Using benchmarks to transform Dubai into a global city

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Dubai is the Arab World’s global city
It bridges East and West, as well as being a gateway to the MENA region

“Dubai has come of age as a global city.”

Source: GaWC.
Dubai is part of the United Arab Emirates (UAE)

It is the commercial capital of the country and preferred home for expats

- **Name:** United Arab Emirates (UAE)
- **Gvt type:** Federation of 7 emirates
- **Population:** 9.3 million
- **GDP (BN):** $325; $670 (PPP)
- **GDP/cap:** $35k; $72k (PPP)
- **Capital:** Abu Dhabi
- **Largest city:** Dubai (3.2m)
- **Life expectancy:** 76.8 yrs
- **Land area:** 83,600 km²
- **Founding date:** 02 Dec 1971
- **Legal system:** Mixed system of Islamic and civil laws
- **Expat population:** 88%
- **Literacy rate:** 94%
- **Oil share of GDP:** 25%
- **External debt (BN):** $172

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- **Exports:** $324 BN: Japan (14.8%), Iran (11.4%), India (9.6%), Korea (5.7%), China (5.5%), Singapore (5.4%), Thailand (4.5%)
- **Imports:** $248 BN: China (15.7%), India (13.4%), USA (8.9%), Germany (5.3%), Japan (4.2%)

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Data retrieved on 09 Aug 2016; with the exception of trade data extracted 16 Nov 2015 (except Japan imports)

Sources: CIA Factbook, IMF WEO, National Bureau of Statistics (NBS), Observatory of Economic Complexity (MIT), UN, WB Database, WHO
UAE is a federation of seven emirates
Local rulers (high autonomy) form the highest level of the government

UAE government

1. Federal Supreme Council

Executive branch

- Head of state: H.H. President Sheikh Khalifa bin Zayed Al-Nahyan (ruler of Abu Dhabi)
- Head of government: H.H. Prime Minister and Vice President Sheikh Mohammed bin Rashid Al-Maktoum (ruler of Dubai)
- Cabinet: Council of Ministers (appointed by the president) – currently with 25 members (5 female; 20 male)

2. President and vice-president

3. Cabinet

Legislative branch

- Federal National Council (FNC): Unicameral body with 40 representatives (20 appointed by the rulers of the 7 emirates) – currently with 9 female members
  - Appointed: 8 female; 12 male
  - Elected (advisory): 1 female; 19 male
- Seat distribution:
  - Abu Dhabi (8), Dubai (8), Sharjah (6), RAK (6), Ajman (4), Umm Al Quwain (4), Fujairah (4)

4. Federal National Council

Judicial branch

- Highest court: Federal Supreme Court (court president + 4 judges) – Dubai and RAK courts not subject to the federal Supreme Court
- Lower courts: Federal Court of Cassation; federal level courts of first instance and appeals courts; emirate-level court systems (outside of federal mandate)
Take a step back...

Dubai is in the heart of the MENA region (Middle East & North Africa)

- Women in Saudi Arabia are forbidden from driving
- Syria is in a civil war with Daesh committing untold atrocities
  - A proxy war is being waged in Yemen

- Post-Saddam Hussain Iraq is a failed state
- Egypt experienced a military coup that ousted the Muslim Brotherhood from power
  - Turkey is creeping slowly to a dictatorship under Erdogan
The MENA region is in a perennial state of strife. Wars, refugees, coups, terrorist attacks are an unfortunate part of life in MENA.
Yet somehow in Dubia, UAE...
A global city has emerged, with a diverse and tolerant population
But it was not always that way

In fact, Dubai was an unknown sparsely-populated desert outpost in 1971.

Although present-day Dubai has been inhabited since around 1095 AD, the UAE was established only in 1971. By 1975 Dubai’s population was still less than 200k and did not surpass 1m until after the current ruler* took power in 2006.

Dubai’s roots are as a fishing and pearling village anchored around the Creek, and later on as a trading port for the Arabian and Persian markets.

Full title: H.E. Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE, and ruler of Dubai
Transformation at first was slow (ca. 1990)

Dubai funneled petrodollars into infrastructure and good governance

In 1966 oil was discovered in territorial waters of Dubai; ensuing petrodollars were funneled to finance infrastructure development (e.g. Port Rashid), in contrast to other countries in MENA where oil wealth was hoarded and mismanaged/stolen.
But no one foresaw what Dubai would become

Fast forward a generation or so and…

With limited hydrocarbon wealth the fate of Dubai was uncertain…
(And given the ephemeral nature of oil reserves there was a definite temptation for those controlling it to hoard the wealth.)

“Prediction is very difficult, especially about the future.”
Neils Bohr (1922 physics Nobel laureate)
Today Dubai is a thriving metropolis (ca. 2015)
Within a two generations it transformed from desert outpost to global city

The growth in Dubai since the turn of the century has been nothing short of remarkable, with the emirate transforming into a global metropolis on par with the world’s great cities.
So how did Dubai manage to achieve this?

Hydrocarbon wealth is only an indirect driver of Dubai’s success

In spite of impressions, Dubai’s wealth is not based on oil. Peak oil (25% of GDP) has already passed (1980s); today it accounts for just ~2% of the economy.

Dubai’s oil reserves are small and not expected to be exploitable in the near future – the vast majority of the UAE’s hydrocarbon wealth is located in Abu Dhabi.

Sources: Dubai Statistics Centre, National Bureau of Statistics.
Bold government policy behind Dubai’s ascent

Dubai chose a path of good governance, benchmarking and being brash

UAE federation allows each emirate to pursue its own development path, but within a national framework. Dubai chose to “specialise” as its gateway to the world.

Sheikh Rashid (Sheikh Mohammed’s father) began with an ambitious vision to transform Dubai into a global city – so he had to be bold and audacious. Sheikh Mo. continued with the vision and doubled down on the “go big or go home” attitude. Policies are taken to build brand Dubai, rather than simply as a NPV decision.

The government structure allows for decisive actions that can be swiftly & efficiently executed. Thus the political hurdles for Dubai’s development goals are muted.
Leveraging its strategic location
A natural bridge for Europe and East Asia, and a gateway to MENASA

Strategically occupying the middle time zone between London and Hong Kong, Dubai lies at the crossroad of Europe, Asia, and Africa. British influence has made English the lingua franca in the country.

One third of the world’s population within a 4-hour flight of Dubai; two-thirds within an 8-hour flight. A natural gateway to Middle East, North Africa and South Asia (MENASA), as well as Africa.

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An open city connected to the world
Trade and connectivity are pillars of Dubai’s success

Dubai lies at the crossroads of Europe, Africa and Asia. Its ports connect it to world trade, and its position b/w Europe and Asia makes it a natural aviation hub.

- Jebel Ali Port is the world’s 9th busiest container port (TEU)
- DXB is the busiest airport by international passenger traffic and the most connected airport.* (As Emirates goes, so goes Dubai.)

* From Dubai there are non-stop flights at least three times a week to 93% of global cities outside of its home region.
Business-friendly and sociable environment
To attract businesses and talent Dubai hanged an “open for business” sign

- One of the biggest considerations for MNCs on where to do business is taxes. Dubai attracted by businesses by creating a low-tax environment – both for businesses and households.
- Moreover, it is an open city (hosting over 200 nationalities) offering attractive lifestyle, so employers find it easy to attract/relocate talent to the emirate.
Dubai chose a path that few would have foreseen; but it also got basics right

Some of the great development success stories have seen countries ignore the advice of “experts” who pushed countries to pursue growth in areas where they had a comparative advantage. (Korea was advised to specialise in wigs and ginseng, two sectors for which they had a comparative advantage in the 1950s – at the time its GDP/cap was just $100.)

- Dubai’s natural advantages seemed limited. But with no history in traditional sectors, it leapfrogged the traditional steps of development.
- Dubai’s motto is to “go big or go home.” Most sane advisers would have advised against most (if not all) of Dubai’s hallmarks: Aviation hub/Emirates; tallest building; largest mall; indoor ski resort; man-made islands
Where other saw challenges...

Dubai – the unlikeliest of places – saw opportunity

The MENA region is abundant in hydrocarbon wealth. Yet, the political instability of the region left it mostly ignored by investors. Leaders from the region did not help either by sending their money abroad with little regard to domestic development (i.e. no “skin in the game”). Religion and wealth extraction divided countries and led to corruption and/or iron fisted rule.

- No water? Desalination plant that is integrated with aluminum smelting plant (use waste energy/heat)
- A “barren” desert? Offer desert safaris
- Hot climate? Create an indoor ski resort and build an Olympic-sized ice hockey rink in a mall
- Unwelcoming region? Turn city into a global tourist destination
Government policy as a maximisation problem
Maximise social welfare choosing policy variables that achieve KPIs

The UAE government places great priority (and its legitimacy of rule) on delivering a high quality of life to its citizens. The UAE government accomplishes this through three primary means:

1. *Placing key performance indicators on government bodies to ensure transparent policymaking that works to improve the country*

2. Attracting expats to the country to help make the country prosperous

3. Creating laws favourable to locals and guaranteed employment through the public and semi-public sectors

\[ \max_{\{\kappa; \pi\}} W = \sum_{i=1}^{N} \omega_i W_i(\kappa; \pi) \]

s.t. \( V = \sum_{j=1}^{M} \vartheta_j V_j \geq \bar{V} \) and \( M = \min\{M\} \)

s.t. \( C(\kappa(\pi)) \leq B \) and \( \kappa_{t|0} \to \kappa_{t|T} \)

where \( W_i'(\kappa; \cdot) \geq 0 \) and \( W_i'(\cdot; \pi) \geq 0 \)

and \( g(\kappa; \cdot) \geq 0 \); and \( \kappa \) a set of KPIs and \( \kappa = \kappa(\pi_1, \pi_2, \pi_3, ..., \pi_L) = \kappa(\pi) \)
A culture of benchmarking
Everything is benchmarked and people are rewarded for meeting KPIs

The PMO assigns KPIs (indicators, indices, etc.) to every Ministry/Minister based on 3rd-party metrics – incentives also in place for private sector. Quantifiable targets give entities clarity on how to set policies and incentivizes parties to enact legislation aligned with Dubai’s (and UAE’s) development goals. In addition to normal set of KPIs, PMO also recently assigned “Project #1”: All ministries and entities to achieve #1 in at a set of international KPIs

KPIs

\[ \kappa_1, \kappa_2, \kappa_3, \kappa_4, \ldots, \kappa_{X-1}, \kappa_X \]

Entities

\[ \rho_1, \rho_2, \rho_3, \rho_4, \ldots, \rho_{R-1}, \rho_R \]
Benchmarking against leading economies

Borrow and localise successful policies that have worked elsewhere

Singapore transformed itself from a poor former British colony into a dynamic global powerhouse economy in just 2 generations. It is perennially ranked atop various benchmarks (e.g. WEF-GCR and WB-DBR).

Hong Kong is arguably the freest and most dynamic economy in the world. It is also the gateway to the Chinese market. Both Singapore and Hong Kong are world cities, with English the language of commerce.
Vision 2021: A set of “national agenda” indicators

UAE has laid out a clear strategic roadmap (w/ milestones) for development

Sources: UAE Vision 2021.

Cohesive society & preserved identity
Safe public & fair judiciary
Competitive knowledge economy
First-rate education system
World-class healthcare
Sustainable environment & infrastructure

How to measure success...
International reports are like report cards
An index score is like a GPA; its components show where to improve

Source: WEF-GCR.

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UAE competitiveness & international rankings

The outside world’s perspective of the UAE – “Brand Dubai/UAE”

Sources: Earth Institute, IMD, INSEAD, Legatum Institute, Transparency International, UNDP, WEF, World Bank, Y/Zen
Reports rely on national sources for data
But sometimes data chain is porous and/or ad-hoc reporting is done

Reports take data directly from international sources (DW)

Direct data submission

NSO produces data that DWS upload

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WEF Global Competitiveness Report (GCR)

The GCR is the commonly accepted flagship report on competitiveness

Institutions
Infrastructure
Macroeconomic environment
Health & primary education
Higher education & training
Goods market efficiency
Labour market efficiency
Financial market development
Technological readiness
Market size
Business sophistication
Innovation

Competitiveness pertains to the ability & performance of a firm, sub-sector or country to sell and supply goods & services in a given market, in relation to the ability & performance of other firms, subsectors or countries in the same mkt.

Source: WEF-GCR.

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Improve competitiveness by improving in its underlying indicators.

\[ s(x) = \begin{cases} 
6 \left( \frac{x - \min}{\max - \min} \right) + 1 & \text{if } x \in G \\
-6 \left( \frac{x - \min}{\max - \min} \right) + 7 & \text{if } x \in B 
\end{cases} \]

\[ S(x) = \sum_{k=1}^{K} \omega_k s_k(x) \]

The UAE has set itself a goal to be top-10 globally by 2021 (currently 17).

Source: WEF-GCR.
Doing Business 2016
Measuring Regulatory Quality and Efficiency

Starting a business
Dealing with construction permits
Getting electricity
Registering property
Getting credit
Protecting minority investors
Paying taxes
Trading across borders
Enforcing contracts
Resolving insolvency
World Bank Doing Business Report (DBR)

A recipe list of reforms to do to make “doing business easy”

Jim Yong Kim

The UAE has set itself a goal to be number 1 globally (currently 31)

Source: World Bank DBR.

\[
s(x) = \begin{cases} 
100 \left( \frac{\text{worst} - x}{\text{worst} - \text{frontier}} \right) & \text{if } x \in N \\
100 \left( \frac{x - \text{worst}}{\text{frontier} - \text{worst}} \right) & \text{if } x \in O
\end{cases}
\]

and \( S(x) = \sum_{k=1}^{K} \omega_k s_k(x) \)
Reports identify areas of strength and weakness
Policies are suggested to improve on weak points and maintain advantages

- Seek missing data
- Correct erroneous data
- Seek modification of report
- Indirect policies
- Direct policies
- Massage data
- Manage survey process

Identify weak areas of economy through international benchmarks
Identify local stakeholders to assume responsibility
Engage experts to help design policies to improve in areas identified

R&D and innovation infrastructure weak (limited data and low intensities)
Ministry of Economy to take ownership
Work with ECC/PMO to devise policies (e.g. dedicate budget for R&D; promote STEM in schools; etc.)
In era of low oil price priority now to become KBE

Global Innovation Index provides framework for policies using its indicators

The Global Innovation Index 2015
Effective Innovation Policies for Development

Target set for reducing UAE reliance on hydrocarbons

Grow knowledge sectors of economy by targeting GII indicators

Engage experts to help design policies to improve in areas identified
Leveraging Dubai Expo 2020 to steer growth
Expo to bring direct economic benefits and to boost Dubai’s KBE appeal

25 million visits to the Expo site, of which over 2/3 are expected to come from abroad

Expo budget of €5.2 BN capex and €1.3 BN opex; opex offset by oprev (€1.3 BN)

Creation of 250-280k jobs (every direct Expo job ➞ ~45-50 additional jobs created)

Economic impact:
- Direct: 15.7 BN
- Indirect: 6.0 BN
- Induced: 4.2 BN
- Total: 25.9 BN

Sources: DTCM, Dubai Expo 2020, DWTC
Economic diversification guided by benchmarking

Targeted sectors of economy can be mapped to international reports

**LOGISTICS PERFORMANCE INDEX**
- Busiest airport (international passengers, 2014): DXB (70.5 million)
- 9th busiest container port (TEU traffic): Jebel Ali

**TRAVEL & TOURISM REPORT**
- Tallest building: Burj Khalifa (828 metres)
- Largest mall (total area): Dubai Mall
- 5th most international overnight visitors (MasterCard, 2014): 11.95 million

**FINANCIAL DEVELOPMENT REPORT**
- 3rd most number of skyscrapers (150+ m): 148
- Most important financial centre between London and Hong Kong

**GLOBAL INNOVATION INDEX**
- Knowledge and innovation are seen as the next sectors to propel the Dubai economy
- Green technology and water resource management are key aspects for development and will rely heavily on science, technology and innovation

*Sources: Lloyd’s List Intelligence, MasterCard, Y/Zen. Photo: Masdar stock.*
Long-term growth and KBE requires HC

Human capital is the key that will unlock the knowledge economy

National Agenda has goals to transform Dubai (UAE) into a knowledge economy, but much work required to improve its “intelligence capital”.

Sources: Kai L. Chan (2016)
Thank you!
Questions & answers

شكرا
감사합니다

Danke, Евхаристий, Dalu, Köszönöm, Tack, Gracias, Dank, See, Merci, Sпасибо, 谢谢, ありがとう
APPENDIX: Historical performance of UAE

WEF-GCR, WB-DBR, UNDP-HDR, LI-LPI

Sources: Legatum Institute, UNDP-HDR, WEF-GCR, World Bank DBR.
## APPENDIX: Overview of MENA region

Dependency on oil and youth unemployment biggest challenges

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POP. (MM)</th>
<th>GDP ($BN)</th>
<th>GDP / CAPITA</th>
<th>GVT TYPE</th>
<th>GROSS CRUDE REV. ($BN)</th>
<th>OIL SHARE EXPORTS (%)</th>
<th>MAJOR ENDEMIC RELIGION(S)</th>
<th>ARMED CONF.</th>
<th>U3 RATE (%)</th>
<th>YOUTH U3 RATE (%)</th>
<th>LIT. RATE (%)</th>
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<tbody>
<tr>
<td>Algeria</td>
<td>39.5</td>
<td>227.8</td>
<td>$5,767</td>
<td>Republic</td>
<td>69.8</td>
<td>96.3</td>
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<td>9.8</td>
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<td>72.6</td>
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<td>72.4</td>
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<tr>
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<td>7.8</td>
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<td>29.8</td>
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<td>336.1</td>
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<td>Absolute</td>
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<td>China</td>
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<td></td>
<td></td>
<td>4.6</td>
<td>10.1</td>
<td>95.1</td>
</tr>
</tbody>
</table>

Population, GDP, GDP/capita for 2015. Crude revenues (gross) and unemployment rates for 2013. Oil share of exports for 2012. Literacy rate for most recent available year.

Sources: CIA Factbook, IEA, IMF, national sources, World Bank
APPENDIX: Overview of the GCC

Surpluses from hydrocarbon wealth have been used to build buffers

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>POPULATION</th>
<th>GDP ($BN)</th>
<th>GDP / CAPITA</th>
<th>FOREIGN POP'N (%)</th>
<th>OIL SHARE OF GDP (%)</th>
<th>PROD. (K BBL / DAY)</th>
<th>OIL RES. (BN BBL)</th>
<th>YRS RES.</th>
<th>CURRENCY REGIME</th>
<th>SWF ASSETS ($BN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bahrain</td>
<td>1,316,500</td>
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</table>

Sources: CIA, Factbook, IEA, IMF, SWFI, World Bank
APPENDIX: UAE trade composition (1971)

Diversified trade partners but concentration risk in exported products

Source: Observatory of Economic Complexity (MIT)
APPENDIX: UAE trade composition (2013)

Hydrocarbons still dominate trade

Source: Observatory of Economic Complexity (MIT)
APPENDIX: DXB growth

Riding globalisation to achieve high levels of sustained growth

Dubai Airports* pax vol (MM) and annual growth

CAGR = 13.6%

Historical passenger traffic (millions)

Historical growth

CAGR

Sources: Emirates Airline