

**Middle East  
Chemicals Manufacturing**

**FDI Proposition**

## Contents

## *Chemicals Manufacturing*

	Bahrain	Iran	Jordan	Kuwait	Oman	Qatar	Saudi Arabia	UAE
<b>GDP per Capita PPP (Int\$)</b>	35,561	11,202	5,662	38,876	25,829	87,716	23,388	38,284
<b>Labour Force (Millions)</b>	0.60	25.02	1.67	2.09	1.01	1.20	6.92	3.17
<b>Unemployment Rate (%)</b>	3.50	13.20	13.50	5.50	5.00	0.60	11.70	3.86
<b>No. of FDI Projects in Chemicals Manufacturing</b>	10	8	5	5	8	15	25	29
<b>Companies in chemicals</b>	39	876	210	59	52	40	350	325
<b>Salary for Production Operative – Skilled (\$)</b>	21,540	5,945	14,684	22,246	8,407	20,703	14,010	21,028

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# *Chemicals Manufacturing*

### **Why Middle East?**

- Fastest growing world region for chemicals manufacturing
- Over recent years investments have witnessed interest from Dow Chemicals, the world's largest manufacturer of chemicals
- Bahrain is the leading recipient of FDI, while Saudi Arabia ranks first in the region for its inward capital investment

### **Economic Performance**

- The size of economies vary considerably across the region
- Average unemployment rate of 7.1%
- Six out of the eight prime locations recorded a growth in their economy in 2009

### **Labour Force**

- Jordan stands as the most educated labour force in the region with a gross tertiary enrolment rate of almost 40%
- Oman presents investors with the most liberalised labour regulations in the region

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# *Chemicals Manufacturing*

### **Established and Growing Chemical's Industry**

- Iran presents the most established chemicals industry
- Saudi Arabia stands as the leading innovative location in the region
- Qatar reflects the fastest growing innovative location within the chemicals industry

### **Strategic Location with an Established Infrastructure**

- UAE has the most established infrastructure in the region
- The region will give investors a competitive edge over its Western European and North American rivals, with the region based beside the more established markets of Asia

### **Cheaper Alternative to its Western European Rivals**

- Low labour costs - \$16,070 for a skilled production operative
- Access to an abundant supply of relatively cheap feedstock
- Iran is best placed to offer investors the opportunity to minimise operating costs

## *Major Investments into Middle East*

### **ExxonMobil** into **Qatar** (January 2010)

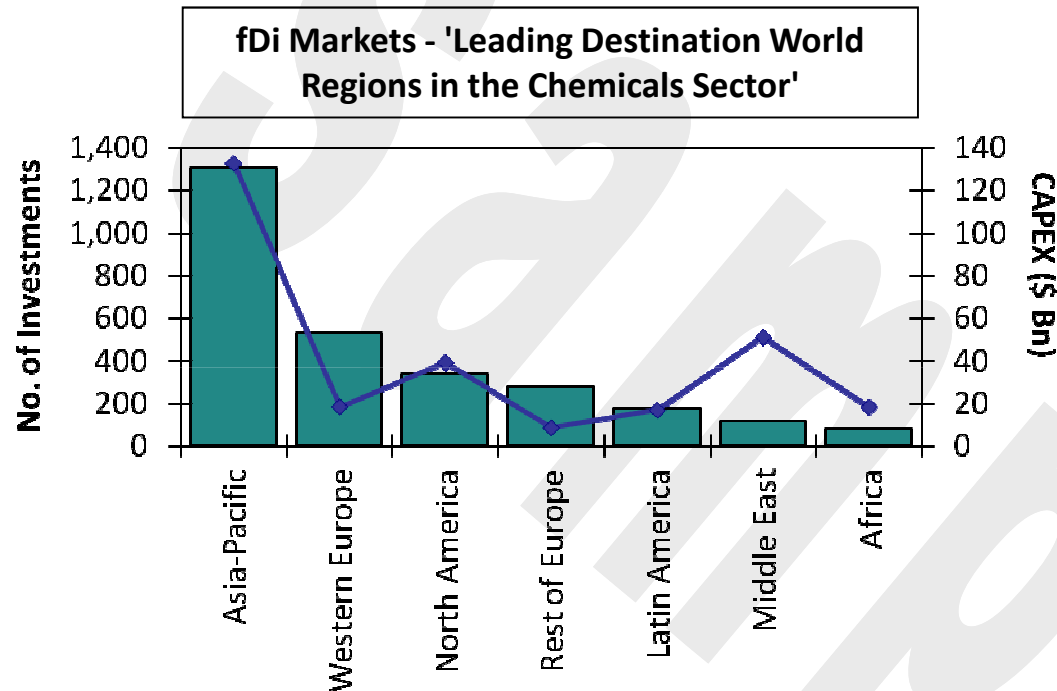
Qatar Petroleum (QP) and ExxonMobil Chemical Qatar, a subsidiary of Exxon Mobil Corporation are to jointly develop a petrochemical complex in Ras Laffan, Qatar. The new complex, 51% owned by QP, will include a 1.6 million tonnes per year (tpy) steam cracker, two 650 tpy polyethylene plants and a 700 tpy ethylene glycol facility. The operation, which will cost an estimated \$6bn, is due to open in the fourth quarter of 2015.

### **BASF** into **Qatar** (December 2010)

BASF, the world's largest chemical company, has expanded its capacity in Qatar with the opening of a new construction materials facility. Located in the Salwa Industrial Area in Doha, the purpose built 9500 sq m facility will be home to BASF Construction Chemicals' sales and technical services team. It also includes a concrete admixture blending plant with a capacity of 65,000 tonnes a year, and a testing facility.

### **Oswal Group** into **Oman** (November 2009)

India-based Oswal Group will invest \$400m in the building of a caustic soda plant in the port city of Salalah, southern Oman. The company will start construction in the final quarter of 2010.



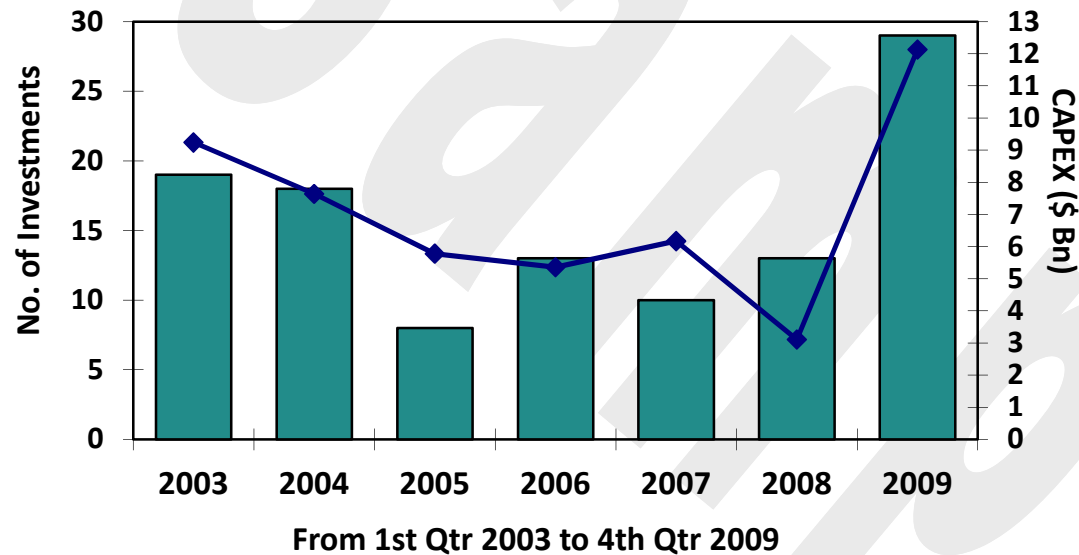
**Destination World Regions - From January 2003 to January 2010**

Source: fDi Markets from the Financial Times Ltd (2010)

**fDi Markets** identifies the Middle East region as the fastest growing region in the world, with investments witnessing a 200% growth between 2005 and 2009.

Despite a small number of investments by world standards, the region is the second leading recipient of capital investment. To date, the region has attracted a total of \$51 billion, highlighting the scope and size involved in the investment projects.

**fDi Markets - 'Inward Investment and CAPEX in Middle East's Chemicals Sector'**

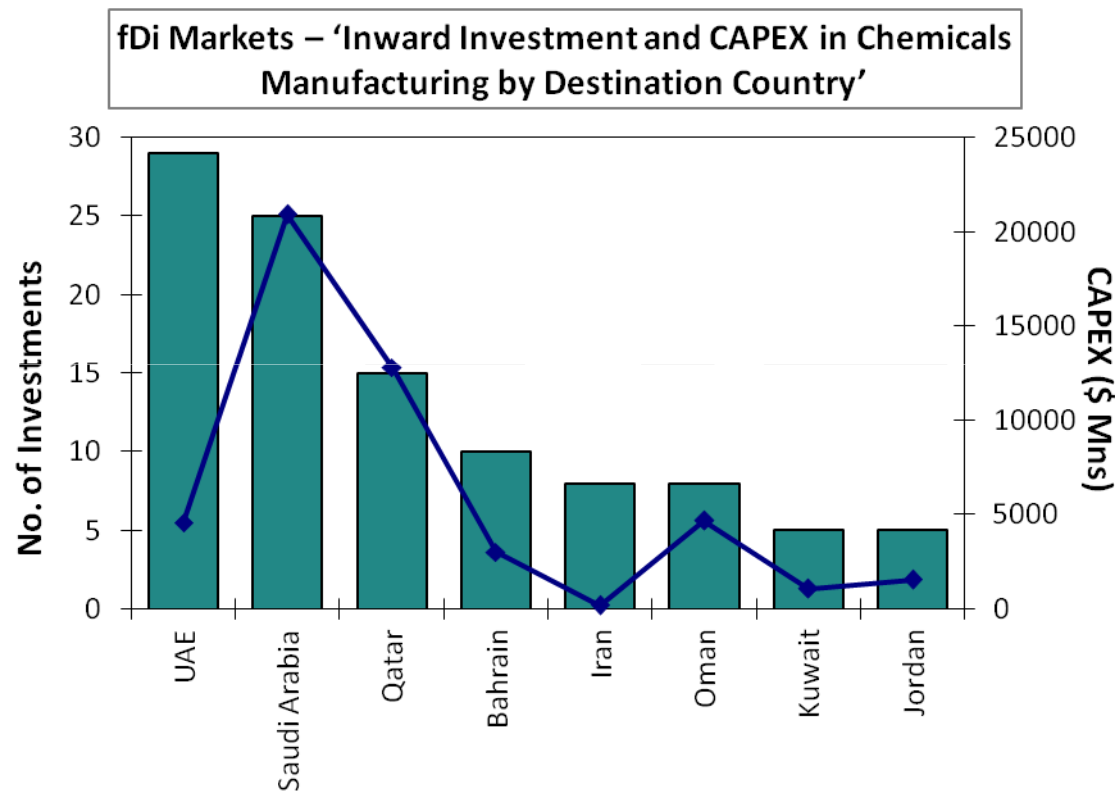


Source: fDi Markets from the Financial Times Ltd (2010)

Yearly analysis shows investments for the Middle East's chemicals sector have secured a total of \$49.43 billion creating over 34,953 new jobs for the region.

The number of investments have not been stable over the period, but a more promising upward trend is evident from 2007 onwards.

Middle East's chemicals sector has a well diversified profile of investing source countries, with major source countries such as India, France, Norway and the US.



From January 2003 to January 2010

Source: fDi Markets from the Financial Times Ltd (2010)

Prime locations within the Middle East region have been identified as Bahrain, Iran, Kuwait, Jordan, Oman, Qatar, Saudi Arabia and UAE. The leading recipient of FDI is UAE, comprising a total of 29 projects over the period.

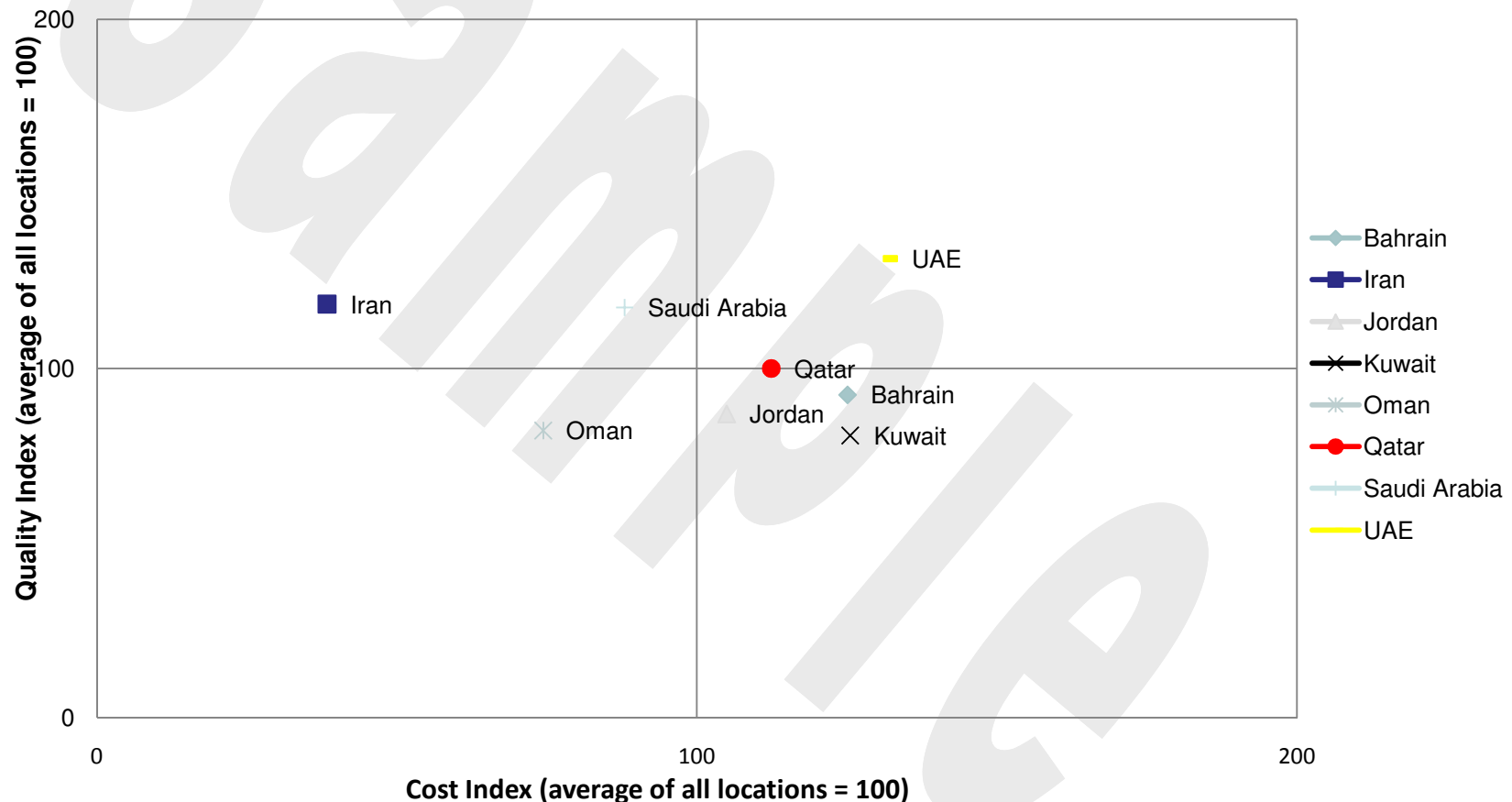
Saudi Arabia, however, is the leading location for capital investment and is a close competitor for FDI. Saudi Arabia was the only country in the region to experience a growth in project numbers in 2008-09.

## Benchmarking Study

- The following analysis is based on fDi Benchmark, an online location benchmarking tool provided by the Financial Times.
- fDi Benchmark compared Middle Eastern prime locations in the chemicals manufacturing sector based on an analysis of over 55 quality factors and 10 cost factors.
- A key emphasis was placed on:-
  - ***General business environment - regulatory environment, taxation, economic growth and stability***
  - ***Labour availability and quality - the size of the labour market and tightness in the labour market; and***
  - ***Presence of an industrial cluster – the size, competitiveness and track record of the domestic industry.***
- Other factors including living environment, infrastructure and accessibility were also assessed.

**fDi Benchmark** identifies UAE as the leading location to provide the highest quality in the chemicals manufacturing industry. Whereas Iran offers a low cost alternative, complemented by a relatively high output.

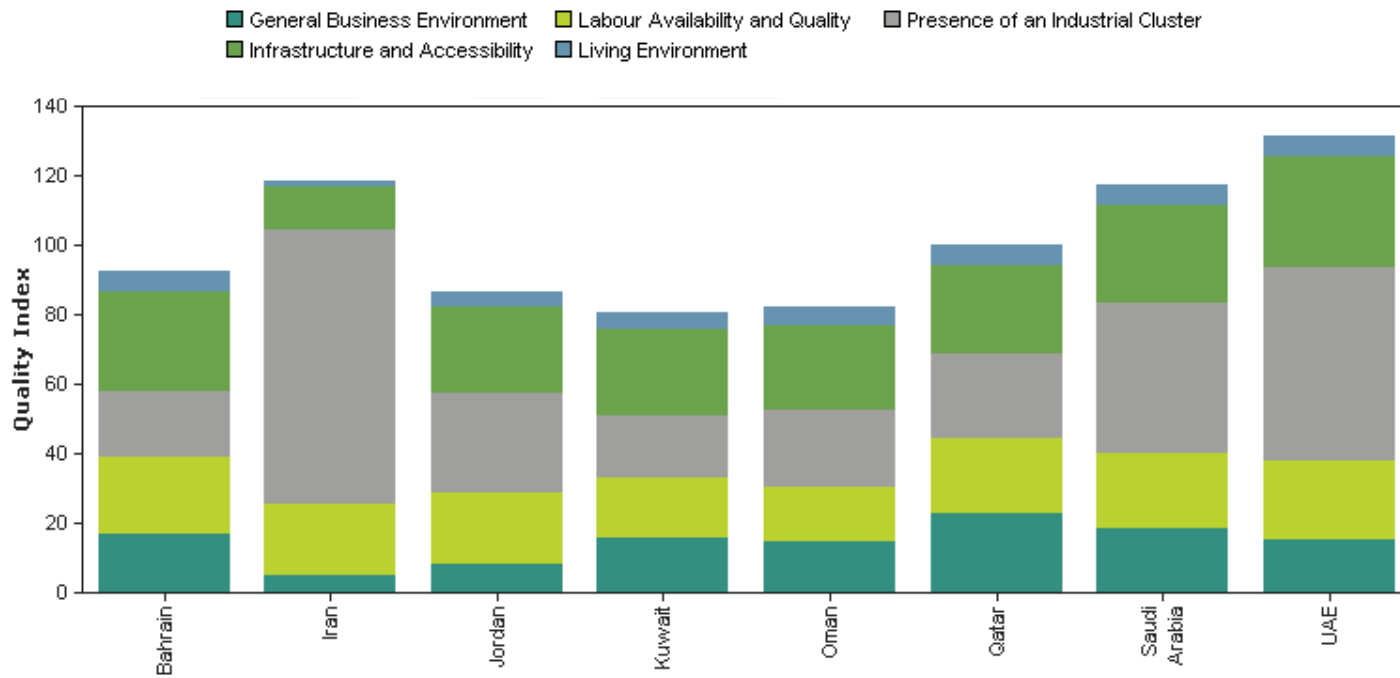
## Competitiveness Matrix – Chemicals Manufacturing



Source: fDi Intelligence, from the Financial Times Ltd (2010)

Assessing the 8 Middle Eastern locations on their quality competitiveness, it is clear to see UAE is the leading location in the region. UAE's high quality offering can largely be accounted for by the country's industrial cluster and infrastructure and accessibility. While Iran and Saudi Arabia provide a similar quality offering, behind that of UAE.

**Chemicals manufacturing plant (NEW) (Head Count: 110) - Total Quality Index Breakdown**



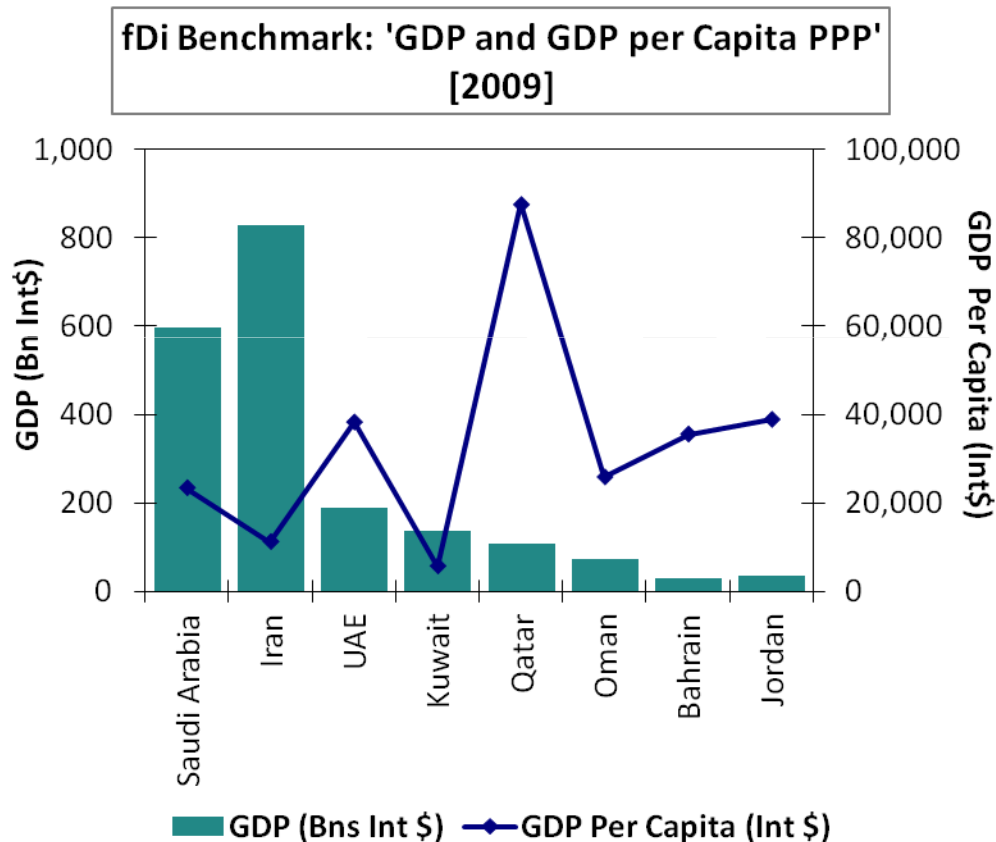
Source: fDi Intelligence, from the Financial Times Ltd (2010)

## General Business Environment

**Qatar is a small yet thriving economy, with the world's highest GDP per capita. The country offers investors the most appealing business climate, with the lowest business start-up costs**

- Iran is the largest economy in the region with a GDP of Int\$830 billion
- Qatar's GDP per capita totals Int\$87,717 - ranking number one in the world
- Average unemployment rate in the region of 7.1%
- Despite global turmoil six out of the eight countries experienced a growth in GDP
- Qatar offers the most lucrative business climate
- Investors property rights are best protected in Qatar
- UAE boasts the strongest legal framework in the region

## General Business Environment



Source: International Monetary Fund

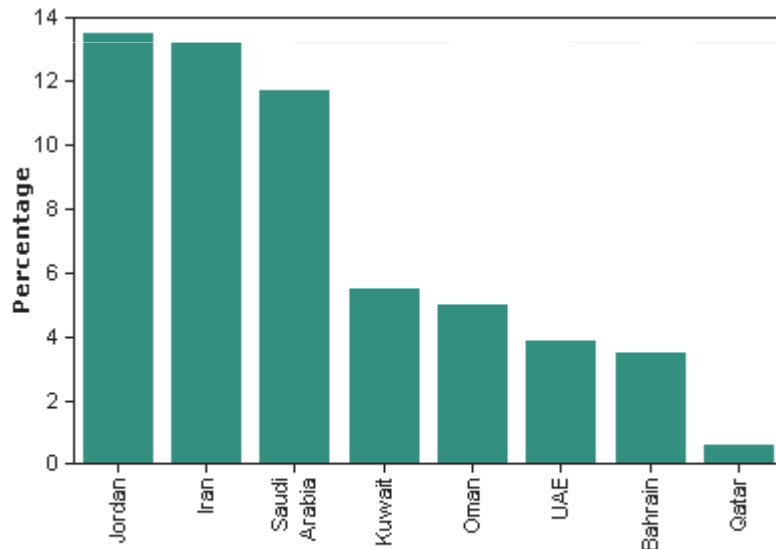
Major contrasts are evident in the 8 prime location economies, ranging from Bahrain (Int\$28 billion) to the largest economy in the region Iran (Int\$830 billion).

Qatar far exceeds its Middle Eastern neighbours when comparing GDP per capita as it exceeds Int\$87,000 representing a thriving economy.

Despite global turmoil all countries except Kuwait and UAE recorded a growth in their GDP(2009). Qatar recorded the strongest growth rate of 9.5%.

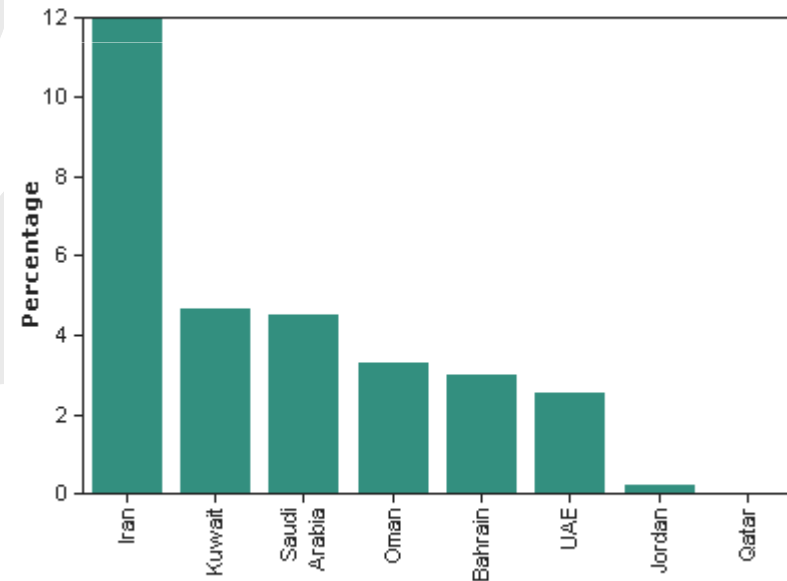
Jordan, Iran and Saudi Arabia reflect weak labour markets, with unemployment rates at 13.5%, 13.2%, and 11.7% respectively. Most countries illustrate a convergence in inflation rates around the 3% mark, with the exception of Iran. Iran represents the most volatile economy with a high unemployment rate of 13.2% and an inflation rate reaching 12%. With the lowest inflation and unemployment rate in the region, Qatar represents the most stable economy.

**fDi Benchmark - 'Unemployment rate' [2009]**



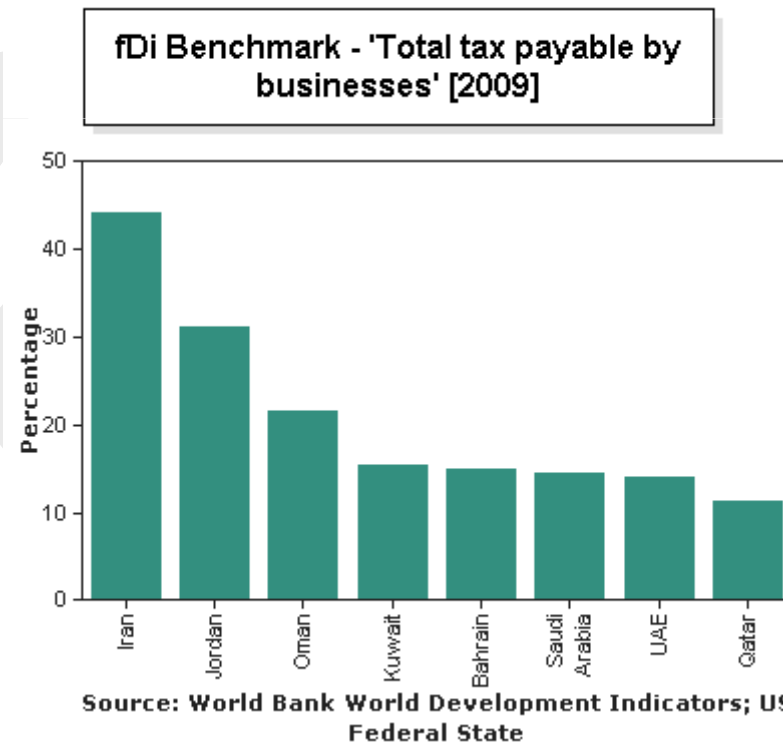
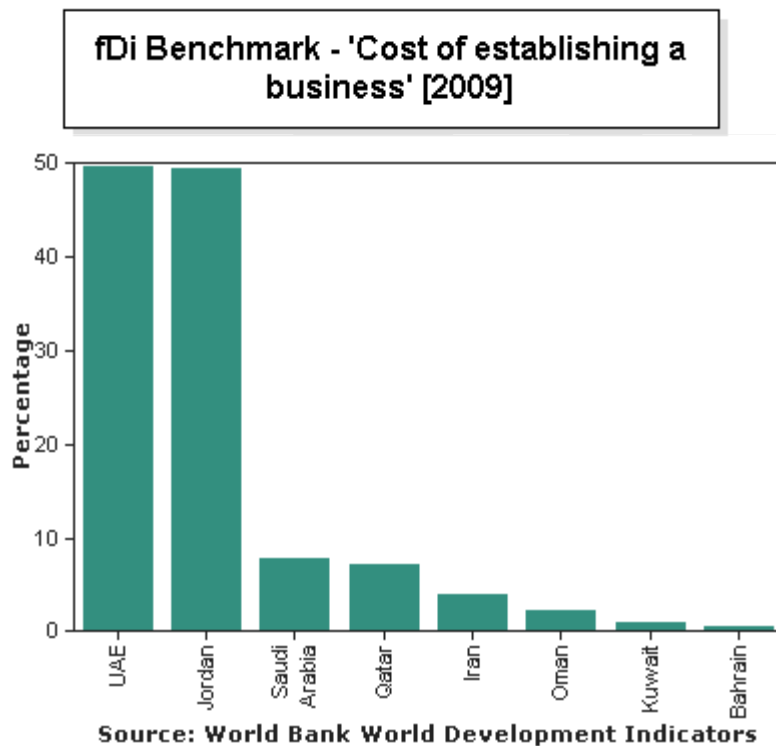
Source: World Bank World Development Indicators; Eurostat; Economic Intelligence Unit; fDi Intelligence from the Financial Times

**fDi Benchmark - 'Stability - Inflation' [2009]**

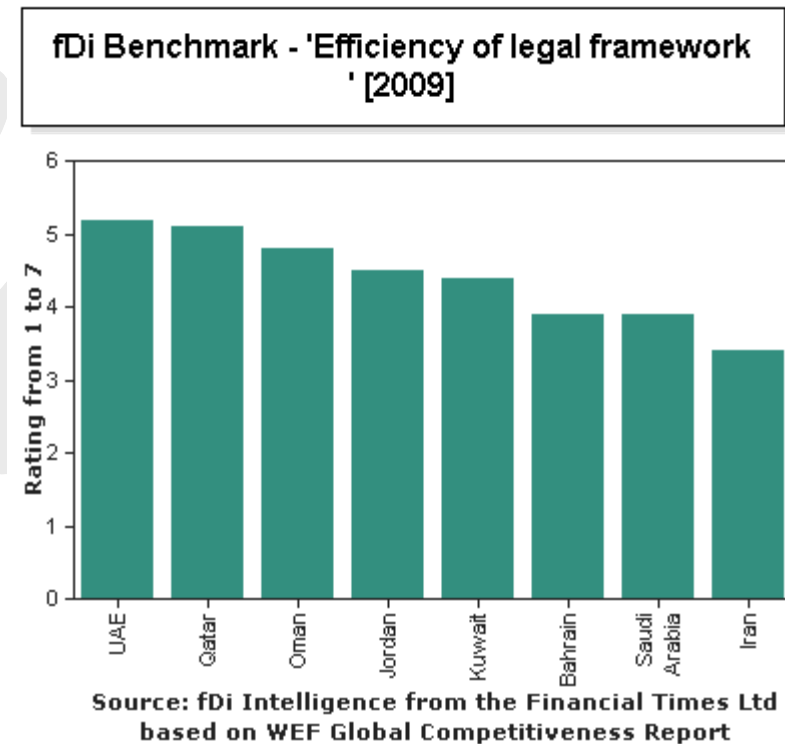
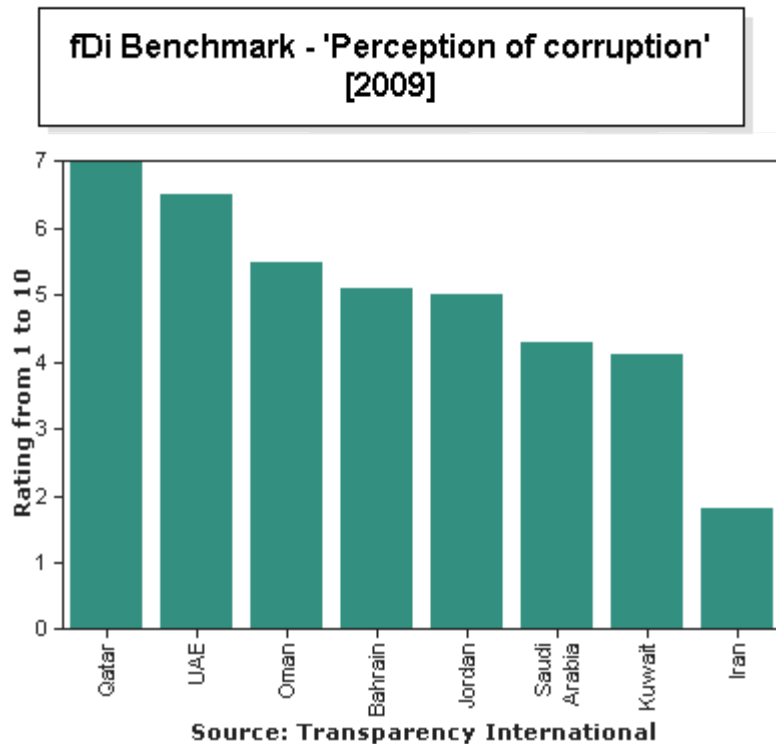


Source: World Bank World Development Indicators; WEF Global Competitiveness Report

UAE and Jordan offer the least favourable cost of establishing a business to investors at 50% (presented as a % of income per capita) while the remaining countries offer a more lucrative deal with official costs under 8%. Kuwait, Bahrain, Saudi Arabia and UAE all offer a similar business tax at 15%. Qatar offers the most attractive business environment with the lowest business tax (11.3%) and relatively low cost of establishing a business (7.1%).



Investors can feel confident investing in Qatar and UAE, with the country's strong and efficient institutions. Both countries offer investors clear property protection, low perception of corruption and a strong efficient legal framework. In contrast, Iran represents the most volatile country for doing business with a high perception of corruption and the least efficient legal framework.



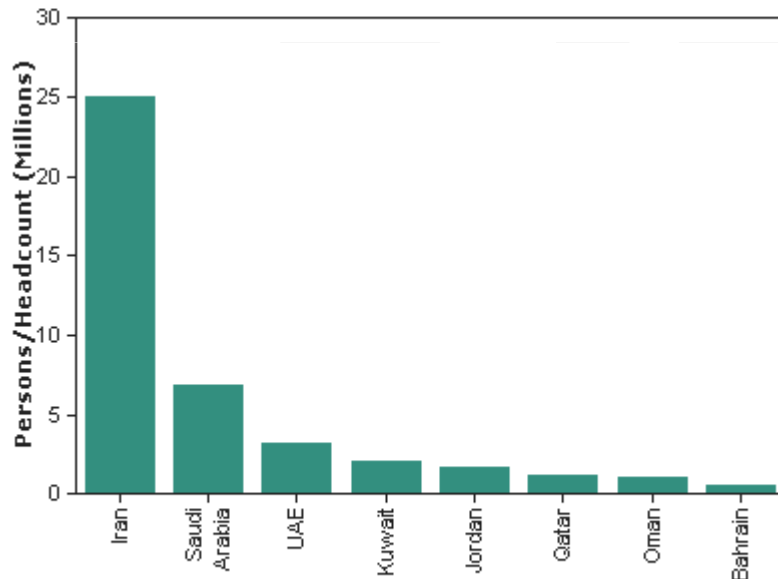
## Labour Availability and Productivity

***Iran offers investors a good source of human capital for the chemicals manufacturing industry, with the largest industrial labour force placed within the most established chemicals cluster in the region.***

- Iran offers the largest labour force in the region - 25 million persons
- Qatar has the greatest availability of scientists and engineers in the region
- Average employment in industry of 27% – Qatar far exceeds this figure at 42%
- High gross secondary enrolment rate of 93%
- Jordan stands as the most educated labour force in the region
- Oman operate the most liberalised labour market
- Qatar and UAE offers investors the strongest power of wage setting in region
- Labour force's of Oman, UAE and Qatar are the most productive

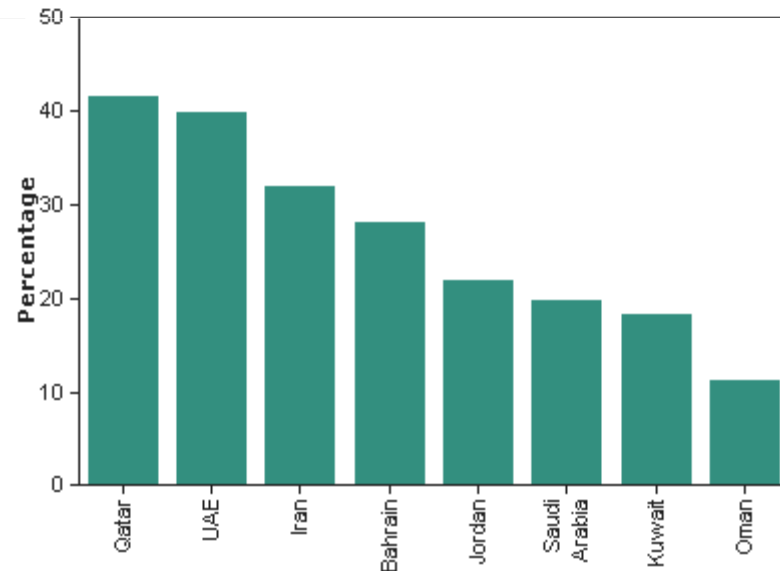
Iran offers the largest labour force in the Middle East region, with a total labour force of 25 million persons. Labour force growth is promising across the Middle East region, with Qatar is forecasted to be the fastest growing country in the region. Qatar benefits from an industrial-focused labour force, with the largest proportion of persons employed in the industry.

**fDi Benchmark - 'Labour force' [2009]**



Source: Economic Intelligence Unit; CIA The World Factbook

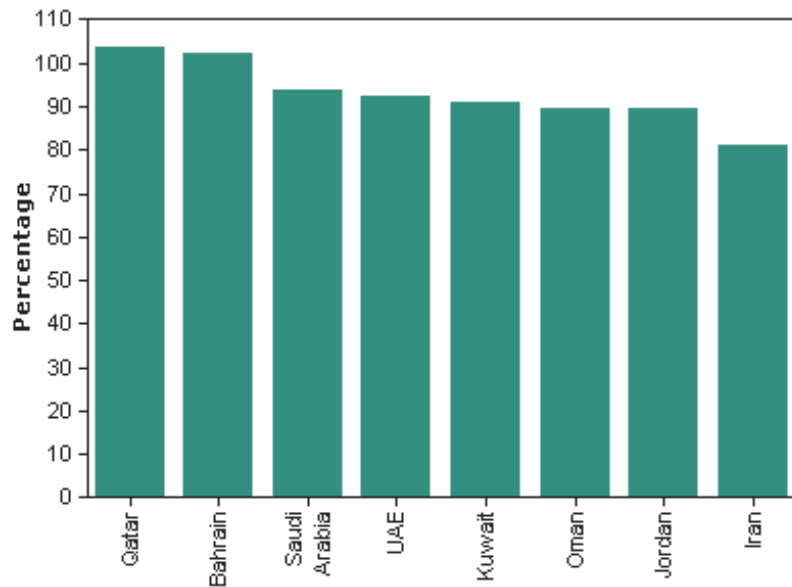
**fDi Benchmark - 'Employment in Industry' [2006]**



Source: World Bank World Development Indicators

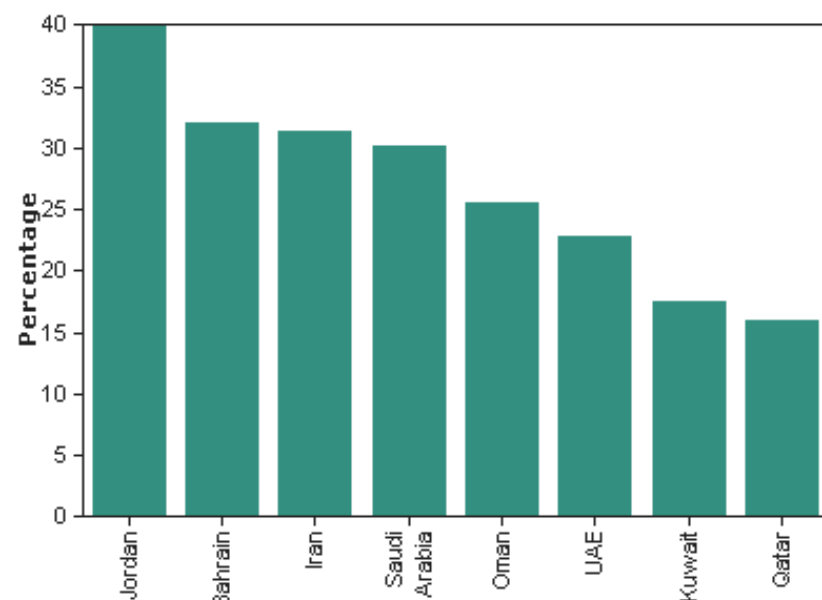
Gross secondary enrolment rate is high across the region, with an average of 93%. The region shows a lack of highly skilled human infrastructure, as gross tertiary enrolment rate averages 27%. However this weakness is likely to be boosted by ambitious education reforms by all countries as they prepare to take centre stage in the chemicals industry. Investors seeking a highly skilled labour force may invest in Jordan, as the country represents the highest gross tertiary enrolment rate of almost 40%.

**fDi Benchmark - 'Gross secondary enrollment rate' [2007]**



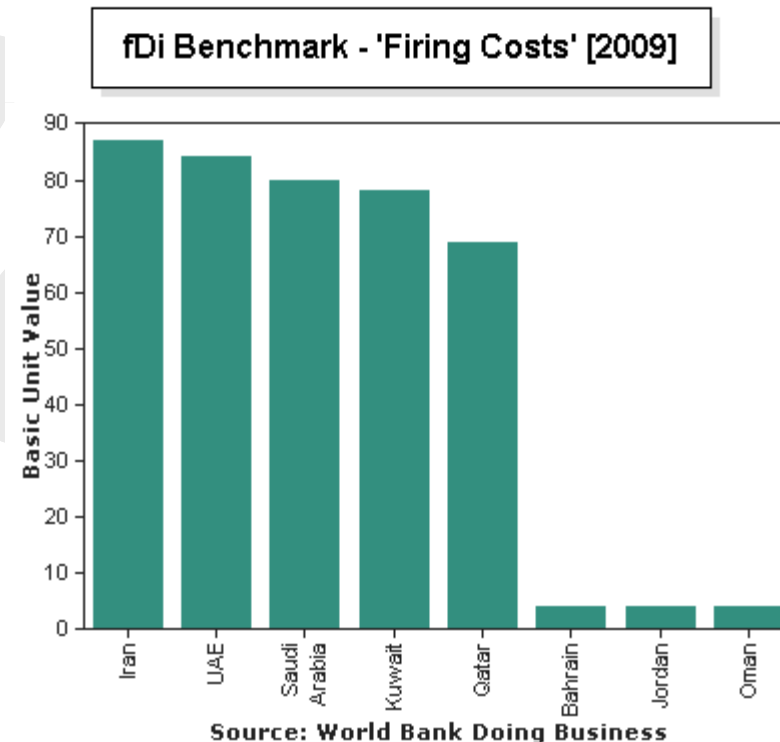
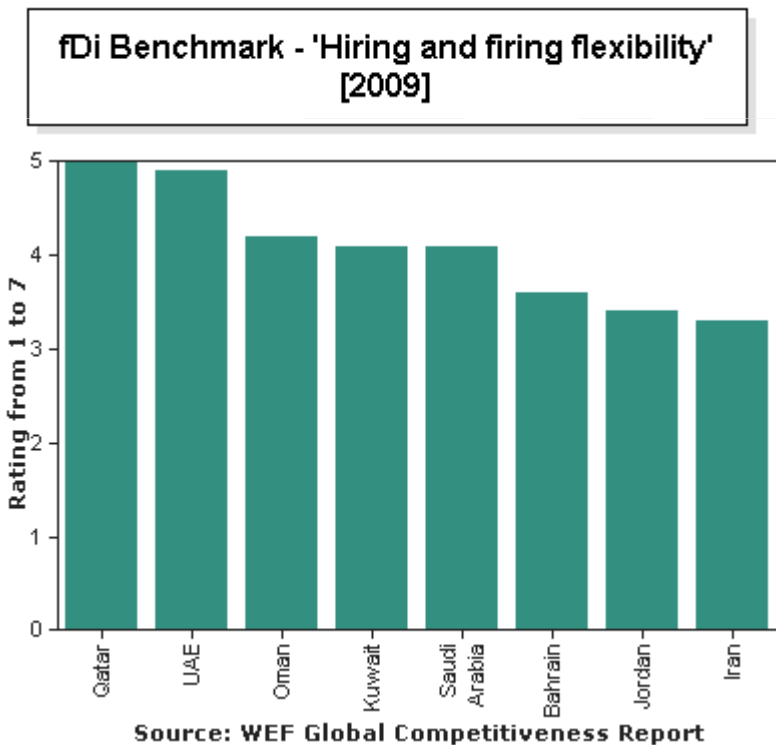
Source: WEF Global Competitiveness Report

**fDi Benchmark - 'Gross tertiary enrollment rate' [2007]**



Source: WEF Global Competitiveness Report

Qatar and UAE offer investors favourable labour outcomes, with a high degree of flexibility in hiring and firing and a strong wage determination. Firing costs, expressed in weeks of salary, vary across the region from 4 weeks in Bahrain, Jordan and Oman to 87 weeks in Iran. Oman presents investors the most liberalised labour regulations, with a high hiring and firing flexibility and low firing costs. In contrast Iran presents the most stringent labour market regulations.



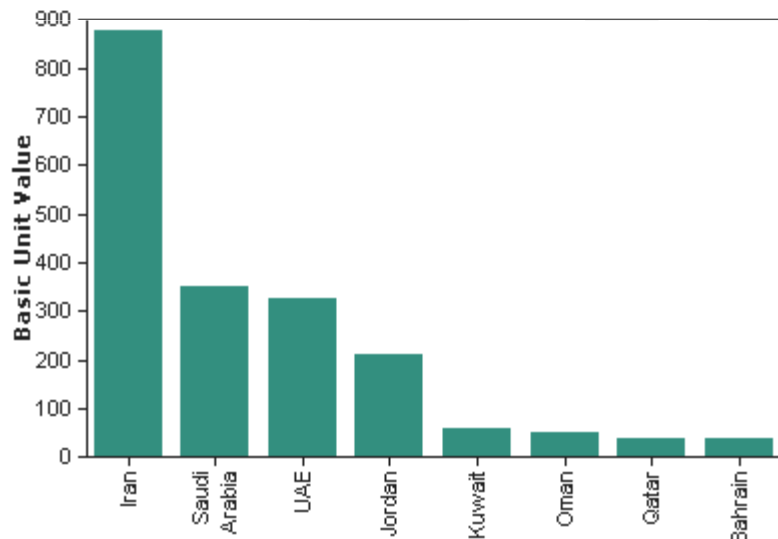
## Presence of an Industrial Cluster

*With the largest number of industry related companies present in Iran, the country offers investors an array of knowledge and expertise in the chemicals manufacturing industry.*

- The largest number of companies in the chemicals and plastics sector reside in Iran
- UAE reflects the largest company specialisation in chemicals
- Saudi Arabia is best placed for its export competitiveness closely followed by UAE
- Iran is the leading country for its high technology exports

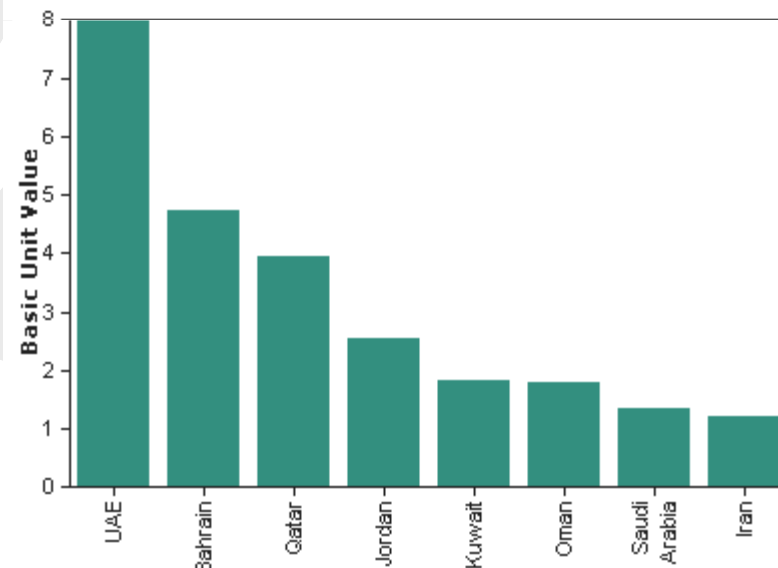
Iran has the most established chemicals industry in the region, with almost 900 chemical companies placed in the country - which is more than Saudi Arabia, UAE and Jordan combined. However, UAE is seemingly the most specialised in the chemicals industry.

**fDi Benchmark - 'Companies in chemicals' [2010]**



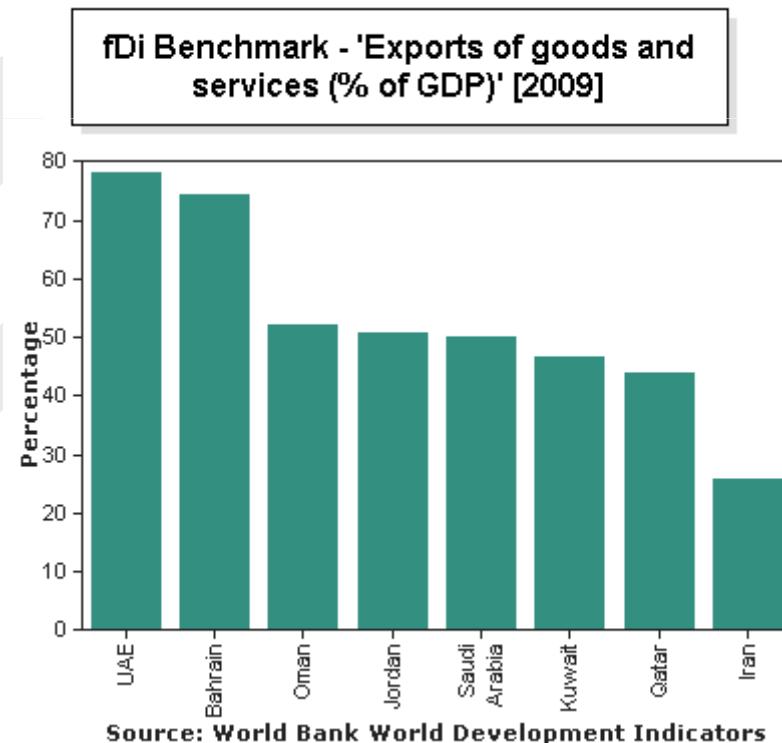
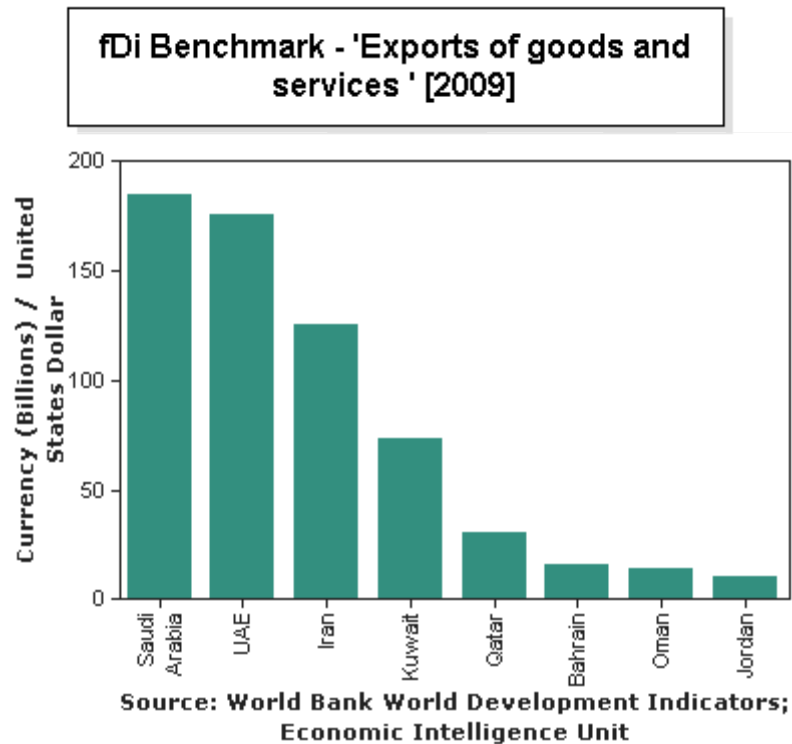
Source: Dun & Bradstreet (Sic 281, 2833, 284, 285, 286, 287, 289)

**fDi Benchmark - 'Specialisation in chemicals' [2010]**



Source: fDi Intelligence

Saudi Arabia shows the greatest degree of export competitiveness, with exports of goods and services valuing \$185 billion in 2009 accounting for 50% of GDP. UAE shows the greatest reliance on international markets, as exports of goods and services account for 78% of GDP. Iran reflects the least reliance on international markets as export of goods and services account for only 25% of GDP.

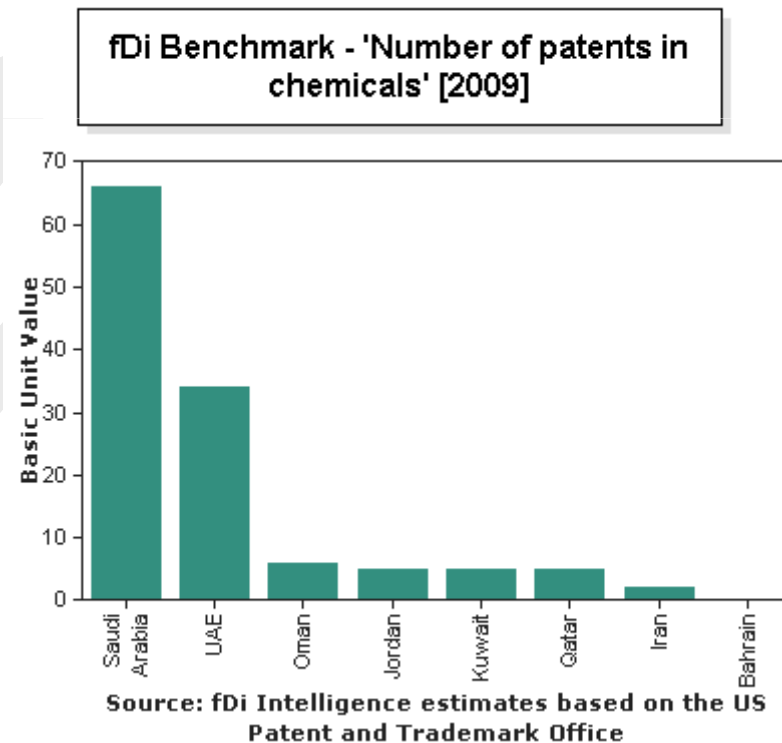
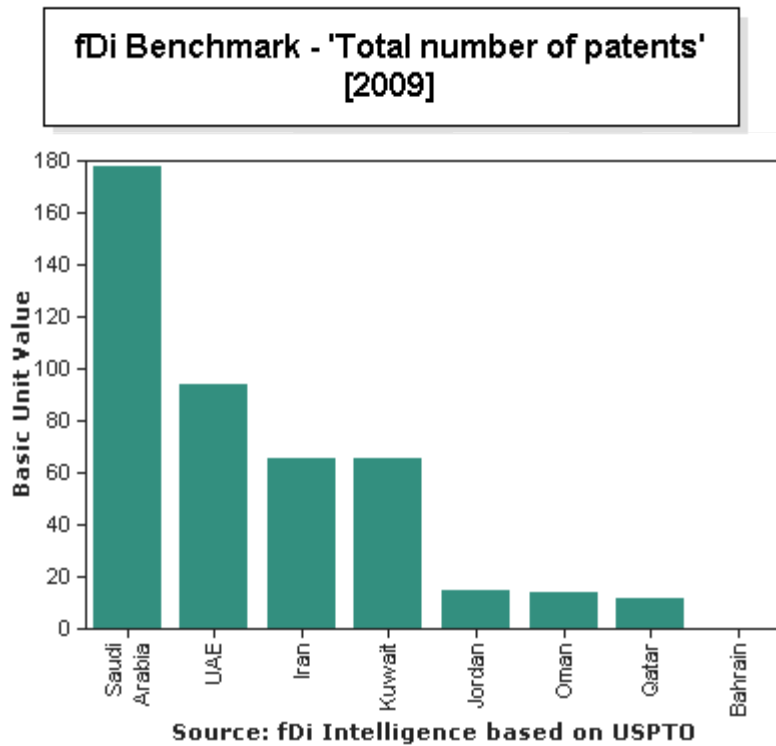


## R&D Capabilities

***While Qatar offers the most established R&D infrastructure in the region - with the highest availability of scientists and engineers trained in the highest quality research institutions. In contrast, Saudi Arabia stands as the leading location to produce the most innovative creations and inventions in the chemicals industry.***

- Qatar scores the highest for their renowned research institutions closely followed by Saudi Arabia
- The greatest availability of scientists and engineers can be found in Qatar
- The highest number of patents in chemicals is concentrated in Saudi Arabia
- Iran produces the highest number of scientific and technical journal articles
- Qatar has the highest R&D expenditure in the region

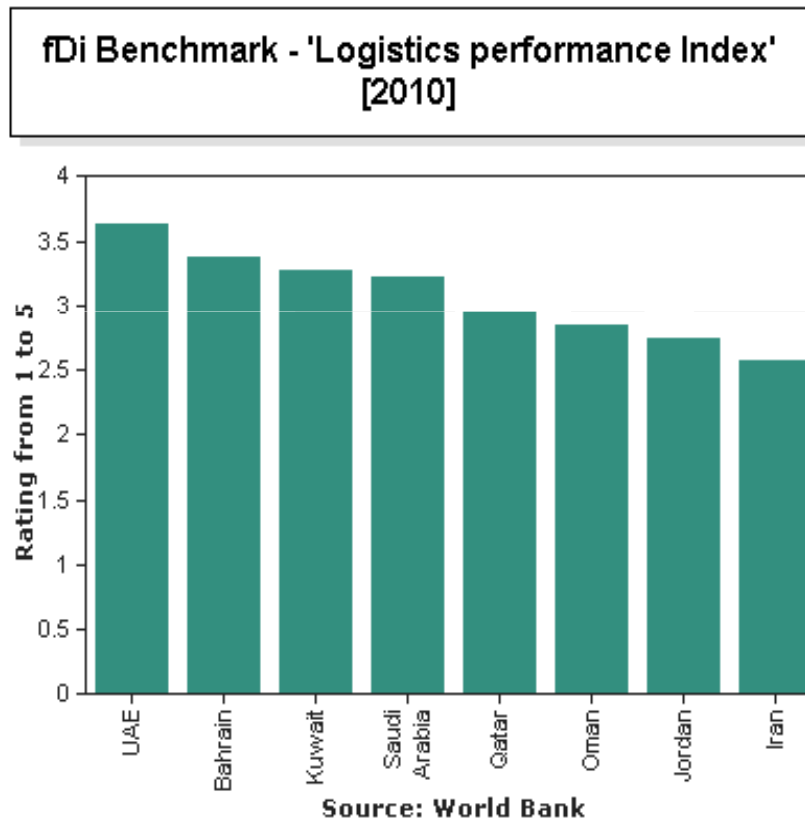
Saudi Arabia presents investors with the greatest innovative capacity in the region, as the country produces the highest number patents in chemicals, accounting for almost 40% of total patents produced in the country, far exceeding its regional counterparts. Although Qatar has a small number of patents in chemicals, the country shows the greatest growth in innovation, as patents increased from 1 in 2008 to 5 in 2009.



## Infrastructure & Accessibility

*UAE offers investors the most robust logistics and trade facilitation, with the country featuring within the top 25 countries in the world for their logistics performance.*

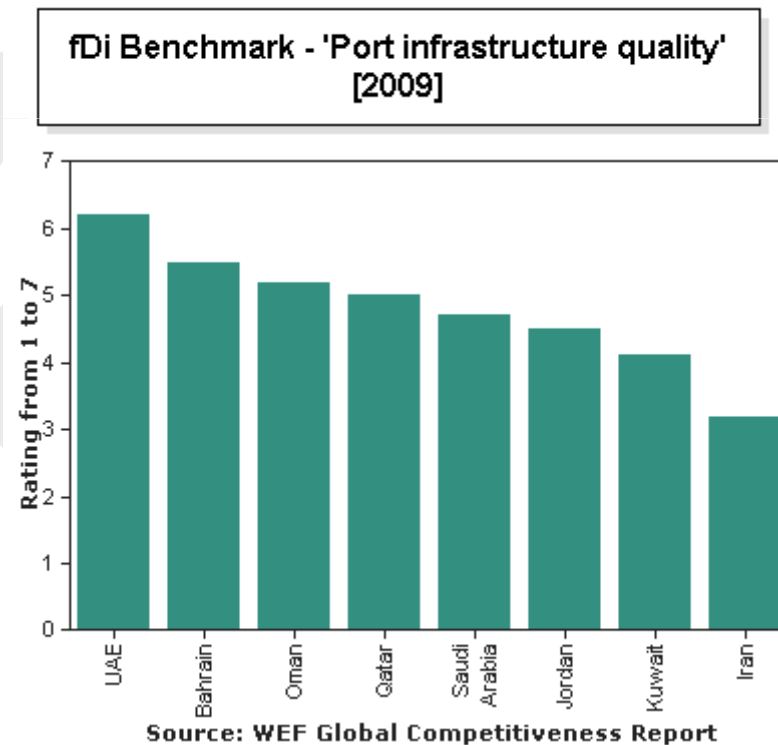
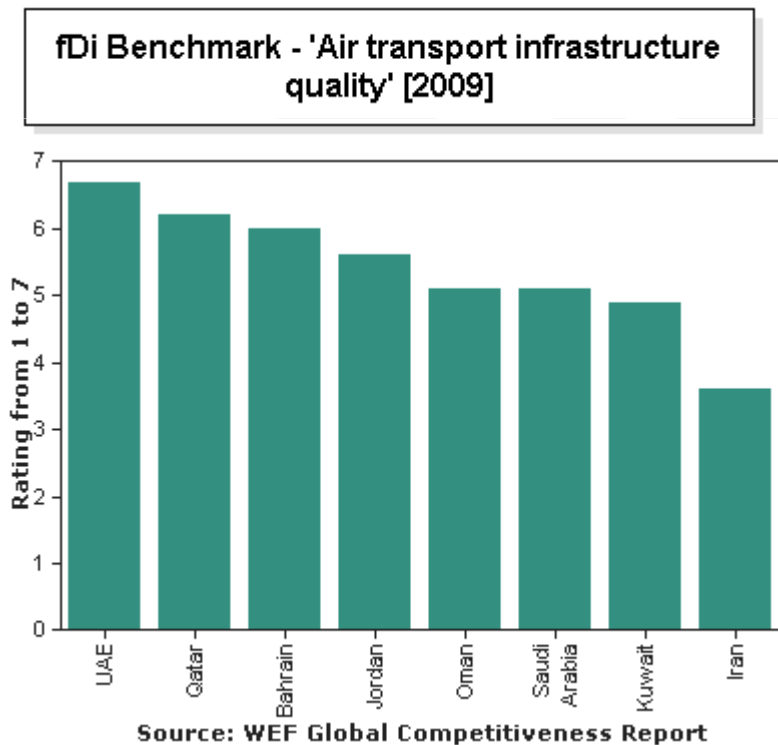
- UAE is best placed for trading across borders
- UAE offers the highest quality airport infrastructure
- UAE is the top location for its high quality utilities offering
- UAE's road infrastructure is the most developed in the region
- Saudi Arabia has the largest road network
- Jordan represents the highest expenditure on ICT infrastructure



The Logistics Performance Index(LPI) is an international benchmarking tool that focuses specifically on measuring the ‘friendliness’ of a country’s trade and transport facilitation. UAE appears in the world’s top 25 LPI, outperforming its Middle Eastern rivals and other emerging countries such as China and India.

With the Middle East’s strategic location offering investors access to the more established markets of Asia and Europe, and with the UAE being home to the leading chemicals industry in the region, the country is well positioned to give investors access to the ‘best of both worlds’.

UAE boasts the most established infrastructure in the region offering access to both domestic and major international markets, scoring 6.7 out of 7 for their air transport infrastructure. The country appears in the top 10 ports of the world, which reflects its high quality port infrastructure. In contrast Iran's infrastructure reflects the least developed in the region.



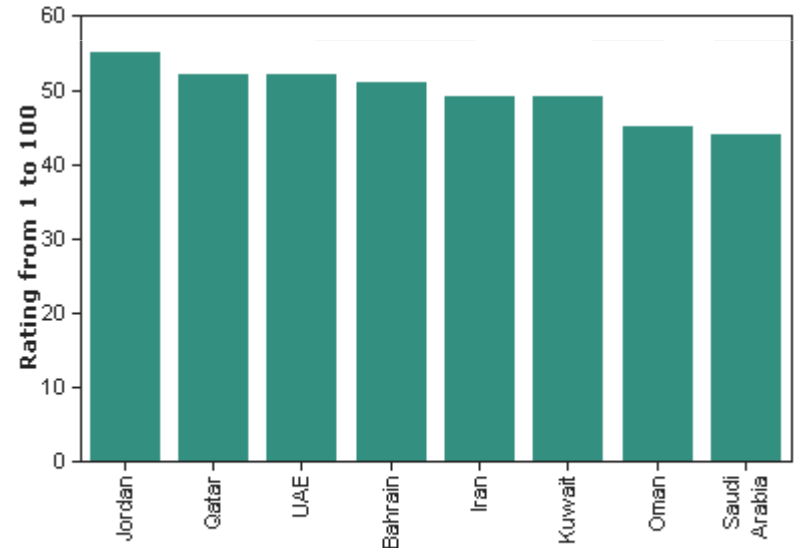
## Living Environment

***UAE is best placed to attract and retain an international labour force, with 0% personal tax rates and the highest number of IB world schools, backed by the country's attractive quality to cost living ratio.***

- Jordan offers the most attractive quality of living
- Iran offers the lowest cost of living in the region
- Average life expectancy of 76 years
- Five of the eight locations offer a lucrative 0% personal income tax
- Qatar's education system is deemed the best in the region
- Iran delivers the highest quality of public schools
- UAE offers the highest number International Baccalaureate World Schools

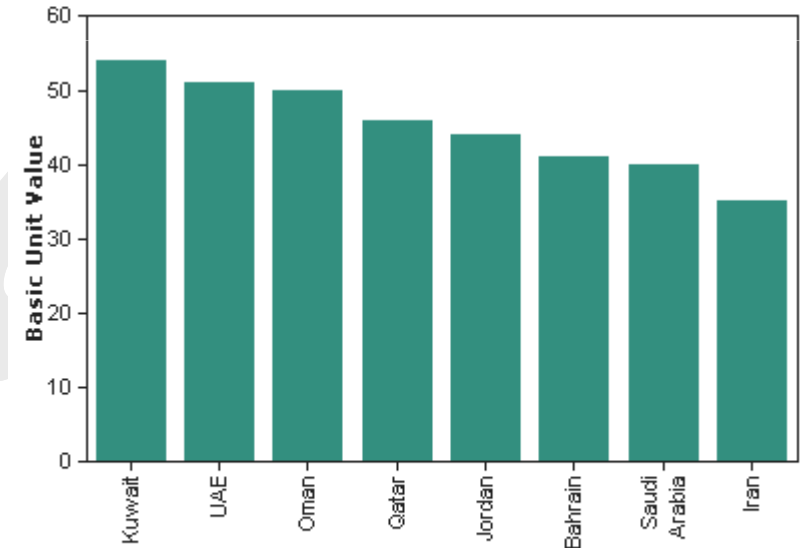
Despite the conflicting size of economies across the Middle Eastern region, quality of living reflects a similar convergence. People within Jordan enjoy the highest quality of living in the region. Cost of living is low across the region, with Iran providing employees with the most cost-effective living environment .

**fDi Benchmark - 'Quality of living index' [2010]**



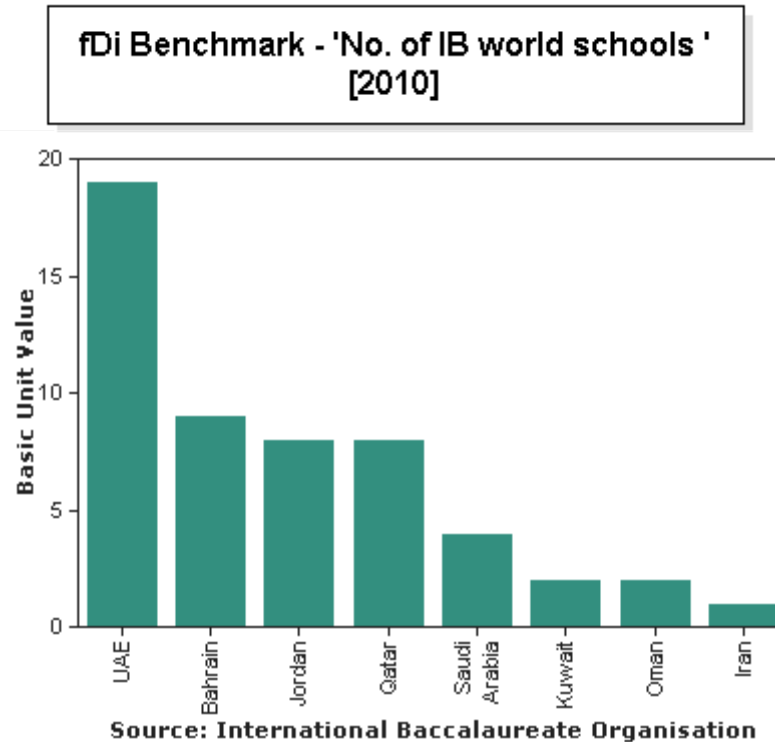
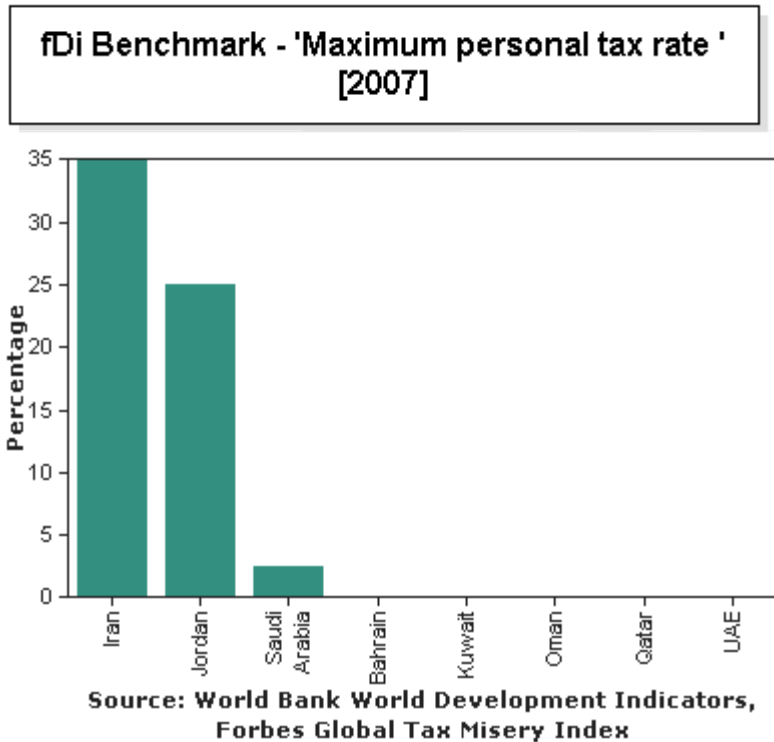
Source: Mercer Global Quality of Living Report; [www.internationalliving.com](http://www.internationalliving.com); fDi Intelligence from the Financial Times

**fDi Benchmark - 'Cost of living Index' [2010]**



Source: Economic Intelligence Unit; [www.internationalliving.com](http://www.internationalliving.com); fDi Intelligence from the Financial Times

Bahrain, Kuwait, Oman, Qatar and UAE all offer 0% personal tax rate, a lucrative incentive to attract an international labour force. However, Jordan and Iran offer rates at 25% and 35% respectively. All locations are host to a number of IB world schools, with UAE best placed in the region to offer the greatest choice of IB locations.

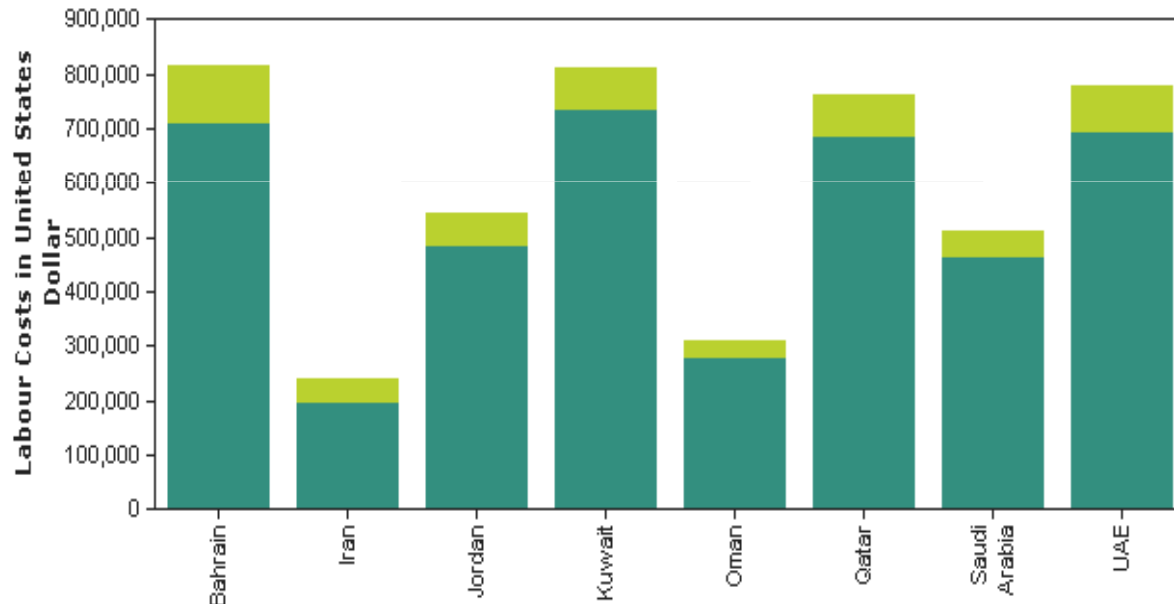


## Cost Analysis

***The prime Middle Eastern locations offer a more attractive low cost business proposition than any of those locations in Western Europe.***

- Average salary cost of a skilled production operative engineer is \$16,070
- Iran offers investors a cheaper alternative to its Middle Eastern counterparts
- Forecasted growth in labour force costs of 7.3%
- All locations give investors access to an abundant supply of relatively cheap feedstock

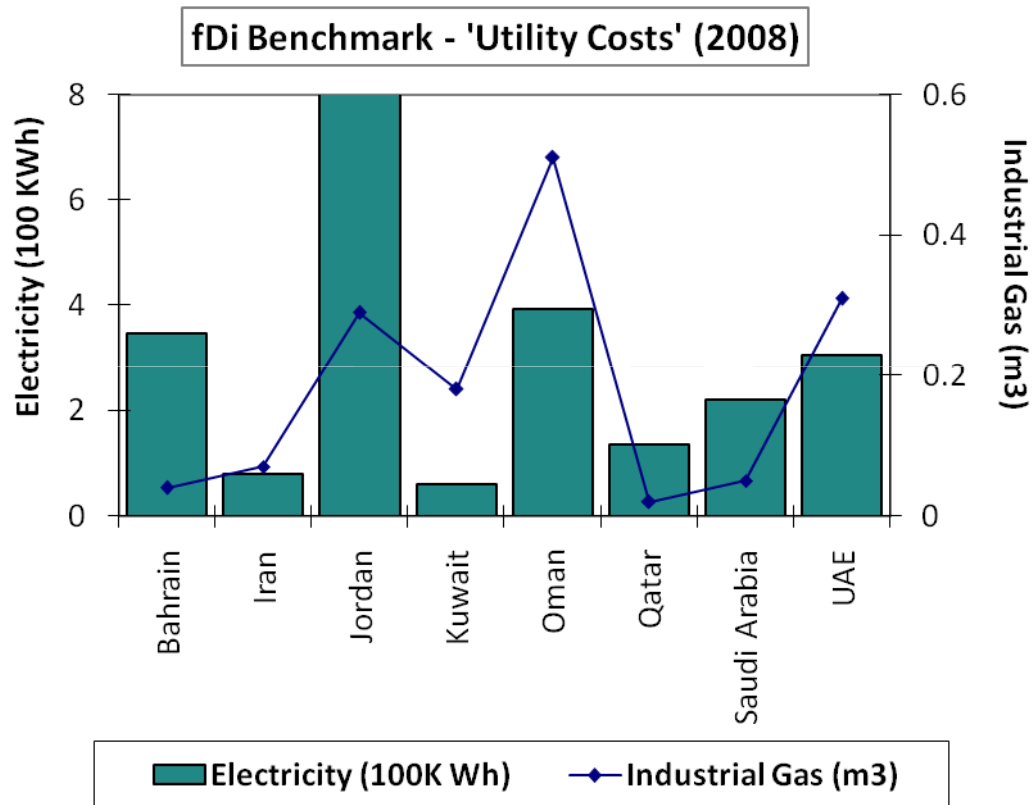
**fDi Benchmark - 'Production Operative (Skilled)' Labour Costs / 'Head Count (33)'**



**Benchmark Locations (Source: fDi Intelligence estimates based on National Statistics, Economist Intelligence Unit, and Watson Wyatt [All Years])**

Although the region offers a cheaper alternative to its Western European rivals, salary costs still vary considerably by location. For example, labour costs of skilled production operative in the region range from \$5,945 in Iran to \$22,246 in Kuwait.

It is evident that Iran holds a cost advantage over its Middle Eastern counterparts. Investors with a team of 33 skilled production operatives could expect to save a total of \$356,006 labour cost savings a year.



Source: fDi Intelligence based on Economist Intelligence Unit, Eurostat and main utility operators

Investing in any of the prime locations offers investors access to an abundant supply of natural resources, at some of the lowest prices - helping to lower overall operating costs.

The most affordable location in the region is Iran, with its low cost offering for both electricity and industrial gas. Qatar closely follows with the lowest electricity costs in the region and relatively low industrial gas costs.

## Summary

**Investors interested in the chemical industry may choose UAE for the country's high quality offering in the industry. However investors seeking a low cost alternative may find the answer in Iran, with the country's low cost offering coupled with a relatively high quality offering in the chemicals manufacturing sector.**

- Qatar has the most stable and growing economy in the region
- Iran offers investors the a strong labour force of 25 million persons and investment in the most established chemicals cluster in the region
- Saudi Arabia stands as the most innovative country producing the most innovative creations and inventions in the chemicals industry
- UAE is best placed to accommodate the needs of investors for trading across borders
- UAE best placed in the region to attract and retain an international labour force
- Lucrative 0% tax incentives for international staff, evident in Bahrain, Kuwait, Oman, Qatar and UAE
- Low operational costs, particularly in Iran with skilled production operatives annual salaries at \$5,945
- Abundant supply of relatively cheap feedstock
- The region offers a strategic location, as it is close to the more established chemicals market of Asia

## Who's already harnessing Middle East's potential...



*The miracles of science™*



**TOTAL**

