad sectors (i.e., trade, transport, and other business services) make up 90% of the UAE's service exports. Travel and transport are especially important in absolute and relative terms, which reflect the UAE's status as a travel and trade hub (Figure 9). As discussed below, there may be ways for the UAE to strengthen its role as a hub for many other activities as well. While their overall share is small, exports of ICT and business services have grown very rapidly. This is perhaps another area for the UAE to focus on future efforts for growth. As shown earlier, services exports have been steady in their growth, which is a boon for a country that can otherwise be exposed to various external shocks.

A large part of the diversification successes that we document can be traced back to foreign direct investment and Free Zones. Many re-exporters and service exporters are foreign companies that have invested in the UAE and set up shop in one of the many free zones in the country. 40% of the country's exports (including re-exports) occur from the free zones.[6] As such, the difference in the industrial structure of Abu Dhabi and the Dubai-Sharjah-Ajman agglomerations also reflects the larger role that Free Zones and their non-oil exports have historically played around Dubai. Going forward, FDI and free zones are likely to remain critical "agents of change" for encouraging greater diversification in the UAE, deepening the country's footprint in budding high-value activities, and attracting new ones. In another report, entitled *Inputs for Policy Design - Tools for Economic Diversification*, we provide additional details on how the UAE can leverage further its successes with FDI, Free Zones, and Sovereign Wealth Funds (SWF) to deepen economic diversification.

Figure 9: Composition of Services Exports by Sector (2019) - UAE and Benchmark Countries



Source: Economic Complexity in the UAE (2023). Note: Relative to total trade in services in the world

[6] See Growth Lab, "Elements of Growth Diagnostics: The United Arab Emirates." for more details

4. Diversification from a Complexity Lens

The report *Economic Complexity: The United Arab Emirates (Tapia et al, 2023),* uses a complexity and knowhow lens to assess the diversification performance of the UAE and suggest pathways for diversification for the country. The framework of Economic Complexity developed by Hausmann *et al*. (2009) suggests that economies become sustainably wealthy by building on their productive knowhow to progressively produce more complex goods and services. The research based on this work makes use of a country's export data and other industrial production data to measure some metrics of the country's productive capabilities that are latent in its current production, as well as provide insight into what types of diversification are aligned with existing knowhow or which might require larger "jumps". Prior research has shown that complexity metrics are predictive of future growth, diversification, and which products a country can move to in the future.

One such metric is the ECI (Economic Complexity Index), which has been relatively stagnant for the UAE between 2005 and 2019, despite this period displaying rapid growth even in non-oil exports (Figure 10). As a large oil exporter, the UAE has a complexity score that is below the world average. Beyond the mechanical weight of oil, which has low complexity properties, the report shows that the proximate driver of the UAE's low complexity is two-fold. First, the UAE has relatively less presence in broad sectors that tend to be complex on average (e.g., machinery). In addition, even when it has a presence in more complex broad sectors, the UAE tends to produce less complex products in those broad sectors. For example, the little presence that the UAE has in machinery production tends to produce the less complex (lower Product Complexity Index or PCI score) products in those broad sectors.

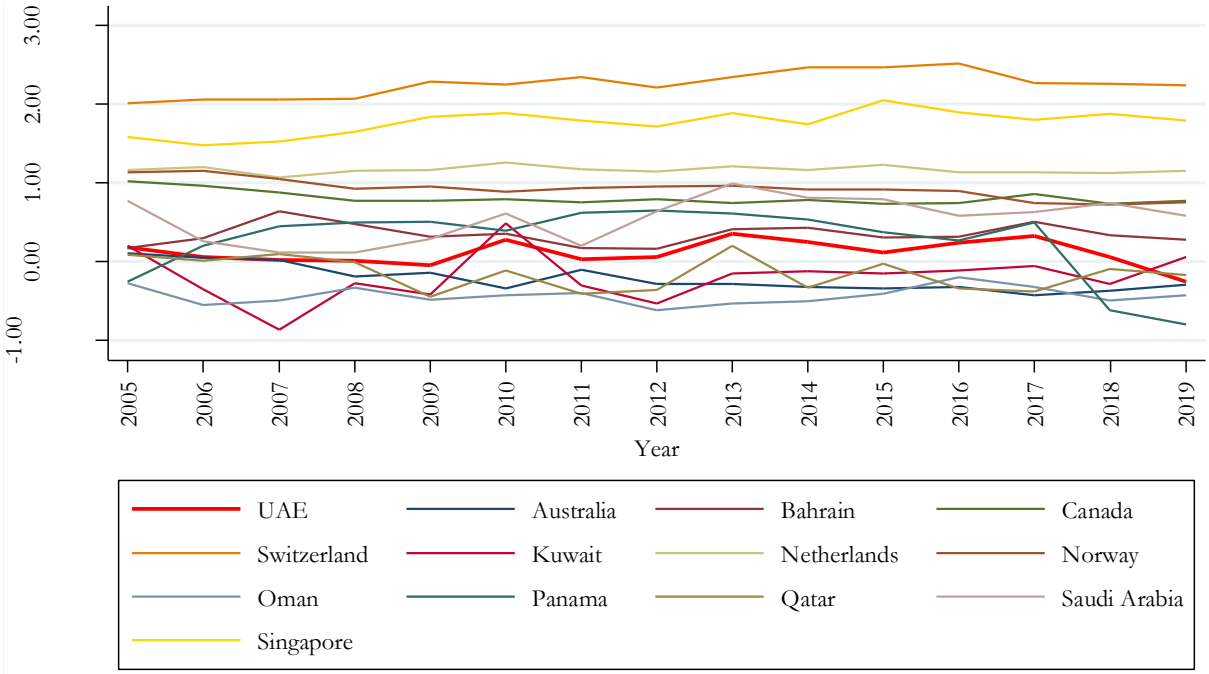
Even in services, the UAE's comparative advantages tend to be in lower complexity services. Analysis of service complexity is fraught with data issues, but the relatively aggregate trends show that the UAE's services strengths (from a relative point of view) are in the lower complexity services of transport, travel, and construction. The UAE has seen strong growth in more complex services like financial services, and other business services, but overall these export values are still small as growth has come on top of a low base (Table 2).[7]

An additional challenge is that the UAE's existing knowhow is far away from (*i.e.*, not very related to) more complex industries. However, we can use the tools of economic

[7] Some of these services make up a larger share of domestic value-added or employment than of exports. In that sense, relying on export metrics specifically may underestimate the progress of the diversification towards higher-value services. However, the ability to export may remain the best yardstick for having reached an actual comparative advantage in a given economic activity.

complexity to help identify sectors for focused diversification strategies. We use a measure called the Complexity Outlook Index (COI) to assess how "close" or far away more complex opportunities are to a country's existing production. The UAE overall has a low COI score especially compared to its peers. Previous research has shown that countries with lower COI scores tend to find it more difficult to make jumps to more complex products. However, these set of metrics also allow us to create a process for identifying potential industries and sectors for diversification, balancing a need to expand into sectors that are attractive from a complexity or future complexity point of view and which are not too far away from one's existing set of capabilities. This can be combined with other data and considerations that are also important and not captured by complexity metrics.

Figure 10: Economic Complexity Index (ECI) (2005-2019) - UAE and Benchmark Countries



Source: Growth Lab, "Economic Complexity: The United Arab Emirates" (Cambridge, MA, March 2023).

Table 2. Relative Comparative Advantage by Services Category (2019) – UAE

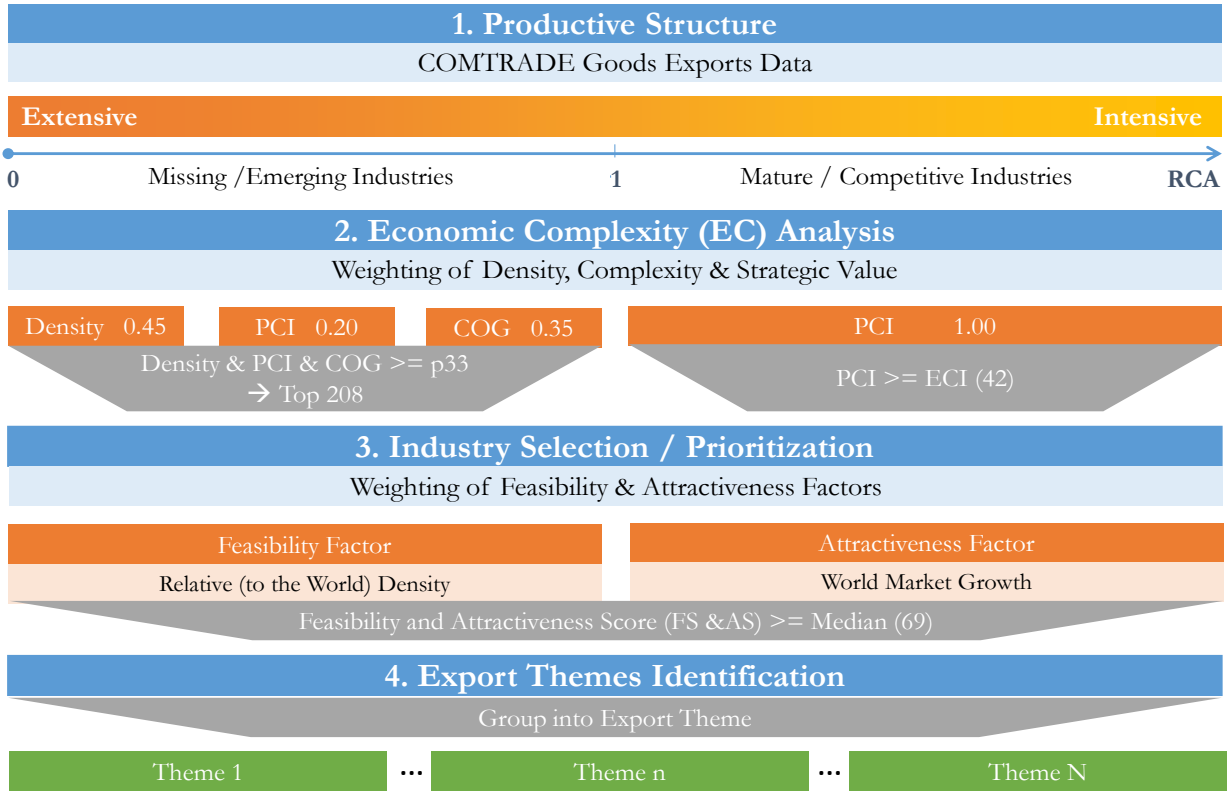
name	export_value	rca	M	pci
Manuf. services on physical inputs	64,034,171	0.05	0	0.28
Maintenance and repair services	654,925,467	0.55	0	1.32
Transport	23,454,405,838	1.99	1	-1.30
Travel	25,326,708,561	1.71	1	-1.80
Construction	2,191,048,435	1.85	1	-0.06
Insurance and pension services	843,461,839	0.54	0	0.48
Financial services	1,132,417,561	0.28	0	1.95
Charges, intellectual property	805,251,821	0.17	0	3.84
Telecom, computer, and information	3,488,080,095	0.60	0	0.28
Other business services	12,336,793,587	0.80	0	0.86
Personal, cultural, and recreational	594,457,475	0.63	0	-0.06
Government goods and services	1,114,767,281	1.10	1	-2.28

Source: Growth Lab, "Economic Complexity: The United Arab Emirates"

Figures 12 and 13 summarize the approach taken in the *Economic Complexity: The United Arab Emirates* Report to identify products, sectors, and consequently key themes for a potential UAE diversification strategy. To make the most of the available data sources, we take different approaches for goods and services. In both cases, we start with an analysis of the productive structure of the UAE economy to separate the analysis further between activities on which the UAE is already specializing (the "intensive margin") from activities that would be newer to the AUE (the "extensive margin"). Both types of activities can contribute to future diversification. For goods, we then conduct complexity analysis and use measures of global specialization and global growth to come up with key product themes. For services, we start with global demand growth to look only at service sectors that seem to have high or growing global demand and then use different feasibility (using co-location of employment and firms within industries) and attractiveness (in this case wages) to filter down to key themes in services.[8] The identified broad sectors are shown in Table 3.

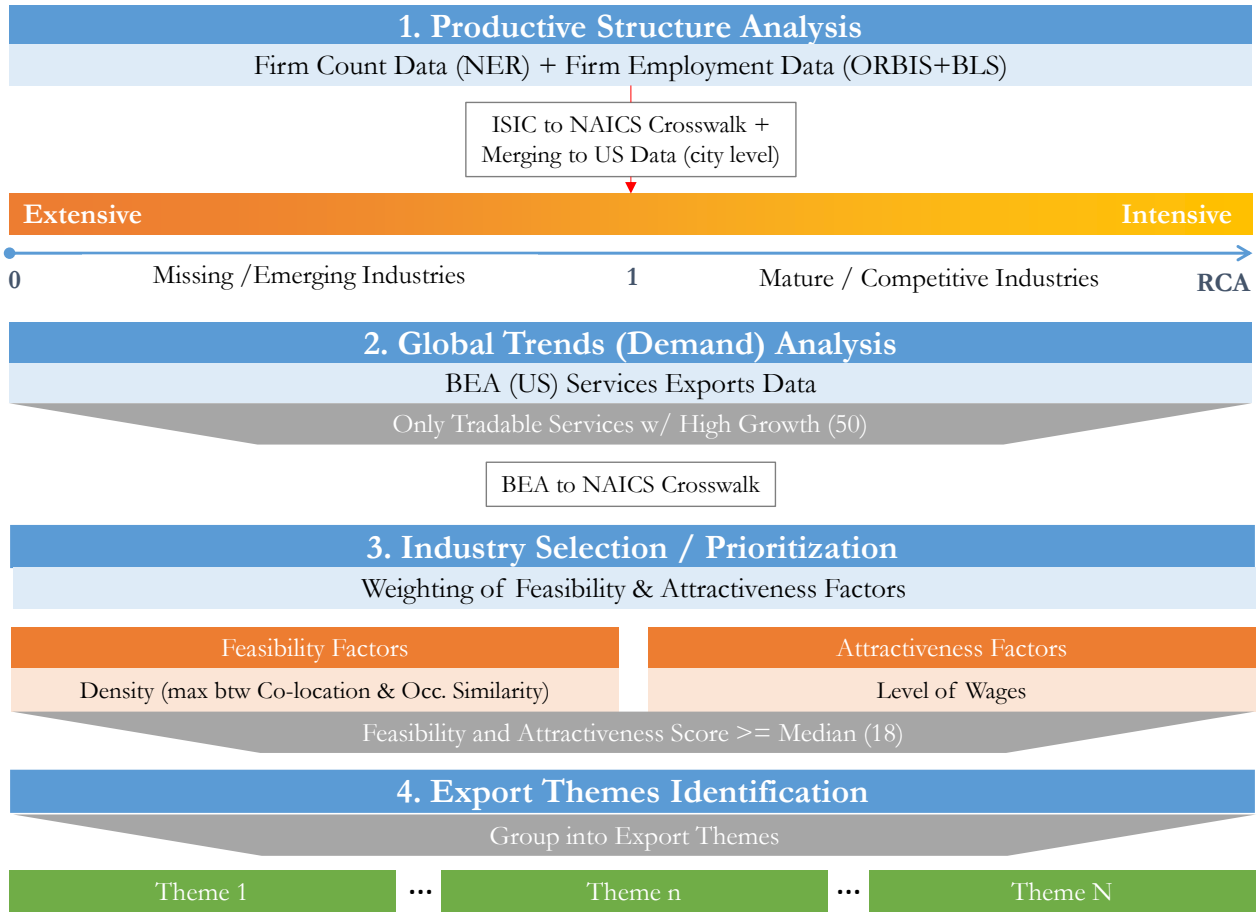
[8] Further details of the methodology and discussion of data sources and other issues can be found in Growth Lab, *Economic Complexity: The United Arab Emirates*.

Figure 11: Sector Identification Process for Goods



Source: Growth Lab, "Economic Complexity: The United Arab Emirates"

Figure 12: Sector Identification Process for Services



Source: Growth Lab, "Economic Complexity: The United Arab Emirates"

To achieve its diversification goals, the UAE will have to focus on the 'what', but also on the 'how': beyond identifying the right opportunities, the country will need to make the most of the policy tools at its disposal to make diversification happen. FDI promotion, Free Zones, and sovereign wealth funds are three tools that the UAE has historically used with success to attract foreign companies and expand export sectors. It will need to use these strengths to further diversify while adapting its approach. This is discussed in more detail in the companion report *Inputs for Policy Design - Tools for Economic Diversification*. It is also important to note that although FDI promotion, Free Zones, and SWFs have been the major tools of diversification to date, there are other tools to consider, which may be more relevant in the future. Domestic entrepreneurship, skilled immigration (whether for salaried work or entrepreneurs), science and technology policy, the educational system, these may all play a larger role for future diversification than they have in the past, and may deserve further study and judicious policy efforts.

Table 3. Key Service and Goods Themes for Diversification

Section	Themes
Services	ICT
	Financial Services
	Business Services
	Healthcare
	Creative Industries
Goods	Food
	Metals
	Chemicals
	Plastics
	Machinery

4. Conclusion and Way Forward

The UAE has seen a dramatic transformation and strong growth in the last twenty years, but the drivers of future growth will likely be different from those of past growth. It is important to emphasize how much the UAE has been able to grow and change. It has doubled its economy and increased its population by even more than that. Much of this growth has been a combination of using revenues from oil exports to allow for the expansion of non-tradable activities such as construction and trade, placing large strategic bets that have overall proven successful, and allowing for massive amounts of migration from other countries. Much of the UAE's past growth might be described as coming from factor accumulation supported by oil: the large expansion of the population through such migration especially of low-skilled workers has been a major driver of growth, as have been capital investments. However, this may not be possible going forward barring a large oil boom or additional large-scale migration.

The UAE has made great strides in evolving into not just an oil exporter but also a hub for trade, travel, and logistics as well as a destination for tourism. Increasingly, it has been able to leverage its role as a hub to massively expand re-exports, develop capabilities in sectors like metals and chemicals, and has used its open immigration system to bring in more high-skilled services and company headquarters. This has been especially true in the Free Zones concentrated in the Dubai-Ajman-Sharjah agglomeration but also in areas of Abu Dhabi. Leveraging successful national air carriers, the country has also developed into a travel hub and a global tourist destination.

Still despite this progress, there are weaknesses in productivity growth, an incomplete diversification towards high-value activities and some difficulties in developing a domestic and globally connected innovation ecosystem. If anything, growth through factor accumulation has meant that productivity has stagnated or declined. Even prior to the COVID-19 shock, we saw that a combination of low oil prices and lower migration (which are themselves correlated) meant that the UAE saw slower growth. Going forward, as factor accumulation may have run its course, it is important for more growth to come from these more dynamic sources. From now on, the UAE's growth agenda is a productivity agenda.

Growth through productivity would mean a different approach. For instance, it involves thinking about the ways that migrants can be employed in more complex activities, how the UAE can continue attracting higher-skill labor and companies in more complex industries, and thinking through the ways that the UAE might revamp R&D efforts to help local firms, especially in high-tech industries, become more innovative and productive.

The UAE will need to do even more to diversify into the right activities, using the right policy tools. Complexity analysis suggests that the UAE will struggle more than perhaps other countries in diversification efforts as it has low ECI and is far away from other opportunities. Still, we have identified potential opportunities across 5 service and 5 goods themes that could be engines of a diversification strategy. In addition, the UAE can rely on its track record using FDI promotion, government investment, and free zones to make a coordination push for increased diversification and "complexification".

Finally, future diversification efforts will also need to take into account global trends in trade and decarbonization. The UAE can continue to play a key role as a trade hub and its efforts to integrate further through free-trade agreements might be useful as supply chains in the world readjust to global politics. At the same time, potential future evolutions towards more regionalized trade might make the emergence of a more domestic growth engine even more pressing. The global drive towards lower carbon emissions also represents a double-edged sword for the UAE. On the one hand, it might make its traditional comparative advantage in energy and energy-intensive activities come under threat. On the other hand, given its large resources and other areas of potential like solar energy, it could be an area of opportunity as well, provided the country formulates an adapted green growth strategy. As the decarbonization drive unfolds, the level of uncertainty in technological innovation and the global policy landscape remains high and makes policy formulation especially challenging. These are areas that are ripe for future research and policy experimentation which the Growth Lab will strive to contribute.

Bibliography

Bukhari, Hatim, Yevgeniya Korniyenko, and Marcello Miccoli. “IMF Staff Country Reports Volume 2022 Issue 051: United Arab Emirates: Selected Issues (2022).” imfsg. Accessed May 26, 2023. https://www.elibrary.imf.org/view/journals/002/2022/051/002.2022.issue-051-en.xml.

Tapia, Jorge; Bustos, Sebastián; Rao, Nidhi; Daboin, Jesus; Brenot, Clement; Prasad, Pankhuri; Barrios, Douglas; Hausmann, Ricardo. “The Economic Complexity of the UAE: Diversification into Goods and Services” Cambridge, MA, March 2023.

Daboin, Jesus; Lamby, Lucas; Tapia, Jorge; Prasad, Pankhuri and Brenot, Clement., “Inputs for Policy Design - Tools for Economic Diversification: The United Arab Emirates” (Cambridge, MA, May 2023).

Hidalgo, César A., and Ricardo Hausmann. “The Building Blocks of Economic Complexity.” *Proceedings of the National Academy of Sciences* 106, no. 26 (June 30, 2009): 10570. https://doi.org/10.1073/pnas.0900943106.