

ExportReady **DISCOVER**



SECTORAL
REPORT

Saudi
Arabia

Sector: Infrastructure

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ExportReady Sponsor



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1. Sector Overview

1.1 Sector Overview

Saudi Arabia's construction sector will continue to see positive growth throughout 2021, with efforts to diversify the economy away from oil offering ample opportunities in residential and non-residential projects and large-scale transport infrastructure. A continuing positive growth is expected throughout 2021, with a forecast growth rate of 2.5% y-o-y in 2021. This will be driven by a sizeable pipeline in construction as megaprojects and related transport projects are developed.

Saudi Arabia has announced a trillion-dollar pipeline of infrastructure projects aimed at diversifying the economy beyond oil and positioning the kingdom as a global hub for investment and logistics. The development agenda has created opportunities in a range of new areas such as smart cities, tourism, and clean energy.

The Qiddiya project, located 45 km west of Riyadh, is being developed as a city for entertainment, sports, and arts, and also has a completion date of 2022 for the first phase. With initial infrastructure costs of USD 8bn, the project needs additional investments to reach its goal of 17million visitors per year by 2035. Amala, a USD 3bn luxury wellness tourism project, planned for construction near NEOM and The Red Sea Project in the north-west, is scheduled to open its first phase in 2020.

The Economic Cities Authority has been set up to rekindle investor interest in older economic cities projects like King Abdullah Economic City. Other planned projects aim to address a specific social challenge. For example, to tackle the shortage in affordable housing, the housing ministry has set up the Sakani programme, which aims to provide housing options for thousands of Saudis. To ease congestion in urban areas and address climate change, the High Commission for the Development of Arriyadh (ADA) has signed the world's biggest civil-engineering contract for a six-line metro valued at USD 22.5bn, while the Ministry of Energy, Industry and Mineral Resources (MEIM) has plans to deploy 9.5 GW of renewable energy by 2023.

RIYADH: The price of building materials, especially steel, rose in the first quarter (Q1) of this year, as construction activity began to recover from the slowdown caused by the coronavirus disease pandemic last year. According to the latest data from the General Authority for Statistics (GASTAT), the price of steel surged to SR3,514.73 (\$937.26) per ton in Q1 of 2021, a 33 percent increase year-on-year and the highest price since 2008.

The cost of ready-mix concrete rose 14 percent year-on-year to SR203.9 per cubic meter during the same timeframe, while cables rose 21 percent year-on-year to SR38.33 per meter.

In addition, wood prices rose 15 percent year-on-year to SR 3,067.49 and cement was up 5 percent to SR14.03 per 50kg bag in Q1. While steel made the biggest surge, the growth slowed as the year progressed, going from 40 percent growth in January to 28 percent growth in March.

The increase in prices for materials comes as construction activity increased in Q1, according to a new report by real estate consultancy firm JLL.

“From a supply perspective, the first quarter recorded an increase in construction activity,” the JLL report said. According to its figures, in the residential sector in Riyadh 7,700 units were handed over in Q1, bringing the total to 1.3 million units in the capital. In Jeddah, around 2,000 units were added, bringing the total to 838,000 units.

The report estimated that 36,000 units in Riyadh and 12,000 units in Jeddah are due to be delivered this year. In addition to the increased activity in the residential sector, Riyadh is also set to see an additional 386,000 square meters of office space, 240 square meters of retail space and 2,800 new hotels rooms built this year.

In Jeddah, the city is forecast to gain an additional 43,000 square meters of office space, 200,000 square meters of retail space and 2,700 new hotel rooms.

However, JLL said that while it remained “cautious about the timely delivery of future projects” it believed that going forward “the government initiatives that are pushing Riyadh to be the business hub of the region are expected to spur local and international demand.” Announced in January this year by Crown Prince Mohammed bin Salman, the ambitious Riyadh Strategy 2030 aims to create 35,000 new jobs for Saudi nationals, pump up to SR70 billion into the national economy and double the size of the capital city’s population to as many as 20 million by 2030. The increased development in the first quarter is a welcome change from 2020, when construction activity declined in the wake of restrictions due to the pandemic. According to the Contract Awards Index produced by the US-Saudi Business Council (USSBC), the total value of construction contracts awarded in Saudi Arabia during the third quarter of 2020 declined by 84 percent year-on-year.

1.2 Latest Developments

- A positive growth it is expected in the Saudi Arabian construction sector during 2021 as the kingdom continues to ease social distancing measures. Saudi Arabia was expected to have vaccinated most of its priority groups by June 2021. The forecast growth for the sector is 2.5% y-o-y in 2021.
- The importance of Saudi Arabia’s so-called megaprojects, both to the market’s Vision 2030 and the political image of Crown Prince Mohammed bin Salman, mean that project works in relation to these are unlikely to be abandoned despite subdued oil revenue. However, weaknesses are noted in the business cases for certain projects that are based on tourism, such as the Red Sea International Airport.
- Expected added momentum behind megaprojects as the Public Investment Fund (PIF) orientates to domestic investment. It is forecasted, this to present an upside risk to the financing of the country’s megaprojects such as Neom and the Red Sea Project, which contribute significantly to the nation’s project pipeline in transport and residential/non-residential construction.

Table 1: Construction – Infrastructure Industry Data (Saudi Arabia 2020-2030)

CONSTRUCTION AND INFRASTRUCTURE INDUSTRY DATA (SAUDI ARABIA 2020-2030)											
Indicator	2020e	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Construction industry value, SARbn	165.2	175.0	183.0	190.6	199.7	209.9	221.7	235.4	249.8	267.6	282.9
Construction industry value, real growth, %y-o-y	-2.8	2.5	2.4	2.3	3.1	3.6	4.2	4.2	4.1	5.2	3.9
Construction industry value, % of GDP	6.2	6.0	5.9	5.9	5.9	5.8	5.9	6.0	6.2	6.4	6.5
Infrastructure industry value, SARbn	92.52	97.92	102.54	107.20	111.99	116.94	122.63	129.75	137.43	145.56	154.18
Infrastructure industry value real growth, %y-o-y	-2.8	2.4	2.6	2.7	2.8	2.9	3.5	3.8	3.9	4.0	4.1

Source: SAMA, Fitch Solutions

1.3 SWOT Analysis

Strengths

- The country has the largest construction sector in the Middle East.
- As one of the largest government spending plans in the region, Vision 2030 will increase infrastructure investment.

Weaknesses

- The industry relies heavily on government contracts rather than a free market driven by the private sector. Therefore, as government revenue declines, so do contract opportunities.
- There is much duplication of regulation and a burdensome bureaucracy.
- Domestic construction labour pool is lacking, and there is a heavy reliance on migrants.
- Government efforts to increase national employment and crack down on visas and immigrant workers created a steep labour shortage as workers were forced to leave the country.

Opportunities

- A number of new and ongoing megaprojects are providing international design and consultancy services with a solid revenue stream.
- Increasing private investment should provide opportunities for large foreign contractors to increase their involvement in the country.
- Infrastructure central to realizing the goals of economic diversification driven by Vision 2030 and the National Transformation Plan.

Threats

- The ongoing violence in Iraq and Yemen has raised the risks of terrorist groups crossing the border and targeting Saudi infrastructure.
- Lower oil prices and elevated government spending have begun to eat away at Saudi Arabia's financial reserves, and it is expected a rationalization of spending.

- Domestic production of building materials will not be sufficient for the foreseeable future, which coupled with rising regional demand could see building costs inflate.
- Heightened tensions with both Qatar and Iran could dent investor sentiment towards Saudi Arabia.

1.4 Structural Trends

Following the sharp economic downturn seen during 2020 amid the Covid-19 pandemic, the Saudi Arabian construction sector is continuing into 2021 with its long-term growth prospects intact, with a sizeable project pipeline. This is bolstered by the fact that Saudi Arabia is expected to have vaccinated key at-risk groups by June 2021, indicating a return to construction as normal. While Covid-19 has created downside risks to megaprojects, such as the Red Sea Project, which are intended to widen Saudi Arabia's appeal to tourists, it is believed that related construction will continue due to the importance of such projects to the market's Vision 2030 and the political image of Crown Prince Mohammed bin Salman. For instance, in the case of the Red Sea Project, it is believed that it is unlikely that passenger volumes will reach 1mn by 2030; however, this will not deter construction in the medium term. While it is expected the project to continue, it is also anticipated that delays may arise and that some projects may be scaled down.

*Graph 1: Near-Term Dip In Growth Before Return To Robust Growth
Saudi Arabia - Construction Industry Value & Real Growth (2019-2025)*



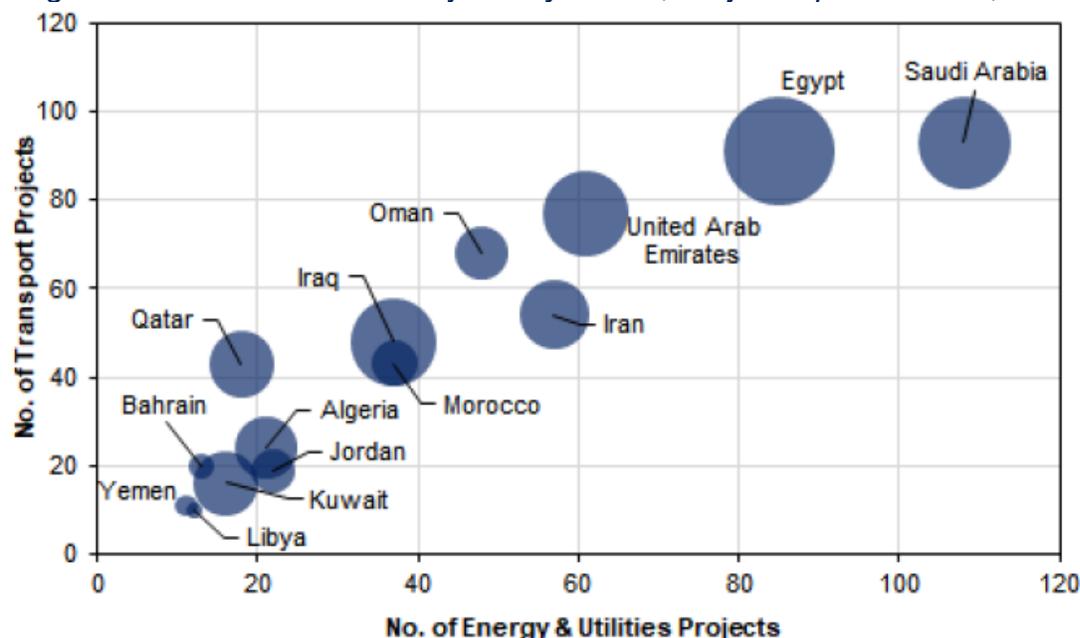
Source: SAMA, Fitch Solutions

The medium-term prospects for the sector are also bolstered by Saudi Arabia's sizeable project pipeline. Data from Fitch's Key Projects Database show the country exhibiting a USD90bn project pipeline of projects over USD30mn in value - the second largest in the Middle East and

North Africa, behind Egypt's USD127bn pipeline. The announcement of The Line in January 2021 as part of Neom is indicative of a growing pipeline and ambitious projects. The 197km city is intended to be revolutionary in being a zero-energy walkable community for a million people, built on artificial intelligence and innovative infrastructure. Substantial government efforts, such as plans to transform the capital city of Riyadh into an economic, social and cultural hub in the next 10 years, are supportive of this. The USD800bn plan, announced in July 2020, seeks to double the size of Riyadh, with various new projects planned. The scheme involves building a mega industrial zone focusing on technology such as renewables, automation, biotechnology and aquaponics.

Neom Showcases Saudi Construction Ambitions: The megaproject Neom it is highlighted as one of the most ambitious construction projects globally, with innovative technology to be developed in terms of rail transport; energy, including hydrogen power and desalination plants; and large-scale residential construction. The project involves the construction of The Line by 2030, a proposed smart city in Neom that will have no cars, no streets and no carbon emissions. The Line plans to have three layers, including a surface level for pedestrians, an underground train line for infrastructure and another line for public transport. In terms of residential construction, the project aims to have housing for 1.0mn residents and will be powered entirely by renewable energy. So far, there has been progress in the energy space, with the planning of the Neom City Desalination Plant and the progression of the USD5bn green hydrogen project. However, details remain unclear about the timelines, developments and companies involved in the construction of the required transport and residential projects in Neom.

Graph2: Saudi Arabia Exhibits One Of The Largest And Most Diverse Project Pipeline In Region MENA - Number Of Projects By Sector, Project Pipeline Value, USDbn



Source: Fitch Solutions Key Projects Database

Momentum Behind Saudi Arabia's Megaprojects Financing Despite Payment Issues

Greater investment in Vision 2030 from Saudi Arabia's PIF presents an upside risk on construction growth in the market and provides greater support for the realization of megaprojects such as Neom and Amaala. A lack of clarity regarding project details and financing frameworks, particularly regarding revenue streams, previously led us to be cautious of the ability of Saudi Arabia to attract sufficient funds into its planned megaprojects. In November 2020, an announcement from the PIF that it will cut its exposure to North American equities by USD3bn and an announcement by Crown Prince Mohammed bin Salman that the PIF would inject USD40bn annually into the economy in 2021 and 2022 are a boost to Saudi Arabia's project pipeline. Therefore, it is expected that greater financing for the megaprojects will come from the PIF, limiting the impact of fiscal spending cuts and reducing the need to seek private investment from elsewhere.

PIF's domestic reorientation is indicative of a positive outlook for Vision 2030. Following the recent fall in oil prices, the case for Saudi Arabia's diversification projects away from hydrocarbons is stronger than ever, with PIF now well positioned to capitalize from this. For instance, PIF recently increased its ownership stake in **ACWA Power**, a Riyadh-based developer of power generation, from 33% to 50%. ACWA power plays a key role in the development of Saudi Arabia's renewable energy strategy. The **Red Sea Development Company**, which is wholly owned by the PIF and is one of the three main megaprojects announced in 2017, has awarded its highest-value contract to a consortium led by ACWA Power. This public-private partnership package will be focused on providing a 100% renewable energy system for power and water for the entire district, the airport, and all related infrastructure that will make up the Red Sea Project. However, the scale of Saudi Arabia's megaprojects remains a challenge to full, timely realization. For instance, the Red Sea Project is being pursued on the basis of annual passenger volumes of 300,000 initially and 1mn by 2030. There is a belief that the pandemic has made these projections unachievable during this time frame. However, due to the importance of such projects to diversifying the economy away from oil and in realizing the goals of the crown prince, is expected these projects to be pursued as initially planned.

Experts highlight reports that construction firms are pursuing payment for unpaid bills related to the Riyadh Metro. US based **Bechtel** is reportedly owed around USD1bn for the metro project, with companies including Spain-based **Fomento de Construcciones & Contratas**, Italy-based **Webuild** and UK-based **WS Atkins** also pursuing delayed payment. The delays in payments are related to construction delays and cost overruns caused by the Covid-19 pandemic, with the issue having been raised by the US, French and Spanish embassies. Given that Bechtel has since been hired as a key contractor for Neom developments, is expected that the payment issue will not substantially impact the outlook for Saudi Arabia's construction sector. However, this issue is a delayed reflection of 2020's environment in the infrastructure sphere, which saw a reliance on faltering oil prices and Covid related construction delays.

2. Transport Infrastructure

2.1 Overview

Saudi Arabia's transport infrastructure sector will see positive growth throughout 2021, following Covid-related contraction in 2020. A robust pipeline of infrastructure projects, particularly in road and rail, will sustain the sector's growth prospects across our forecast period to 2030.

2.2 Latest Developments

- Supported by a robust project pipeline and sizeable investment ambitions in the sector, it is forecast a return to positive growth territory during 2021 for Saudi Arabia's transport infrastructure sector, with real growth of 2.4% y-o-y.
- Qiddiya Investment Company (QIC) has been awarded the concession for the development of roads and bridges infrastructure in the Qiddiya megaproject, which will see a joint venture with Haif Bin Mohammed Bin Abboud Alqahtani and Partners For Trading Contracting and Freyssinet Saudi Arabia Co. The concession contract is valued at more than USD290mn and is expected to be completed by 2023.
- Crown Prince Mohammed bin Salman has announced plans for a 100-mile belt of zero-energy walkable communities for a million people called 'The Line', which will be built as part of Neom. This project will require high-speed transport facilities such as a metro line and a high-speed freight transport system located underground at an estimated cost of between USD100bn-200bn.
- The Red Sea Development Company has selected Aecom to provide the airside construction supervision and quality control services for an upcoming international airport in Saudi Arabia. The new airport is designed by Foster + Partners and will be located at the Red Sea luxury tourism development project. The scope of work includes overseeing the airside infrastructure construction, designing and building a 3.7km Code F runway, a Code B seaplane runway, parallel and link taxiways, pavement works, aerodrome ground lighting, airside utilities, helipads, roads, and associated buildings. The entire infrastructure of the airport is planned to be powered by renewable energy and will serve about 1mn domestic and international passengers per year. The airport is expected to be ready in 2022.
- QIC plans to have a metro line to link the Qiddiya Entertainment City with the airport in Riyadh, Saudi Arabia. The developer has already awarded 10 construction contracts worth SAR2.0bn (USD533.3mn), with Al Ajmi, Shibh Al Jazira Contracting and SAPAC securing the key contracts for the project. The project is expected to be completed in 2023.

Table 2: Transport Infrastructure Industry Data (Saudi Arabia 2020-2030)

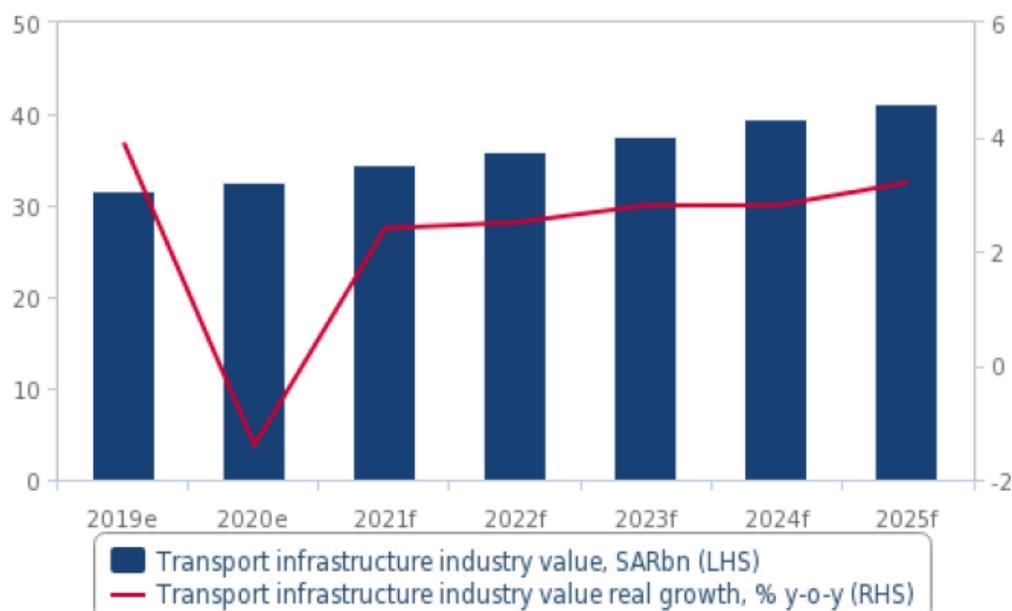
TRANSPORT INFRASTRUCTURE INDUSTRY DATA (SAUDI ARABIA 2020-2030)											
Indicator	2020e	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Transport infrastructure industry value, SARbn	32.53	34.47	36.07	37.76	39.45	41.29	43.44	46.05	48.86	51.85	55.02
Transport infrastructure industry value real growth, % y-o-y	-1.4	2.5	2.5	2.8	2.8	3.2	3.8	4.0	4.1	4.2	4.3

Source: SANA, Fitch Solutions

2.3 Structural Trends

Across the forecast period until 2030, Saudi Arabia's transport infrastructure will continue to benefit from government focus and investment under the National Transformation Plan which is part of Vision 2030. With plans to diversify the economy and encourage private sector growth, an effective transport network is seen as a key supporting factor in developing an industrial base to reduce Saudi Arabia's reliance on crude exports. It has been long noted the prospect for greater private participation in the Saudi infrastructure market at a time where low oil prices have severely undermined the government's long-term ability to finance major infrastructure spending. While the scale of project opportunities has come under pressure from the fall in oil prices, the Saudi market remains one of the favoured transport segments in the Gulf Cooperation Council (GCC) given the sector's multiple centers of demand, with five cities having a population of more than 1mn people, and its need to boost internal and external links. All of these attractive traits point to there being significant interest from the private sector in plans under Vision 2030 to increase private participation in the infrastructure space.

Graph 3: Return To Positive Growth In 2021 Saudi Arabia – Transport Infrastructure Industry Value & Real Growth (2019-2025)



Source: SAMA, Fitch Solutions

High-Value Activity In Roads Infrastructure A Key Growth Driver: Roads and bridges continue to make up a substantial amount of high-value projects in our transport sector in Fitch's Key Projects Database. Sizeable capacity and historical expertise in road construction is supportive for the realization of projects in the sector, while demand factors, namely a growing population and large volumes of long-distance domestic travel, support the investment case for road infrastructure in the country. As well as new roads and bridges to increase connectivity, there will also be significant investment in modernizing roads within cities as part of the National Transformation Plan which seeks to elevate Saudi cities into smart cities.

Notable road projects in the coming decade include:

- A new 400km road network in Riyadh which was announced in early 2020 and is expected to be completed by 2023. The project includes adding 80km to the First Ring Road, completing the Second Ring Road with 73km and developing the King Fahd Road.
- In December 2020 the development of the Madinah-Hail road and the Madinah-AIUla-Tabuk highway were announced to increase connectivity for pilgrims.

Progress In City Metros, But Weak Outlook for GCC Rail: While it is expected public transport to only be used for a minority of journeys within Saudi Arabia, as part of The National Transformation Plan there will be increased efforts to build rail infrastructure within major cities amid changing urban design. It is expected the Riyadh Metro to be completed by 2030. It is currently one of the largest urban metro projects under construction globally with 176km of track and 85 stations. Lines 4 and 6 are estimated to open in June/July 2021, with lines 1 to 5 still under construction. **Alstom** trains will run on three metro lines, with trains being built by **Siemens** running on two lines, and **Bombardier** trains running on one line. A new metro and bus network is being developed in Jeddah and Makkah, with the Makkah Public Transport Programme set to serve 88 stations and transport the millions who usually visit yearly on pilgrimage. There is noted significant hurdles which stand in the way of the completion of the transnational GCC Railway Network, which had an original completion date of 2018. After successive delays, the current end year for this project is now 2030. Financial challenges across the GCC markets, including the dip in oil prices in 2014 and 2015, have served to delay this project. While the blockade against Qatar has now been lifted, previously new railway plans were drawn up to bypass Qatar, which will again be subject to change. Therefore, it is expected that the planned GCC Railway Network will continue to face additional delays, if not cancellation.

Potential For Nascent Hyperloop Technology: Although unproven technology, plans to develop hyperloop infrastructure in Saudi Arabia continue to progress. Since **Virgin Hyperloop One** unveiled plans in mid-2019 to build the Virgin Hyperloop One Centre of Excellence at King Abdullah Economic City in Saudi Arabia, plans have continued to progress to develop the technology. February 2020 saw the Ministry of Transport sign a contract agreement with Virgin Hyperloop One, under which the latter will carry out a pre-feasibility study regarding hyperloop technology in the country. The study will assess viable routes, expected demand and

anticipated costs, among other things. It will lay the groundwork for a network of hyperloop routes to be considered across the country.

Weakened Demand Case For New Airports: Experts remain cautious of the timely realization of new airports that are being built for easy tourist access to megacities such as Amaala and the Red Sea Project. While these airports make sense given the distance between such cities, it is believed that the short-term plans are based on overly optimistic passenger numbers, especially in the wake of the disruption to travel and tourism caused by Covid-19.

Two prominent examples are the Red Sea International Airport and the Amaala International Airport, which are expected to be opened in 2022 and 2023 respectively. The Red Sea Airport has seen contracts awarded by **Red Sea Development Company** to **Nesma & Partners Contracting** and **Almabani General Contractors** for its construction, with UK-based Foster & Partners having already been awarded a design contract in early 2020. The Red Sea Project will encompass a total area of 28,000sq km and feature an airport alongside a mix of more than 8,000 luxury hotel rooms and mixed-use entertainment complexes spread across 22 islands and six inland sites.

The substantial pressure placed on airports globally amid an unprecedented drop in passenger volumes brought about by the ongoing Covid-19 pandemic will weigh on the demand case for the project and cloud its progression until a demonstrable recovery in global travel. Red Sea Development Company envisages, in experts view, overly ambitious annual passenger volumes for the airport - 300,000 initially and 1mn by 2030. Such forecasts, made prior to the pandemic, would further weaken the demand case for the airport's progression once adjusted to take into account the pandemic's impact on air travel and its eventual recovery to pre-pandemic levels. Estimates from the International Air Transport Association expect global air traffic levels to remain below 2019 levels through to the end of 2024 and expect this to lag behind the recovery of the broader global economy.

Despite constraints on tourism in the coming decade, it expected the construction of airports to continue, albeit with caveats regarding project timelines. Owing to the importance of tourism to Saudi Arabia's Vision 2030 and the support from the government and the Public Investment Fund, megaprojects will continue construction, and it is predicted the same for the associated airports.

Table 3: Saudi Arabia Major Transport Infrastructure Projects

Project Name	Sub sector	Value (USDm n)	Size	Unit	Companies	Time Frame End	Status
King Abdulaziz International Airport Expansion	Airports	7.200	67	mn passengers per year	TAV Construction[Construction]{Turkey}, Saudia Aerospace and Engineering Industries[Sponsor]{Saudi Arabia}, Al Rajhi Holding Group[Construction]{Saudi	2035	At planning stage

<p>on Project, Jeddah, Makkah</p>					<p>Arabia}, BIC Contracting[Construction]{UAE}, Dar Alhandasah[Consultant/Project Management]{Lebanon}, ADPI[Design/Architect]{France}, Arup Engineering firm[Design/Architect]{UK}, Areen Design[Design/Architect]{UK}, Bank of Bahrain and Kuwait[Financier]{Bahrain}, Arab Bank[Financier]{Jordan}, Arab Banking Corporation[Financier]{Bahrain}, BNP Paribas[Financier]{France}, Arab National Bank[Financier]{Saudi Arabia}, Emirates NBD[Financier]{UAE}, Ahli United Bank[Financier]{Bahrain}, Union National Bank[Financier]{UAE}, Samba Financial Group[Financier]{Saudi Arabia}, Maybank[Financier]{Malaysia}, Abu Dhabi Commercial Bank[Financier]{UAE}, Gulf International Bank[Financier]{Bahrain}, Saudi Arabia General Authority for Civil Aviation[Sponsor]{Saudi Arabia}, Saudi Binladin Group[Construction]{Saudi Arabia}, Atkins[Design/Architect]{UK}, Netherlands Airports Consultants[Consultant/Project Management]{Netherlands}, Aircraft Accessories & Components Co[Sponsor]{Saudi Arabia}</p>		
<p>Saudi Landbridge Project, Jeddah (Makkah) -</p>	<p>Rail</p>	<p>7,000</p>	<p>1,549</p>	<p>km</p>	<p>Huawei[Consultant/Project Management]{China}, Arabian Consulting Engineering Centre[Design/Architect]{Saudi Arabia}, Public Investment Fund[Sponsor]{Saudi Arabia},</p>	<p>2025</p>	<p>At a planning stage</p>

Jubail (Eastern)					Saudi Railway Company[Sponsor]{Saudi Arabia}, Fluor Corporation[Consultant/Project Management]{US}, Parsons Brinckerhoff[Consultant/Project Management]{US}, Italferr[Design/Architect]{Italy}, Saudi Railways Organization[Sponsor]{Saudi Arabia}		
Makkah Metro Rail Project - Phase I, Makkah	Rail	6,797	45.1	km	Development Commission of Makkah and Mashaaer[Sponsor]{Saudi Arabia}, Prasarana Malaysia Berhad[Consultant/Project Management]{Malaysia}, Parsons	2025	Under construction
Jeddah Monorail Project, Makkah	Rail	5,597	NA	NA	Government of Saudi Arabia[Sponsor]{Saudi Arabia}, IBI Group[Consultant/Project Management]{Canada}	NA	At planning stage

Source: Fitch Solutions Infrastructure Key Projects Database

3. Energy and Utilities

3.1 General Overview

The energy and utilities infrastructure sector in Saudi Arabia maintains a positive view on the long-term outlook. Growth is expected to be 2.3% y-o-y during 2021. Specifically it is highlighted the deployment of renewable energy assets, particularly solar, as a key investment bright spot.

3.2 Latest Developments

- Saudi Arabia's energy and utilities infrastructure sector is expected to grow by 2.3% y-o-y during 2021, following a contraction of 3.5% during 2020 in light of the economic impact of Covid-19.
- National Contracting Company has won a SAR300.9mn (USD80.3mn) contract from Saudi Electricity Company for the construction of a 380kV transmission line between Wadi Dawaser and Layla Project in Saudi Arabia. The double circuit overhead transmission line will have a length of around 293.25km. The contractor will deliver the project on a lump-sum turn-key basis, with responsibilities including design, engineering, materials procurement, installation, construction, and testing and commissioning. The works are due to be delivered by 2023.

- The Japan Bank for International Cooperation (JBIC) has signed a loan agreement with South Rabigh Renewable Energy Company (SRREC) for the Rabigh solar photovoltaic (PV) facility in Saudi Arabia. SRREC, which will build, own and operate the plant, is owned by Marubeni Corporation and Al Jomaih Energy & Water Company. JBIC will provide around USD78mn for the project. The loan is co-financed with Mizuho Bank and Al Rajhi Banking & Investment, with total co-financing amounting to USD157mn. The project, located in Mecca Province, is scheduled to start operations by June 2023.
- Saudi Water Partnership Company (SWPC) has reached financial closure for the SAR3.3bn (USD880.0mn) Yanbu 4 Independent Water Project in Saudi Arabia. The facility will be located near Ar Rayy is on Saudi Arabia's Red Sea coast and generate up to 450,000 cubic metres of potable water per day. Doosan Heavy Industries & Construction is the engineering, procurement and construction (EPC) contractor for the project. Slated to be operational in Q423, the project will be operated by a private firm under a 25-year concession. The pipeline will be transferred to the Saline Water Conversion Corporation after it is completed.
- In February 2021, ACWA Power signed an EPC contract with China-based SEPCOIII for the delivery of utilities and infrastructure works for the Red Sea Project, an upcoming tourism development in Saudi Arabia. Under the contract, the team will be responsible for the construction of a 1GWh battery storage facility, a reverse osmosis plant, a wastewater treatment plant, as well as facilities for solid waste management and district cooling. The contract also covers the installation of a wind and solar projects.
- The renewable unit of India-based Larsen & Toubro has won an EPC contract for the Jeddah solar PV plant in Saudi Arabia. The 300MW power plant, which will come up in Makkah Province, will feature bifacial panels, single-axis trackers and string inverters. The project is being developed by MASDAR, EDF Renewables and NESMA, which will sell the project output to Saudi Power Procurement Company for 25 years. The project is due to enter operation in mid-2022.

Table 4: Energy and Utilities Infrastructure Industry Data (Saudi Arabia 2020-2030)

ENERGY AND UTILITIES INFRASTRUCTURE INDUSTRY DATA (SAUDI ARABIA 2020-2030)											
Indicator	2020e	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Energy and utilities infrastructure industry value real growth, % y-o-y	-3.5	2.3	2.6	2.6	2.8	2.8	3.3	3.7	3.8	3.9	4.0
Energy and utilities infrastructure industry value, SARbn	59.99	63.45	66.47	69.44	72.55	75.64	79.19	83.71	88.57	93.71	99.16

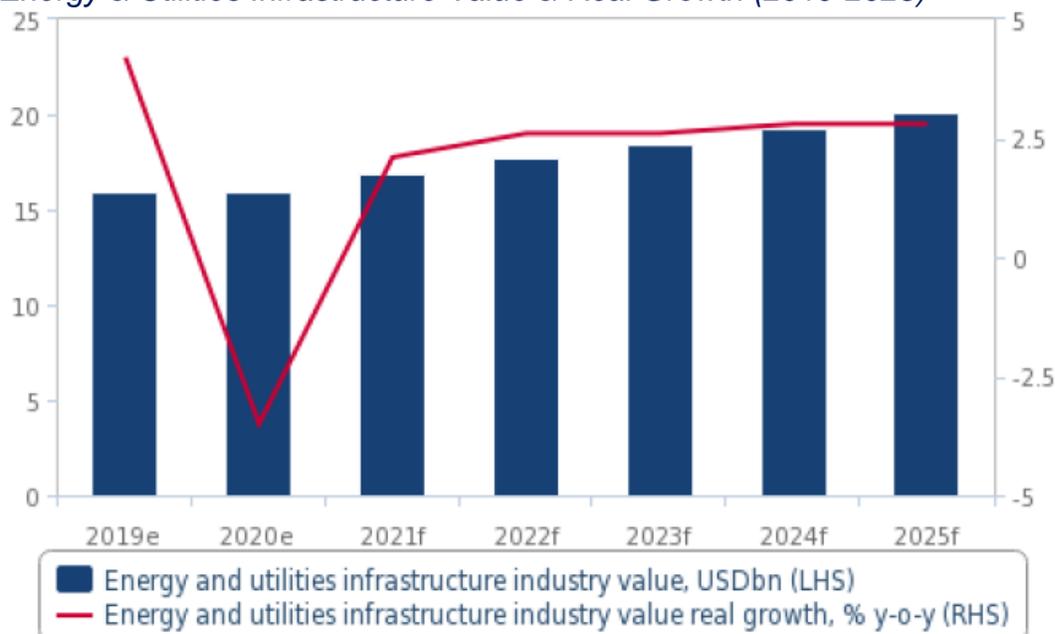
Source: SAMA, Fitch Solutions

3.3 Structural Trends

Change in Saudi Arabia's energy and utilities sector will be driven by the government's aim to reduce domestic crude oil consumption to free up its reserves for exports rather than electricity generation. Gas-fired generation will be the most significant substitute for crude oil. It is expected growth in solar capacity, as well as the necessary grid infrastructure needed to accommodate it. Likewise, it is predicted diversification efforts to lend support behind the

nation's nascent but growing hydrogen energy sector, with the Saudi Arabia to be a legion leader in the sector.

Graph 4: Steady Medium-Term Growth Amid Power Generation Diversification Saudi Arabia - Energy & Utilities Infrastructure Value & Real Growth (2019-2025)



Source: SAMA, Fitch Solutions

Renewable Infrastructure To Grow But Unlikely To Meet Targets: It is forecasted a significant increase in solar power capacity over our forecast period; however, there are obstacles to reaching ambitious targets and the realization of solar infrastructure projects. As set out in the Vision 2030 programme and executed by the Renewable Energy Project Development Office, Saudi Arabia aims to meet the ambitious target of 57.8GW from solar and wind by 2030. The kingdom, like its neighbours, is well placed to take advantage of an ideal combination of high solar insolation rates and well-matched demand patterns. Solar installations can also be developed on Saudi Arabia's vast quantity of unused land, with our Key Projects Database (KPD) showing that solar infrastructure makes up 11% of the current energy and utilities pipeline.

However, there are a number of factors that will hamper the kingdom's ability to rapidly expand its renewable power capacity. These factors include:

- Saudi Arabia's focus on developing a domestic solar manufacturing market and acquiring the expertise to export components and knowledge to other countries will hinder the timely development of projects. The kingdom aims to build projects with a local content requirement of 80%, and limited domestic expertise in developing projects has stalled progress in recent years.
- The regulatory environment for renewables remains relatively challenging, with a lack of subsidies on offer to attract investors to the market - a problem exacerbated by the

prevalence of relatively cheap oil, threatening solar power's cost competitiveness. However, the adoption of an auction-style tender scheme will improve competitiveness in the industry and is likely to bring more success in tendering out new non-hydropower renewables capacity in future.

- Wind power infrastructure is currently limited in Saudi Arabia, with only one onshore wind plant currently under construction - the Dumat Al Jandal Wind Farm, which is due to be completed by 2022.

All solar infrastructure projects in Fitch's KPD are expected to be completed by 2022; however, given the disruption to solar supply chains caused by Covid-19, as well as Saudi Arabia's focus on the domestic solar manufacturing market, there is room for delays. Also, it is noted that the strong project pipeline and government backing behind renewable infrastructure present upside risks.

Water Investment To Be Non-Negotiable Amid Risk Of Water Scarcity: Water infrastructure makes up 32% of the energy and utilities pipeline, according to Fitch's KPD, which is underpinned by the risk of water scarcity in the kingdom. Currently, 50% of drinking water in the kingdom comes from desalination, 40% from mining non-renewable groundwater and only 10% from surface water. This is against a backdrop of rising global temperatures and increased drought risk and diminishing groundwater reserves. In 2019 the government launched the Qatrah programme which aims to reduce water consumption from 200 litres per person per day by 2020 and 150 liters by 2030, although this will not be enough to mitigate a growing population, new cities and increased tourism.

Saudi Arabia is expected to become a regional outperformer in new water technology, namely in solar-powered desalination plants. The King Abdullah Solar Powered Desalination Plant is nearing the end of construction, and as solar energy becomes more cheaply and readily available, it is expected solar to be more widely used in the energy-intensive process of water desalination.

Saudi Arabia is also spearheading new developments in water infrastructure developments, which has the potential to be replicated both domestically and abroad. The megaproject Neom has planned a solar desalination plant with UK-based company Solar Water. The plant will be based on solar dome technology. The process sees seawater pumped into a hydrological dome made from glass and steel before it is superheated, evaporated and eventually precipitated as freshwater. This technology aims to provide more sustainable methods of water desalination.

The kingdom's Saline Water Conversion Corp, Saudi Water Partnership Company and the National Water Company have already built an extensive network of desalination plants, and it is expected this to continue as the demand for water increases amid growing urbanization.

Strong Future For Nascent Green Hydrogen Production: It is expected progress in Saudi Arabia's green hydrogen production, with the nation being a regional leader in our Green Hydrogen Suitability Index, with a score of 62, placing it second in the Middle East and North Africa region and 26th globally. As the kingdom continues to develop its infrastructure, it is expected Saudi Arabia's score to climb to 67.5 by 2030, climbing 15 places in the global rankings. Saudi Arabia has already begun producing grey and blue hydrogen. With robust

government support, it is seeking to expand both processes via blue carbon capture and storage. Early works are currently under way on Saudi Arabia's USD5nn Helios Green Fuels Project which is being developed with the US-based Air Products as well as the domestic ACWA Power in the new megacity of NEOM. The planned project will reportedly integrate 4GW of renewable power from solar, wind and storage with the production of hydrogen, and the project is expected to be operational by 2025.

No Expectations For Nuclear Capacity Additions: Grid-connected commercial nuclear power will remain absent from Saudi Arabia's energy mix throughout our forecast period to 2030 as challenges in financing and construction delay its completion. Exports do not currently forecast that Saudi Arabia will have any nuclear power capacity online over our 10-year forecast period. A track record of delays in the development of nuclear power projects in other countries, both emerging and developed, prompt us to adopt a cautious approach to Saudi Arabia's plans. Experts are waiting to see concrete progress in the contracting of developers and the start of construction before factoring any nuclear capacity into our forecast for Saudi Arabia. The KA CARE Nuclear Power Project, which is the only nuclear project in the pipeline, is currently at the planning stage, and it is expected yet to see any concrete developments or potential timelines. Also it is noted that the country has not yet established an independent nuclear regulator.

Table 5: Saudi Arabia - Major Energy and Utilities Infrastructure Projects

Project Name	Sub - sector	Value (USD mn)	Size	Unit	Frame time End	Status
Jubail Phase 3 IWPP, Eastern	GAS	5,000	3,000	MW	2023	Under Construction
South Medinah Combined Cycle Plant, Medinah	GAS	3,000	5,580	MW	2023	Feasibility studies/EIA under way
Yanbu Power and Desalination Plant - Phase 3, Medinah	OIL	3,000	3,300	MW	2020	Under Construction
Duba 2 ISCC Power Plant, Tabouk		2,700	1,800	MW	2018	At a planning stage

	GAS					
Riyadh Water Storage Project, Riyadh	RESERVOIR	1,173	NA	NA	NA	Under Construction

Source: Fitch Solutions Infrastructure Key Projects Database

4. Residential & Non-Residential Buildings

4.1 General overview

Saudi Arabia's residential and non-residential buildings sector will continue to see positive growth in Q2 with the sector having strong prospects, with project activity across entertainment, tourism and social infrastructure set to rise in the coming years due to its importance within the broader Vision 2030.

Latest Developments:

- Saudi Arabia's residential and non-residential buildings sector will post positive real growth of 2.7% y-o-y during 2021, following a contraction of 2.8% y-o-y during 2020 in light of the economic impact of Covid-19.
- The sector is expected to exhibit an average annual real growth rate of 3.8% between 2021 and 2030, with project activity in the entertainment and tourism sector a strong driver of growth due to its importance within the broader Vision 2030.
- National Housing Company (NHC) has signed four agreements worth more than USD210mn for the infrastructure development of the Murcia residential project Phase II and the Khayala project in Saudi Arabia. The second phase of the Murcia project is located in the suburb of Al-Jawan, Riyadh. To be implemented over a 5sq km area, the project will deliver more than 9,000 housing units. The Khayala project in the Al-Hamdania neighborhood is a residential development with modern designs and integrated services across the Jeddah governorate. Spread over an area of more than 1.5sq km, the project will provide about 3,500 housing units. Both the projects are being developed on a public-private partnership (PPP) basis.
- Saudi German Hospitals Group intends to award a SAR346.5mn (USD92.4mn) contract to International Hospitals Construction Company for upgrading its healthcare facilities in Saudi Arabia. The scope of works includes the modernization and renovation of hospitals located in Jeddah, Riyadh, Khamis Mushayt and Madinah. The project is expected to be completed in 2024.
- The Red Sea Development Company has awarded two contracts for the development of 50 hotels and 1,300 residential properties under the Red Sea tourism project in Saudi Arabia. Under the first contract, Al Bawani will provide civil and structural works for 40 hotel villas. Al Bawani will carry out the construction of the infrastructure networks for the Southern Dunes resort. Under the second contract, Blumer Lehmann will be

responsible for carrying out timber construction planning and fabrication services for a Kengo Kuma-designed resort on Ummahat Al-Shaykh Island.

- The Eastern Region Municipality in Saudi Arabia has received expressions of interest from 63 companies for the construction of the SAR800.0mn (USD213.3mn) Al Khobar Waterfront mixed-use project in the Al Khobar corniche. The 60,960sq m PPP project will be executed under a 25-year build-operate-transfer model.

Table 6: Residential and Non-Residential Building Industry Data (Saudi Arabia 2020-2030)

RESIDENTIAL AND NON-RESIDENTIAL BUILDING INDUSTRY DATA (SAUDI ARABIA 2020-2030)											
Indicator	2020e	2021f	2022f	2023f	2024f	2025f	2026f	2027f	2028f	2029f	2030f
Residential and non-residential building industry value, SARbn	72.7	77.1	80.5	83.4	87.8	93.0	99.0	105.7	112.4	122.1	128.7
Residential and non-residential building industry value real growth (%)	-2.8	2.7	2.2	1.8	3.5	4.4	5.1	4.7	4.3	6.7	3.7

Source: SAMA, Fitch Solutions

Structural Trends:

Sound Financing Prospects For Vision 2030 Projects: A key source of long-term strength for project activity in the sector is Vision 2030, which comprises government efforts to seek to diversify the country's economy away from oil. Vision 2030 has several important targets for the residential building sector aimed at increasing access to financing for homes and the output of units through more efficient procurement.

Greater investment in Vision 2030 from Saudi Arabia's Public Investment Fund (PIF) presents an upside risk to our existing forecasts for construction growth in the market and provides greater support for the realization of giga-projects such as Neom and Amaala. Previously, experts were cautious of the ability of Saudi Arabia to attract sufficient funds into its planned megaprojects due to a lack of clarity regarding project details and financing frameworks, particularly regarding revenue streams.

Saudi Arabia has taken clear steps to increase private sector involvement in infrastructure development by opening its stock exchange to foreign investment and lowering the minimum assets under management required. The November 2020 announcement from the PIF that it will cut its exposure to North American equities by USD3bn, and Crown Prince Mohammed bin Salman's announcement that the PIF would inject USD40bn annually into the economy in 2021 and 2022 are a boost for Saudi Arabia's project pipeline. It is expected that greater financing for the megaprojects will come from the PIF.

This will limit the potential impact of Saudi Arabia's fiscal deficit and its decision to cut oil output. It is highlighted that the fiscal deficit will narrow to 6.1% of GDP in 2021, compared with an estimated 11.6% in 2020. This bodes well for the construction sector, reducing the previous risks of potential delays and cancellations in the project pipeline.

5. Competition

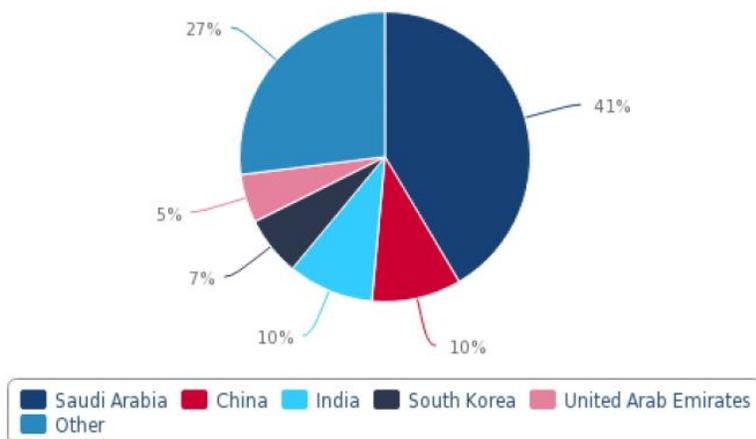
5.1 Key View

- Saudi Arabia's competitive landscape exhibits a healthy degree of competition between domestic contractors and multinationals, with domestic construction occupying a third of construction roles.
- The sector sees a significant proportion of its financing roles serviced by key players in Saudi Arabia's banking sector, such as Arab National Bank, National Commercial Bank and Samba Financial Group.
- The country's business environment is less conducive to international participation relative to other markets in the region, with many projects featuring restrictions on international firms, including mandatory partnering between foreign and domestic companies.

Saudi Arabia's construction sector has a healthy mix of domestic and foreign contractors in its construction competitive landscape, with a third of construction roles being occupied by domestic firms. Data from Fitch's Key Projects Database show Saudi Arabian firms ahead of Spain, South Korea and China in terms of their share of construction roles in the country's project pipeline. **Saudi Binladin Group, Almagbari General Contractors** and **Saudi Oger** stand out as active domestic contractors, alongside well-established foreign companies in the sector, such as India-based **Larsen & Toubro, China Railway Construction Corporation** and South Korea-based **Doosan Heavy Industries & Construction**.

Spain's involvement in the sector transpires via a variety of companies taking on a small number of respective roles each. Active Spain-based companies include **Fomento de Construcciones y Contratas (FCC), Ferrovial and Acciona**. FCC, for example, is involved in the USD23bn Riyadh Metro Project, a rapid transit system set to facilitate more than 176km of metro lines which is set to start operations in 2021.

Graph.5: Healthy Mix Of Domestic And Foreign Contractors



Source: Fitch Solutions Key Projects Database

The sector has a large share of Saudi Arabian banks in financing roles in its project pipeline, with more than 50% of such roles being occupied by domestic financing institutions. Entities in Saudi Arabia's domestic banking sector account for a sizeable portion of financing roles, distantly followed by Japanese and Emirati institutions, with respective shares of 11% and 8%. **Arab National Bank, National Commercial Bank and Saudi British Bank**, the latter being minority-owned by **HSBC Holdings**, are the most active financing entities in the country's project pipeline, and Japan-based **Mitsubishi UFJ Financial Group** and **Sumitomo Mitsui Banking Corporation** also appear frequently.

Saudi Arabia's sovereign wealth fund, the Public Investment Fund, maintains a presence in the country's construction sector, both as a financier and sponsor of several high-value projects. The fund is involved in the planning of the Saudi Landbridge Project, which intends to carry rail freight between Riyadh and Jeddah on the Red Sea coast and was previously involved in the completion of the USD3.5bn North-South Railway project, which is a 2,400km passenger and freight rail line between Riyadh and Al Hadithah.

Previously, foreign contractors and engineers were attracted to Saudi Arabia by activity in its oil and gas industry, seeking to gain exposure in the deployment of pipeline infrastructure. US-based **Bechtel** and South Korea-based Doosan Heavy Industries & Construction are examples of key multinationals that have established operations in the country's oil and gas pipeline infrastructure sub-sector, providing services that include the design, procurement and construction of such projects.

With significant public infrastructure investment having occurred in recent years, it is expected expect the government, and the sector generally, to become more open to supporting public-private partnerships in transport and other infrastructure classes. This would, in turn, open up the country's competitive landscape due to the need to bring in the necessary expertise to conduct more technical infrastructure projects.

Relative to the region, Saudi Arabia's business environment remains less conducive to international participation and exudes greater operational risk. Many projects feature mandatory partnering between foreign and domestic companies, and companies willing to cooperate with Saudi Arabia's domestic business environment will benefit from greater accessibility to future opportunities for infrastructure investment in the country.

6. Sources

- BMI Research, Fitch Group
- Exportgate, Eurobank
- Mordor Intelligence

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