

Industry in Focus 2020

Charting the growth of Saudi Arabia's industrial capacity





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Alternative Engine

Industrial operations are pegged to drive future non-oil growth and provide attractive employment opportunities for citizens

Saudi Arabia's industrial sector is widely regarded as a promising area for growth that can provide citizens with attractive employment opportunities in the decades ahead. The Kingdom has also recognized that a formula based on the inputs of plentiful crude oil and inexpensive foreign labor alone will not create enough distinctive products to diversify exports and generate sufficient wealth for a growing population. The sector is therefore embarking on an agenda based on Industry 4.0, a more efficient and educated workforce, and investment and skills transfer from the private sector.

VISION 2030: The sharp downturn in oil prices from 2014 to 2016 prompted a policy overhaul in which civil servants and management consultants re-appraised the Kingdom's economic strengths and weaknesses, and identified a new strategy on which to map future prosperity. The resulting document, Saudi Vision 2030, laid out a blueprint for success based on three pillars: a vibrant society, a thriving economy and an ambitious nation. Crafting a new economic composition is a project that requires the support of citizens and residents, as well as investment from the local private sector and international businesses.

However, it is public sector agencies that are leading the charge in enabling progress.

Vision 2030 lays out 96 objectives within 13 programmes, each with its own measurable goals. Plans can be adapted to capture new opportunities as they arise, but accountability in delivery is emphasized. Goals that are important to industry include boosting the private sector's contribution to GDP from 40% in 2016 to 65% by 2030, while increasing the contribution of foreign direct investment (FDI) to GDP from 3.8% to 5.7%. Since the roadmap was launched in April 2016, there have been multiple changes in the public departments and agencies responsible for implementing its agenda, many of which have had a direct impact on the industrial sector.

OVERSIGHT BODIES: The overarching Council of Economic and Development Affairs (CEDA) is chaired by Crown Prince Mohammed bin Salman bin Abdulaziz Al Saud. There are 22 seats on the CEDA board, many of them held by ministers. The Ministry of Economy and Planning (MEP) is responsible for coordinating with other ministries to enact the policies of Vision 2030. In 2017 the

MEP assumed oversight of the new National Development Fund, an umbrella body composed of a number of key government financing agencies such as the Saudi Industrial Development Fund (SIDF), the Agricultural Development Fund, the Human Resources Development Fund and the Social Development Bank.

In 2016 the ministries responsible for industry, mining and energy were merged, with Khalid Al Falih, the former CEO of national oil giant Saudi Aramco, leading the new Ministry of Energy, Industry and Mineral Resources. However, in late 2019 the portfolios were separated again and two new ministers appointed. Khalid Al Falih was replaced at the helm of the Ministry of Energy by Prince Abdulaziz bin Salman Al Saud, an oil industry veteran. Meanwhile, Bandar Alkhorayef was appointed the head of the Ministry of Industry and Mineral Resources.

This shake-up also meant dividing the functions of the Ministry of Commerce and Investment, which had been responsible for issuing and enforcing commercial licenses, trademarks and trade names. The functions of the Saudi Arabian General Investment Authority (SAGIA) were assumed by the new Ministry of Investment in February 2020, headed by Al Falih after a couple months out of office. At the same time Majid Al Qasabi, the minister of commerce, was named acting minister of media.

INDUSTRY FOCUS: The reshuffle reflected concerns that a ministry combining the interests of industry, mining and energy had too broad a mandate to address the three sectors' needs effectively. At the end of the process many welcomed the return of Al Falih to a key government role related to investment, where he would be able to draw on dozens of years in industry and a vast network of international contacts. The agency he assumed control of, SAGIA, was formed in 2000. For two decades it spearheaded the Kingdom's FDI drive by identifying opportunities and partnerships that would bring new products and skills into the country, but also acted as a regulator by issuing licenses to international investors in addition to setting standards.

Invest Saudi, SAGIA's promotional arm, highlights business opportunities in the Kingdom. Broad categories identified by Invest Saudi include mining and minerals, chemicals, industry and manufacturing, and transport and logistics. Within each of these the agency identifies sub-sectors ripe for investment. Under industry and manufacturing it mentions meeting demand for food and building materials by creating food processing businesses, aquaculture farms and companies manufacturing construction inputs. Parts needed for desalination plants, solar panels, vehicles and aircraft were also highlighted.

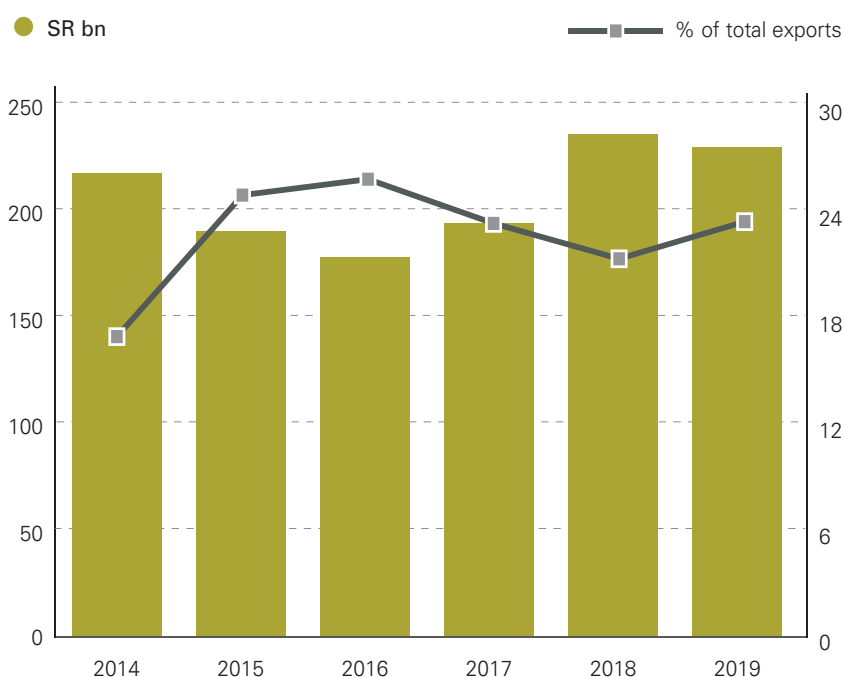
"When speaking about localizing manufacturing capabilities, there are many industries on which the Kingdom can capitalize under Vision 2030," said Abdullah Al Khorayef, CEO of conglomerate Al Khorayef Commercial, speaking to Oxford Business Group (OBG), a global research and advisory firm. "Indeed, the military industry and utilities sector are two promising markets in which local content is being developed."

The government recognizes that investors considering opening new factories and warehouses in the Kingdom require different types of locations to meet their needs, from industrial parks with installed sources of power, water and communications, to greenfield sites that can be developed to service the particular requirements of larger firms. The agency responsible for this service is the Saudi Authority for Industrial Cities and Technology Zones (MODON). MODON's developed industrial land exceeds 198.8m sq metres, and it has attracted SR500bn (\$133.3bn) in investment to the Kingdom since it was established in 2001. It operates 35 industrial cities in all corners of the country and acknowledges that some businesses need to be located within manufacturing clusters or adjacent to shipping facilities.

REALIZATION PROGRAMS: Government policy outlined in Vision 2030 is broken down into 13 Vision Realization Programs (VRPs). Each VRP had short-term goals to be met by 2020, and as of March that year the process of measuring progress and planning for the next stage was under way. One VRP, the Privatization Program, has a 2020 commitment to raise SR35bn-40bn (\$9.3bn-10.7bn) through the sale of government-owned entities. This would generate net government savings of SR30bn-35bn (\$8bn-9.3bn) in capital projects and operating costs for those entities, while creating 10,000-12,000 private sector jobs for the public servants who had been working in the entities that were sold off.

However, the most far-reaching VRP for the industrial sector is the National Industrial Development and Logistics Program (NIDLP). Launched in January 2019, its mandate is to attract SR1.7trn (\$453.2bn) in investment and create 1.6m jobs in industry, energy, mining and logistics.

Non-oil exports, 2014-19



Source: GaStat

SIDF is the primary financial enabler of the program, and at the time the NIDLP was unveiled, the government injected funds into SIDF to raise its capital base from SR40bn (\$10.7bn) to SR105bn (\$28bn) (see analysis).

The NIDLP supports the growth of industry, mining, energy and logistics to create private sector jobs, boost their contribution to GDP and exports, and promote local content. The NIDLP provides potential investors with useful context and historical footnotes on the development of Saudi Arabia's industrial ecosystem, and indicates its aspirations for the next 10 years. It covers 11 of Vision 2030's 96 objectives, and its 2020 commitments are divided into two categories: legal and regulatory changes, including the encouragement of private sector investment in mining; and capacity development initiatives, such as expanding ports and airports, creating specialist centers devoted to Industry 4.0 technologies and supporting industrial compounds like Jubail Automotive Manufacturing City.

PERFORMANCE: Many of the country's industrial activities remain affected by cyclical fluctuations in global prices for oil, petroleum products and petrochemicals. In 2018 the average price for Brent crude oil was \$71.19 per barrel, a significant improvement on \$43.63 and \$53.90 per barrel in 2016 and 2017, respectively, according to the US Energy Information Administration. In 2019 oil prices dipped, however, with Brent crude slipping to an average of \$64.37. Early 2020 brought further drops, with crude trading at around \$25 per barrel in mid-March and as low as \$18 by the end of April. A combination of factors led to this decline, most notably the global spread of the Covid-19 pandemic that shuttered factories and dampened demand, first in China then in other major economies. Production increases among leading members of the Organization of the Petroleum Exporting Countries (OPEC) were also a supply-side factor. In April 2020 the organisation and its oil-producing allies, known as OPEC+, agreed to a production cut of 9.7m barrels per day to help stabilize prices, which sat at around \$45 in mid-August.

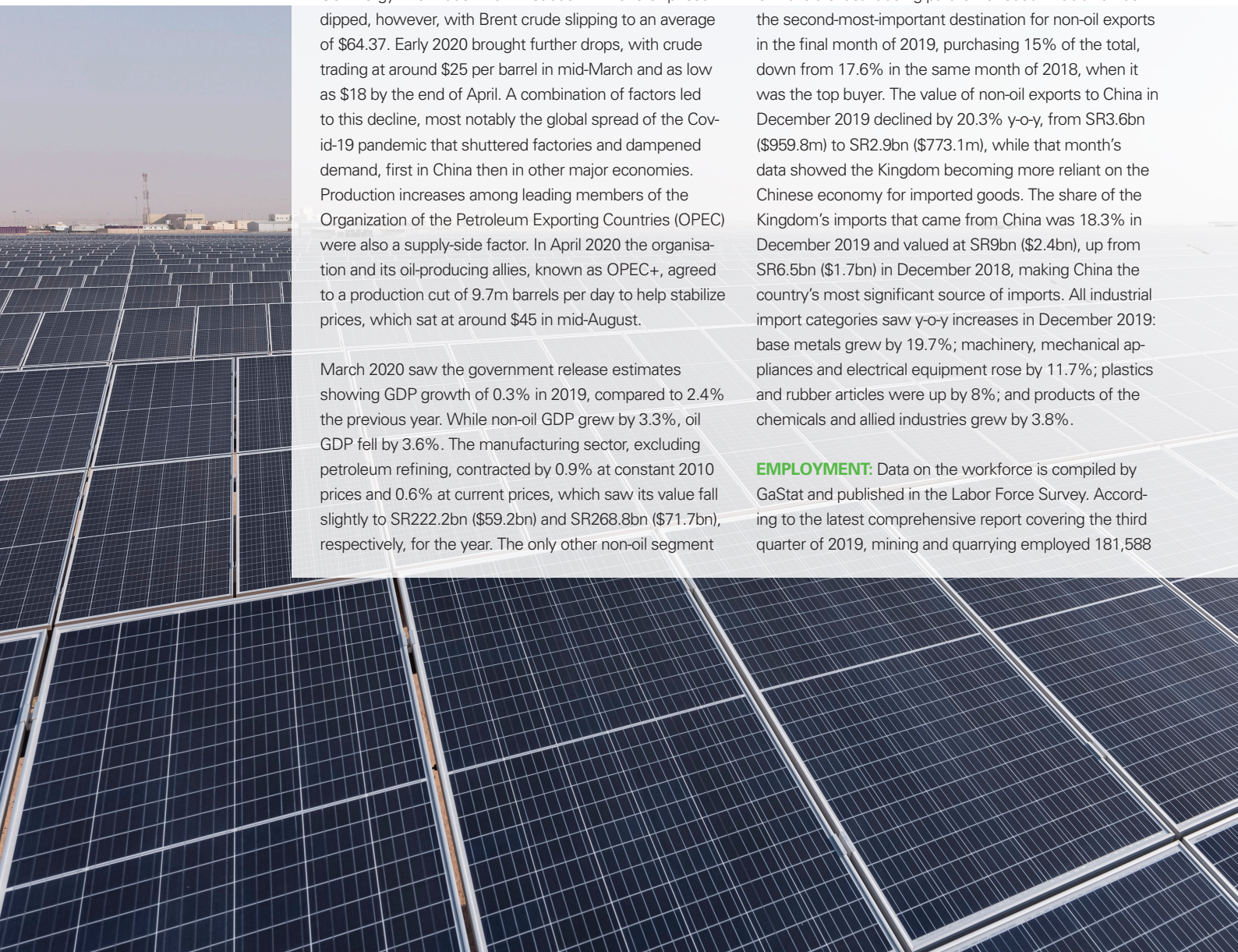
March 2020 saw the government release estimates showing GDP growth of 0.3% in 2019, compared to 2.4% the previous year. While non-oil GDP grew by 3.3%, oil GDP fell by 3.6%. The manufacturing sector, excluding petroleum refining, contracted by 0.9% at constant 2010 prices and 0.6% at current prices, which saw its value fall slightly to SR222.2bn (\$59.2bn) and SR268.8bn (\$71.7bn), respectively, for the year. The only other non-oil segment

to fall in value in 2019 was electricity and water, which contracted by 4%. Manufacturing contributed 9% of overall GDP in 2019, in line with 9.2% in 2018. Mining, for its part, grew by 4.8% at constant prices and by 5.3% at current prices. However, while it is seen as a sector with much promise, its contribution to overall GDP was a mere 0.4% in 2019, with a value of SR10.7bn (\$2.9bn) at constant prices and SR13.2bn (\$3.5bn) at current prices.

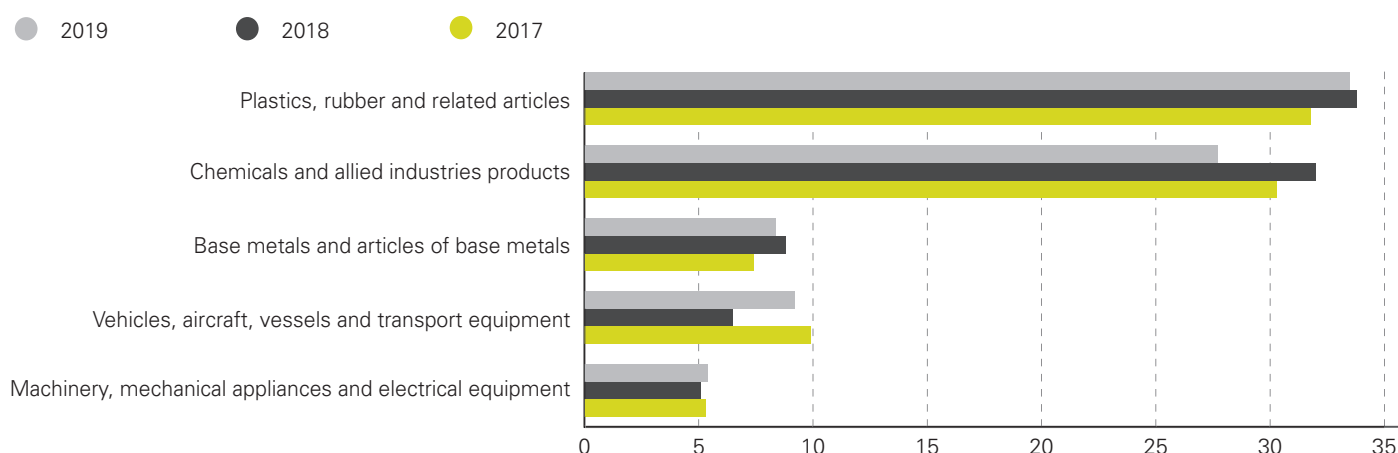
INDUSTRIAL TRADE: A good barometer of industrial health is the value of non-oil exports. According to the General Authority for Statistics (GaStat), total non-oil exports for the whole of 2019 were valued 2.7% lower than in 2018, at SR229.1bn (\$61.1bn) compared to SR235.5bn (\$62.8bn). Exports of products from the chemicals and allied industries fell by 7.8% year-on-year (y-o-y) to SR69.5bn (\$18.6bn), plastics and rubber articles were down by 8.6% to SR72.8bn (\$19.4bn), and base metals fell by 18.3% to SR16.9bn (\$4.5bn). At the same time, the exports of machinery, mechanical appliances and electrical equipment grew by 1.7% to SR12.1bn (\$3.2bn), and exports of vehicles, aircraft, vessels and associated transport equipment rose by 47% to SR22.6bn (\$6bn). Saudi Arabia's ratio of non-oil exports to imports stood at 39.9% in 2019, down from 45.8% in 2018.

China is a critical trading partner for Saudi Arabia: it was the second-most-important destination for non-oil exports in the final month of 2019, purchasing 15% of the total, down from 17.6% in the same month of 2018, when it was the top buyer. The value of non-oil exports to China in December 2019 declined by 20.3% y-o-y, from SR3.6bn (\$959.8m) to SR2.9bn (\$773.1m), while that month's data showed the Kingdom becoming more reliant on the Chinese economy for imported goods. The share of the Kingdom's imports that came from China was 18.3% in December 2019 and valued at SR9bn (\$2.4bn), up from SR6.5bn (\$1.7bn) in December 2018, making China the country's most significant source of imports. All industrial import categories saw y-o-y increases in December 2019: base metals grew by 19.7%; machinery, mechanical appliances and electrical equipment rose by 11.7%; plastics and rubber articles were up by 8%; and products of the chemicals and allied industries grew by 3.8%.

EMPLOYMENT: Data on the workforce is compiled by GaStat and published in the Labor Force Survey. According to the latest comprehensive report covering the third quarter of 2019, mining and quarrying employed 181,588



Main non-oil exports, 2017-19 (% of total)



Source: GaStat

people, while there were 835,811 people working in manufacturing. Of the 112,653 Saudi nationals in the extraction industries, 107,700 were men and 4,953 were women. Manufacturing employed 198,029 Saudis, of whom 52,750 were women and 145,279 were men. In its "Saudi Labor Market Update" report for the third quarter of 2019, Riyadh-based Jadwa Investment noted there was a fall in net employment in the manufacturing sector that quarter, with 1,600 fewer citizens and 7,000 fewer expatriates working in manufacturing than in the previous quarter. The number of workers in mining and quarrying grew in terms of both citizens and expatriates, building on the 800 Saudis hired in mining during the second quarter. In its latest annual report for 2018, the country's largest mining firm, Saudi Arabian Mining Company (Ma'aden), reported that it employed 5,772 people at the end of the year, of which 66% were nationals.

The mining sector is one of the main industrial targets of the NIDLP, which estimates the country could hold SR5trn (\$1.3trn) worth of minerals (see analysis). According to the NIDLP, Vision 2030 initiatives in mining could lead to 450,000 direct and indirect jobs over the coming decade. To put this in context, Australia's mining industry, which estimates \$282bn in revenue in 2019/20, employed around 250,000 people as of November 2019. The NIDLP's target for employment in the chemicals industry, meanwhile, is 400,000 jobs. For perspective, the 2019 annual reports of SABIC and Dow Chemical Company showed that the two global petrochemicals firms em-

ployed 33,000 and 36,500 people, respectively.

Although the creation of jobs for future generations of Saudis is a central pillar of Vision 2030, transforming industrial employment to create more jobs for citizens may take some time. A key component of the first phase of Saudi Arabia's industrial development from the 1970s was the use of unskilled and primarily male labor. While that remains the case in some sectors of the economy, much has changed since then. Data for the third quarter of 2019 shows a total labor pool of 12.9m people. Of these employees, 3.2m were expatriate domestic workers, including 1m foreign women. Therefore, the labor market in which Saudis were active was 9.7m strong, and of that total 3.1m were citizens.

Among Saudis 54% worked in the private sector and 46% held public sector jobs, which is in contrast to many GCC neighbors, where the public sector accounts for the majority of employment for citizens. Saudis constituted 95% of all civil servants and 20% of private sector employees in the third quarter of 2019, while Saudi women accounted for 35% of all employed locals. Women represented 38% of Saudi civil servants and 32% of citizens in private roles.

LABOR FORCE DIFFERENTIALS: Expatriate levies were introduced in 2018 to incentivize companies to hire more Saudis, with companies paying up to SR800 (\$213) per month for each foreign worker in 2020 – a large bill for some companies, as expatriate males are the largest group in the workforce. In September 2019 the government made an exception for industry in order to stimulate investment, waiving the fees for five years – an exemption that could be worth a total of SR29.8bn (\$7.9bn). However, the 706,717 expatriates working in mining and quarrying or manufacturing in the third quarter of 2019 accounted for just 11% of the 6.6m foreign men and women working in Saudi Arabia's private sector.

More than 1m unemployed Saudi citizens were looking for work in the third quarter of 2019. Of the job hunters, 84% were women; that period there were 857,312 female citizens looking for work, compared to 1.1m in positions. Among female job seekers 730,389 had a high school

The National Industrial Development and Logistics Program aims to attract \$453.2bn in investment and create 1.6m new jobs by 2030

qualification or above, and 540,100 held a bachelor degree or higher. Of the 168,016 male Saudi jobseekers, 144,261 had completed high school or higher education, and 70,000 held at least a bachelor degree. "Many companies are thinking to establish their factories in Saudi Arabia nowadays. The Chinese workforce is becoming more costly, and there are many Saudis living in secondary cities who are willing to work," said Ahmed Al Sultan, CEO of garment manufacturer Al Aseel, speaking to OBG. "However, more incentives need to be put in place."

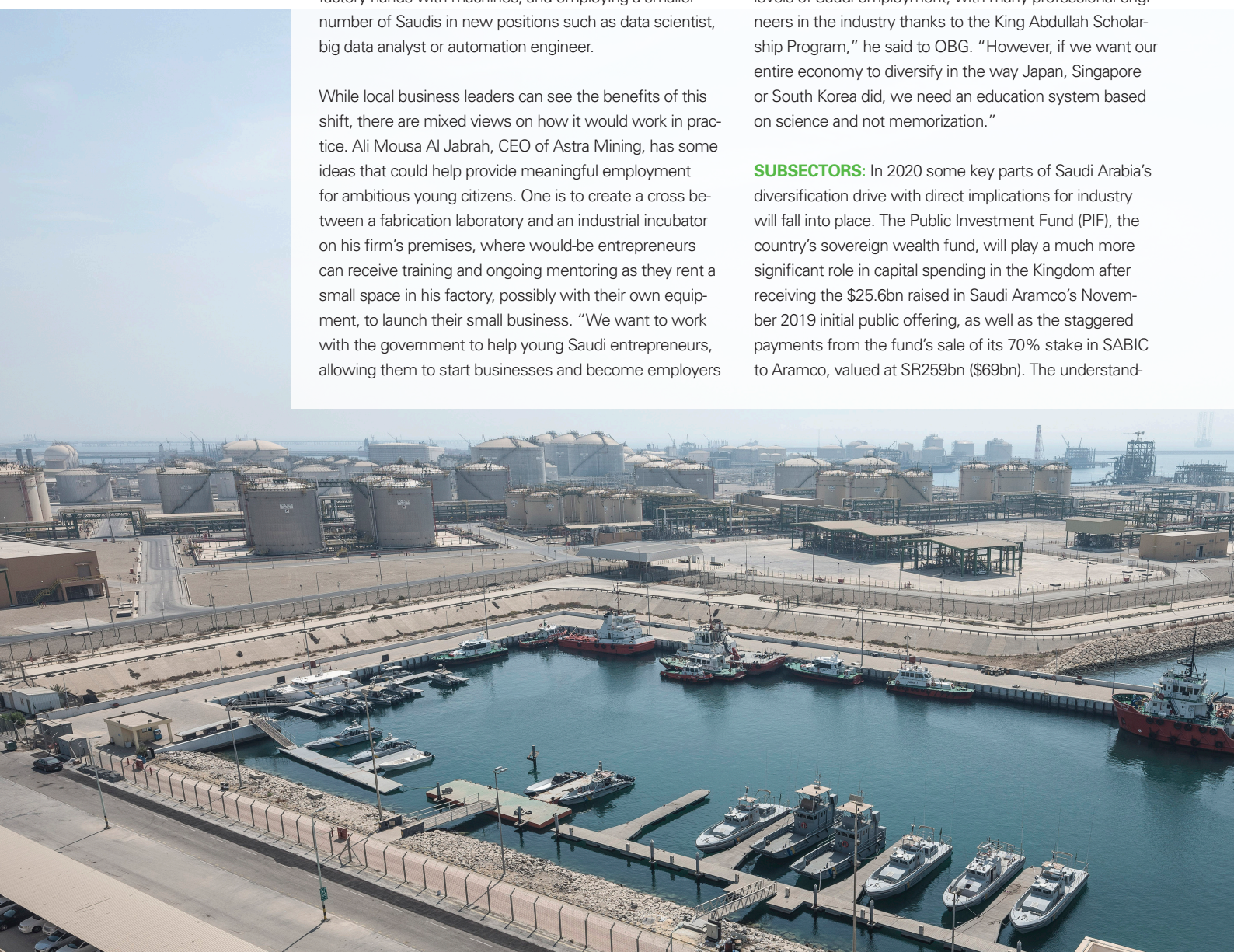
WORKFORCE 4.0: In this context, the real challenge is to create a significant number of positions that match the salaries and expectations of well-educated citizens, while developing and maintaining economically viable businesses. The idea of Industry 4.0, in which manufacturing is transformed by technologies such as robotics, machine learning and artificial intelligence, was used as the basis of a study under the NIDLP. The study suggested that the country's existing plants and factories could become more efficient and profitable if significant investments were made in developments such as 3D printing, automation and advanced analytics. Another conclusion of the report is that an industrial sector transformed by 4.0 technology could complement its investment with a reshaped workforce. This would entail replacing low-skilled expatriate factory hands with machines, and employing a smaller number of Saudis in new positions such as data scientist, big data analyst or automation engineer.

While local business leaders can see the benefits of this shift, there are mixed views on how it would work in practice. Ali Mousa Al Jabrah, CEO of Astra Mining, has some ideas that could help provide meaningful employment for ambitious young citizens. One is to create a cross between a fabrication laboratory and an industrial incubator on his firm's premises, where would-be entrepreneurs can receive training and ongoing mentoring as they rent a small space in his factory, possibly with their own equipment, to launch their small business. "We want to work with the government to help young Saudi entrepreneurs, allowing them to start businesses and become employers

themselves without the need to make a large capital commitment at the outset," Al Jabrah said, speaking to OBG. Another idea to solve a problem facing the mining industry is to replace fleets of smaller 3.5-ton heavy goods trucks driven by expatriate drivers with fewer longer, heavier vehicles capable of hauling 44-60 tons driven by Saudis. Research on the introduction of such larger vehicles conducted by the EU in 2013 found they would be safer than conventional heavy goods vehicles, because replacing standard trucks with mega-trucks would reduce the overall number of kilometers traveled and thus lower the risk of accidents. At the same time, the vehicles would cause less wear and tear to roads, as multiple axles on larger vehicles allows the cargo weight to be spread more efficiently. The EU study conceded that some investment would be required to increase load-bearing on bridges. "This idea helps create jobs for Saudis because if a company operates many smaller trucks it cannot afford to employ local drivers at higher salaries; but if one mega-truck is carrying the same load as five smaller vehicles then it makes sense," Al Jabrah told OBG.

According to Mutlaq Al Morished, CEO of petrochemicals manufacturer Tasnee, Industry 4.0 is already reflected in many segment operations. "The chemicals industry is already highly automated and technical, and we have high levels of Saudi employment, with many professional engineers in the industry thanks to the King Abdullah Scholarship Program," he said to OBG. "However, if we want our entire economy to diversify in the way Japan, Singapore or South Korea did, we need an education system based on science and not memorization."

SUBSECTORS: In 2020 some key parts of Saudi Arabia's diversification drive with direct implications for industry will fall into place. The Public Investment Fund (PIF), the country's sovereign wealth fund, will play a much more significant role in capital spending in the Kingdom after receiving the \$25.6bn raised in Saudi Aramco's November 2019 initial public offering, as well as the staggered payments from the fund's sale of its 70% stake in SABIC to Aramco, valued at SR259bn (\$69bn). The understand-



ing is that this will facilitate PIF investments in a range of diversification initiatives and mega-projects, such as the new smart city of NEOM in the country's north-west. This should benefit mining, logistics and advanced manufacturing that are targeted for growth under the NIDLP, but also bring some relief to traditional segments like construction.

There were signs at the end of 2019 that cement businesses were benefiting from the Housing VRP, which aims to see home ownership among citizens reach 70% by 2030. The Sakani affordable housing program began in 2017, and its impact is noted by real estate consultancy Knight Frank. In the firm's third quarter 2019 report, it reported a 122% y-o-y increase in the number of residential transactions in Riyadh, with the value of transactions up by 139%. The report noted that 8000 new residential units were delivered in the capital in the third quarter alone, and that it expected to see a total of 70,000 residential properties built between 2019 and 2021. Cement producers are indeed seeing a boost to their financials due to the initiative. A look at the performance of Yamama Cement showed a 47% rise in sales from the fourth quarter of 2018 to the fourth quarter of 2019, which was attributed to heightened building in the residential segment.

The steel industry is also set to reap the benefits of ongoing construction activity, with SABIC executives at an industry conference in Dubai in December 2019 saying that steel product consumption in Saudi Arabia is expected to increase from 8.4m tons in 2019 to 8.5m tons in 2020 – although the Covid-19 pandemic may weigh on this projection. Hopes are that by 2030 private investment will bolster demand to a level similar to the 11.7m tons recorded in 2012. Both the cement and steel industries have excess capacity in Saudi Arabia, as reined in government project expenditure has dampened demand.

After a year of growth in 2018, 2019 proved to be a tougher year for the Kingdom's petrochemicals businesses (see analysis). SABIC reported a net profit of SR8.5bn (\$2.3bn) in 2019, down considerably from SR31.9bn (\$8.5bn) the year before, with a net loss of SR1.5bn (\$400m) in the

final quarter of 2019. "The petrochemicals industry was negatively impacted in 2019 by additional supply in key products coming on-stream, coupled with a moderation in global growth compared to 2018," Yousef Al Benyan, vice-chairman and CEO of SABIC, said in a January 2020 press release announcing the financial results.

Mining company Ma'aden also faced lower sales prices for many of its key commodities, thus revenue fell from SR4.9bn (\$1.3bn) in 2018 to SR2.3bn (\$613.2m) in 2019, and net profit of SR2.2bn (\$586.5m) in 2018 turned to a loss of SR1.5bn (\$399.9m) the following year. Meanwhile, the food and beverage giant Almarai saw revenue rise by SR793.4m (\$211.5m) in 2019 to SR14.4bn (\$3.8bn), but net profit dip from SR2bn (\$533.2m) to SR1.8bn (\$479.9m). Investment firm Al Rajhi Capital noted in the third quarter of 2019 that Almarai faced higher prices for the alfalfa that is used as animal feed, while limited population growth and expatriates leaving the market created downside risk. The World Bank put population growth at 1.8% for 2018, creating a challenge in regard to market size for the fast-moving consumer goods (FMCG) industry.

INVESTMENT: With an FMCG sector reliant on population growth, consumer confidence and incomes; construction-oriented industries typically powered by public spending; and petrochemicals and mining industries subject to fluctuations in global commodity prices, widening the role of private investment is paramount. According to the "Investment Highlights Winter 2020" report by Invest Saudi, FDI flows into Saudi Arabia during the January to September period rose from \$1.2bn in 2017 to \$3.2bn in 2018 and \$3.5bn in 2019. Around 1130 new investment licenses were issued to foreign companies in 2019 – 54% more than in 2018 and triple the number issued in 2017. Of the 2019 licenses, 69% were for full ownership of a business and 31% were for joint ventures with local partners. In the manufacturing sector 190 licenses were issued in 2019, up from 133; transport and storage saw 35 licenses, up from 29; and construction saw 193, up from 111.

OUTLOOK: In its analysis of the industrial landscape, Vision 2030 and the NIDLP also looked at ways that investors could be attracted to develop or expand local industrial activity at special economic zones (see analysis). At the same time, localization strategies have been developed by home-grown industrial giants such as Saudi Aramco, SABIC and Ma'aden to enable the participation of local businesses in the supply chain of mega-projects. Greater involvement would also equip these growing businesses with knowledge and technology transfer when in partnership with international industrial firms.

Although early 2020 brought concerns over the Covid-19 pandemic, which resulted in slowed economic activity across the globe and an associated drop in oil and other commodity prices, Saudi Arabia is keeping its sights on the decade ahead. The country's transformation vision for the period to 2030 is designed to create a multifaceted industrial economy that provides attractive jobs for citizens, and capitalizes on opportunities that come with its geostrategic position and influence in the wider region.

Around 1130 new investment licenses were issued to foreign companies in 2019 – 54% more than in 2018 and three times the number issued in 2017



Financing Growth



IBRAHIM ALMOJEL, CEO, Saudi Industrial Development Fund (SIDF)

What are the key priorities of the National Industrial Development and Logistics Program (NIDLP)?

ALMOJEL: The NIDLP is one of the 13 Vision Realization Programs that support an ambitious economic diversification plan, aiming to transform the Kingdom into a leading industrial powerhouse and international logistics hub. The program includes the development of export activities aimed at leveraging the Kingdom's natural resources and its location at the crossroads of three continents. It focuses on expanding four key sectors – industry, mining, energy and logistics – targeting the private sector with new incentives to promote growth. The NIDLP aims to create jobs and boost the combined contribution of the four sectors to one-third of GDP by 2030. To achieve this goal the government defined a new approach based on utilizing its competitive advantages, increasing private sector participation, underlining clear socio-economic benefits and stimulating economic loans, with SIDF as the NIDLP's financial enabler. This system has evolved to support priority sectors – namely mining, energy, logistics and existing industries – and new promising regions.

In what ways is the Kingdom promoting sustainable business and energy efficiency?

ALMOJEL: In line with the UN Sustainable Development Goals, there have been global efforts to manage demand through the efficient use of energy and adoption of renewables, and Saudi Arabia is committed to reducing greenhouse gas emissions. The NIDLP includes a number of initiatives designed to encourage sustainable practices. SIDF introduced a financing program for energy efficiency solutions in the manufacturing, agriculture and commercial sectors, with the option of connecting clients to third-party consultants. We also launched Mutjadeda, a program to support the introduction of renewables in the country's energy mix by offering financing to independent power producers and manufacturers of solar and wind technology. Mutjadeda will facilitate the establishment and growth of local distributed generation projects by offering funding to project developers and facility owners.

To what degree can government incentives encourage the adoption of Industry 4.0 technologies?

ALMOJEL: The global supply chain is changing. Cheap labor is losing to automation, and scale is losing to customization. These events are shifting global trade dynamics and are providing opportunities for countries like Saudi Arabia, which is rich in capital and strategically placed to support logistics networks. Saudi government entities are harnessing the power of advanced technologies to drive forward the Kingdom's ideas, but there is still room to accelerate and expand efforts. The Kingdom has the opportunity to play a leading role in a new era where automation and customization are key. The Industrial Digital Transformation Program aims to employ innovative technologies and combine advisory and financing offerings to improve the digitalization and automation of the manufacturing sector.

How are industry-focused small and medium-sized enterprises (SMEs) being supported?

ALMOJEL: The Covid-19 pandemic and the precautionary measures taken in order to prevent its spread have negatively impacted SMEs. As a result, many SMEs are suffering from a loss of revenue and disrupted cash flows. As part of a wider package of governmental support for Saudi businesses and employees, SIDF intends to offer an accelerated financial loan to support the operating expenses of local SMEs, as well producers of medical supplies. Furthermore, SIDF has restructured the installments due in 2020 for small businesses. It will also consider restructuring the same for medium and large enterprises that are affected by the precautionary measures in order to help them deal with the current situation. The total economic impact of these initiatives is expected to reach approximately SR4bn (\$1.1bn).

New Streams

Sector funding is increased and extended to mining and mineral extraction

The Saudi Industrial Development Fund (SIDF) was formed in 1974 and has played a key role in supporting the Kingdom's industrial development, providing soft loans that helped the country's manufacturing pioneers through the hard first years in business and subsequently supported their growth. In recent years SIDF's focus was realigned more closely with Saudi Vision 2030, the national development blueprint, and the National Industrial Development and Logistics Program (NIDLP). The fund is set to play a pivotal role in enabling the NIDLP achieve its goal of boosting investment in new industrial sectors to SR1.7trn (\$453.2bn) by 2030.

MORE FUNDING: In order to facilitate this role, the government increased SIDF's capital by 60% to SR105bn (\$28bn) in January 2019. A year later SIDF revealed its loans to industry in 2019 had risen by 32%, with the approval of SR12.5bn (\$3.3bn) worth of loans in the 12-month period. In 2019, 77% of loans were granted for projects developed by small and medium-sized enterprises, while 41% were awarded for projects in promising regions and cities. The chairman of SIDF is Bandar Alkhorayef, who is also the minister of industry and mineral resources. "We are proud of SIDF's performance, which came in line with the ambitious plans of Vision 2030 ... transforming Saudi Arabia into a leading industrial powerhouse and a global logistics hub," he said at the announcement of SIDF's 2019 results in February 2020.

Looking at past years, SIDF's 2018 annual report noted that it provided funding of SR9.4bn (\$2.5bn) for 110 new industrial projects and 24 existing ones, with total investment reaching SR38.5bn (\$10.3bn) that year. From its inception to the end of 2018, SIDF had provided 4350 loans worth SR157.4bn (\$42bn), contributing to the establishment of 3218 new projects and the expansion of 1132 existing ones.

EXPLORATION: By the end of 2019 SIDF expanded its funding to include financing advanced exploration activities in the mining

sector. To this end, the development fund provides loans of up to 75% of mining and mineral extraction project costs, including financing advanced exploration activities, such as delineation, as well as mine preparation and drilling. Moreover, SIDF announced it will support added-value services and companies involved in the sustainable development of the sector in all areas of the value chain. Mining expansion is targeted under the NIDLP due to the Kingdom's availability of mineral resources and its advantageous location between three continents.

SIDF also introduced new products in 2019, including a working capital financing program for new businesses for investors with tenures of up to 24 months, as well as acquisition finance. While yet to be fully implemented, the latter provides financial backing for a number of items, including the acquisition of specific technology and manufacturing methods, intellectual property, suppliers and clients, and competitors. Acquisition finance will be offered either up front or after the transaction, with a repayment period of up to seven years.

SERVICES: SIDF has also been working to automate operations, reducing the time it takes to process applications by 60% in 2019 to four to five months, as well as focusing on customer satisfaction. "We are not a bank, but we are trying to benchmark our services to the standard provided by commercial banks. Thus, we have divided our credit department, with one section dealing with customer relations while another focuses on portfolio management. We have also created a customer satisfaction index," said Noor Shabib, vice-president of strategic planning and business development at SIDF, speaking to global research and advisory firm Oxford Business Group.

However, the development fund sees its function as very different to that of a commercial lender. "A bank will assess whether you can cover the collateral when deciding to give you a loan, but we are more interested in the economic impact of the project, as well as its viability," Shabib added.

Blueprint for Success

The National Industrial Development and Logistics Program underpins Saudi Arabia's new economic vision

Saudi Arabia is not unfamiliar with the idea that if it wants to build a thriving economy it must not only make the most of its hydrocarbon resources, but also look beyond oil and gas to build a multifaceted industrial economy on the front line of new technologies. The launch of Saudi Vision 2030 in April 2016 galvanized the nation with a bold reimagining of how Saudi people could transform the way they live and work. In order to map a clear route to delivery, the government created 13 Vision Realization Programs (VRPs) with specific, measurable goals.

In January 2019 the National Industrial Development and Logistics Program (NIDLP) published a comprehensive 500-page plan that identified potential growth activities; 2020 commitments and aims for 2030; and a set of overarching enablers that would help drive progress across the industrial landscape. The NIDLP gives industry investors a clear reference point when assessing Saudi Arabia's priorities for the sector, and can help them identify opportunities in the local market. It also illustrates the country's willingness to think big, with the NIDLP aiming to attract SR1.7trn (\$453.2bn) in investment and create 1.6m jobs.

FOCUS AREAS: The four sectors covered by the NIDLP are industry, energy, mining and logistics. The strategy is to ensure that all sectors increase their contribution to GDP, provide more private sector job opportunities, boost exports, support local content, attract non-government investment and produce additional non-oil returns. The program looked at the supply and demand factors for each sector, considering untapped resource potential on the supply side, and identifying import substitutions that could be made for products and services in high demand in the Kingdom. By maximizing local content in this way, major job opportunities will be available for citizens and the country can improve its non-oil trade balance. Industry, specifically, is subject to the National Industrial Strategy (NIS) that has identified several target segments: equipment and machinery; renewable energy supplies; pharmaceuticals and medical supplies;

automotives; oil and gas equipment; food processing and aquaculture; chemicals; and military manufacturing.

COMMITMENTS FOR 2020: The NIDLP articulates goals that it hopes to achieve by the end of 2020 and aspirations for 2030 in each of the four sectors. The 2020 commitments within the NIS include securing an agreement with a factory to develop vehicle assembly, and to make two primary investments in companies developing solar and wind energy to assemble necessary parts in the Kingdom. For aquaculture one commitment is to raise fish and shrimp production to 15 times the capacity seen in 2019, while increasing Saudization rates. For military industries the plan is to open the sector to local and foreign investors, ease the licensing process, build strategic partnerships with international original equipment manufacturers and restructure military aspects of the offset program.

The 2020 commitments for the energy sector are to increase the contribution of renewable sources to the energy mix, encourage greater private sector contribution, reduce emissions from burning fuel by boosting gas production and upgrade distribution networks. In the mining sector the goals are to develop the ecosystem in order to attract private sector investment, enhance the service quality of the Deputy Ministry for Mineral Resources and the Saudi Geological Survey, and expedite the distribution of mining licenses.

The logistics sector has made a number of commitments to improve urban traffic flow and make roads safer. Other aims include improving Customs processes by digitalizing systems at sea ports, cutting the number of mandatory import/export forms firms must fill out, and reducing the time it takes for imports to come through the receiving docks in order to grow into a major global logistics center.

ASPIRATIONS FOR 2030: By 2030 the NIS hopes to see globally competitive Saudi manufacturers; increased capacity and production of renewables; greater expertise in battery technology; the development of a pharmaceutical, biopharmaceutical and medical supplies industry; greater local content; and the development of industrial clusters for food and automotive industries, including the manufacturing of cars. In the chemicals industry the aspiration is to localize the supply chain of basic and intermediate chemicals, prioritize 18 specialized chemicals groups, and double production capacity of plastic and packaging products. In aquaculture the goal is to increase its contribution to GDP sevenfold, while creating new jobs for Saudis and replacing imports with locally harvested seafood.

There is a particularly ambitious target in regard to military equipment, as the NIDLP notes that Saudi Arabia is the third-largest importer of military

As the third-largest importer of military equipment in the world, Saudi Arabia aims to localize 50% of military expenditure by 2030, thereby making it one of the Kingdom's key activities in terms of manufacturing and maintenance

equipment in the world. The aim for 2030 is to localize 50% of military expenditure, thereby making it one of the country's key activities in terms of manufacturing and maintenance. The move would also help increase military readiness and transparency in the procurement supply chain. It is hoped that locally sourcing the majority of military equipment will increase equipment interoperability between different military and security branches, while enhancing the Kingdom's strategic autonomy.

The NIDLP focus on the energy sector in the run up to 2030 is to increase the production and use of natural gas, improve efficiency in the use and distribution of energy, and develop a renewable energy industry with a highly qualified workforce. In the mining sector aspirations are to increase gold production by 10 times, and to join the ranks of the world's top-10 aluminium producers and top-three fertilizer producers by accelerating the exploration and extraction of minerals. The NIDLP estimates the country's mineral reserves to be worth up to SR5trn (\$1.3trn) (see analysis).

Meanwhile, a multi-agency approach is being used to craft a globally competitive logistics sector by 2030, with fast and efficient movement, tracking and clearance of goods; construction of freight and warehousing facilities; greater collaboration between national and international transport companies; and a fully integrated multi-modal transport network.

ENABLERS: Having established the key sectors that can play a prominent role in developing an industrial economy, the NIDLP goes a step further to address issues that may create challenges or prevent growth. In the document these solutions to structural impediments to progress are referred to as enablers. Each sector is examined in detail in the report, with an appraisal of the current situation, and the identification of specific government agencies responsible for devising strategies to capture opportunities

and remove obstacles to development. The NIDLP also draws on best international practices to suggest ways to boost local content; support domestic research, development and innovation (RDI); create funding for enterprise; identify target markets for exports; develop education and training; raise standards through regulation and improved governance; tap the opportunities presented by Industry 4.0 technologies, such as artificial intelligence, robotics and big data analytics; and use new strategies to attract foreign investment to special economic zones.

The NIDLP names the public bodies that back the enablers. These include the Local Content and Private Sector Development Unit (Namaa); the Saudi Industrial Development Fund, which is the primary financial engine of the NIDLP; the National Industrial Clusters Development Program; the Saudi Exports Development Authority; the National Committee for RDI; the King Abdulaziz City for Science and Technology; and the Saudi Authority for Industrial Cities and Technology Zones (MODON).

REALIZATION: The NIDLP acknowledges that there are many ways in which the industrial sector in Saudi Arabia could improve, stating that its impact on the national economy has waned since 2012. The overriding message is that maintaining the status quo is not an option if the Kingdom is to capitalize on the advances it has made on many fronts and move to the next phase of its development. Therefore, government policymakers began measuring the roadmap's progress one year after publication; by 2021 they will know how many of the 2020 commitments the NIDLP reached. At the same time, officials are working on new short-term targets to ensure the 2030 aspirations are delivered on schedule. While the NIDLP is just one of the VRPs to achieve Saudi Vision 2030, it is a leading blueprint for building the economy Saudi Arabia envisions will best support future generations in a rapidly changing global landscape.



**Logistics, industry,
energy and mining
are prioritized for
diversification**



Buried Treasure

Mining clusters support ongoing expansion, while new opportunities emerge for private firms

As part of the Kingdom's economic diversification strategy, billions of dollars in investments have been allocated to develop the mining industry. The driving force behind the sector's expansion is the Saudi Arabian Mining Company (Ma'aden), which is majority owned by the Public Investment Fund (PIF) – the country's sovereign wealth fund – and listed on the Saudi Stock Exchange (Tadawul). The diversified business, which is active in aluminium, gold, phosphates, industrial minerals and copper concentrates, is one of the largest and fastest-growing companies of its type in the MENA region.

The National Industrial Development and Logistics Program outlined a number of targets for the expansion of Ma'aden and the mining sector as a whole. Two new industrial cities, a port and an expanded railway network have been built to facilitate these efforts. In addition, Ma'aden is seeking to boost capacity and production, with work under way on new phosphate and gold facilities. While public investment and institutions have taken the lead, the government is seeking to create a more diversified mining environment in which private companies and foreign investors play a greater role.

INDUSTRIAL GIANT: The rapid growth of Ma'aden has highlighted what can be achieved through a combination of proactive government measures, partnerships with international companies and increased private sector investment. This approach forms part of Saudi Vision 2030, the country's economic diversification program. Ma'aden was founded by royal decree in 1997 and remained wholly state owned until July 2008 when it launched an initial public offering (IPO). Raising approximately SR9.3bn (\$2.5bn), it is the biggest mining IPO in the MENA region to date. Shortly after, in 2009 the company established a \$10.8bn joint venture (JV) with US-based aluminium producer Alcoa to create the world's first fully integrated, high-efficiency

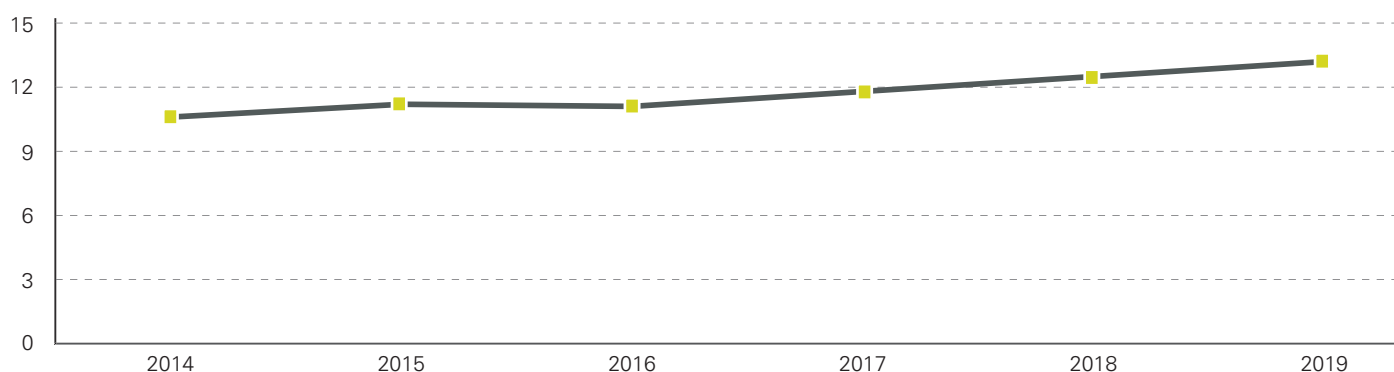
aluminium production complex. The facility includes a bauxite mine, refinery, smelter, casthouse, can-recycling unit and rolling mills.

The IPO set off a series of major investments, with the company commissioning eight new mines and 17 processing plants, all of which were operational by 2018. The total value of the company's assets increased dramatically over this period, rising from SR29bn (\$7.7bn) in 2009 to SR97.7bn (\$26bn) in 2019, while its sales rose from SR622m (\$165.8m) to SR17.7bn (\$4.7bn). Meanwhile, the company's gold sales grew from 45,000 oz in 2009 to 394,117 oz in 2019. As of December 2019 the company operated six gold, one bauxite and two phosphates mines, as well as three mines producing low-grade bauxite, kaolin and magnesite.

The most recent extraction facility to come on-line was the Al Khabra phosphates mine in 2017. The mine is operated by Ma'aden's Wa'ad Al Shamal Phosphate Company – an \$8bn JV between Ma'aden, Mosaic and SABIC – and is located in the Northern Borders region, forming a key part of the Wa'ad Al Shamal Industrial City.

MINING CITIES: The construction of specialized cities to serve as nodes clustering industrial facilities, transport infrastructure and human resources is a central part of the Kingdom's industrial development strategy. Completed in November 2018 the SR22.5bn (\$6bn) Wa'ad Al Shamal Industrial City covers over 440 sq km. The project, which includes residential units, public amenities and new roads, was designed to centralize expanding phosphate mining activities and generate around 30,000 jobs for citizens. The city is connected by a rail freight line to Ras Al Khair Industrial City, where Ma'aden has a designated area for mining. Initiated in 2016, the bulk

Mining & quarrying GDP at current prices, excluding oil & gas, 2014-19 (SR bn)



Source: GaStat

commodity city is currently under development, with the project being managed by the Royal Commission for Jubail and Yanbu. The completed urban development will span 179 sq km and include an aluminium production complex, a water desalination and power plant, and a major port.

Ras Al Khair Industrial City is set to benefit further from the construction of supporting transport links. The city will feature a new railway network connecting it with bauxite and phosphate mines. As of December 2019 the project had attracted investments amounting to SR100bn (\$26.7bn). Additionally, a rail link under development between the city and Dammam via Jubail will facilitate product transfers to other global markets.

CHALLENGES & OPPORTUNITIES: While Ma'aden has experienced impressive growth in output and sales over the last decade, it nonetheless faces challenges, particularly in terms of the fluctuation of global commodity prices. Indeed, while overall sales increased by 25% to SR17.7bn (\$4.7bn) in 2019, the international price of phosphate and aluminium fell by 18% and 15%, respectively. These sharp declines, coupled with capital expenditure in new operations, resulted in a net loss of SR1.5bn (\$399.9m), compared to a net profit of SR2.3bn (\$666.5m) in 2018.


Despite these challenges Ma'aden continues to expand its capacity. In April 2019 the company announced an agreement to acquire an 85% stake in the Mauritius-based fertilizer distributor Meridian Group, marking its first overseas acquisition. Additionally, in June 2019 it was announced that Alcoa would divest its 25.1% share in Ma'aden Rolling Company (MRC), bringing the company under complete ownership of Ma'aden. As part of the deal, MRC's \$796m in outstanding debt to the PIF was transferred to Ma'aden. Furthermore, Ma'aden aims to double its production of gold to 1m oz per year by 2025 through its wholly owned subsidiary Ma'aden Gold and Base Metals Company. The firm, which operates six gold mines, plans to begin production by 2023 at Mansourah-Massarrah and Ar Rjum.

NEW INVESTMENT: While majority state-owned Ma'aden is likely set to dominate the sector for the foreseeable future, private companies are playing an increasingly active role, particularly in the upstream segment. For example, Modern Chemicals and Services Company – a JV between the local firm Modern Industrial Investment Holding Group and the French multinational EPC Groupe – has supplied civil explosives to the mining and construction industries since 2009. The company is currently developing a 350,000-ton-per-annum, low-density ammonium nitrate project to produce components for mining explosives. Furthermore, Modern Mining Holding Company formed a JV with resource trading firm Trafigura in late 2018 to develop an integrated copper, lead and zinc smelting and refining facility. Both projects will form part of Ras Al Khair Industrial City.

In February 2020 Rifd Industry broke ground on a 1.5m-sq-meter copper smelter facility in Yanbu Industrial City, a development that will be key in plugging the gap in the midstream value chain. Once complete, it will produce up to 500,000 tons of grade-A copper cathodes per year.

The government is aiming to release more concessions for mining and quarrying to private sector firms to unlock the Kingdom's estimated SR5trn (\$1.3trn) in mineral deposits. One firm looking to expand operations is Saudi company Astra Mining. Since 2017 Astra Mining has produced lime and dolomite products in Al Kharj. The company has applied for licenses to operate four quarries to extract lime, dolomite, magnesite and quartz, and plans to launch license applications for feldspar, kaolin and pozzolan.

As part of this effort, the Saudi Geological Survey has been tasked with conducting surveys and creating a database to help companies during exploration. It also provides support services, and manages an Accelerated Exploration Program and a Geophysical Data Program. In addition, a mining law was enacted in June 2020 to provide foreign investors with greater access, thus increasing the share of private activity in the sector.



**8 new mines and 17
processing plants came
on-line between 2008
and 2018**

Chemical Reaction

Domestic consolidation and international partnerships provide support to the petrochemicals industry

Saudi Arabia is making efforts to consolidate and expand its petrochemicals industry through a series of new mergers and partnership deals. By far the biggest development in the sector was the finalization of an agreement in March 2020 for the purchase by national oil giant Saudi Aramco of a 70% stake in SABIC. The proceeds from the deal, which stand at \$69bn, will go to the Kingdom's sovereign wealth fund, the Public Investment Fund (PIF). This comes in conjunction with the \$25.6bn the PIF is set to receive from Saudi Aramco's initial public offering in November 2019. This combined \$94.6bn windfall will enable the PIF to support Vision 2030 initiatives, while Saudi Aramco and SABIC push on in tandem to further develop the petrochemicals industry, which is the largest source of non-oil exports.

HEAVYWEIGHT PLAYERS: Founded in 1976, SABIC has grown into one of the world's largest petrochemicals manufacturers, utilizing the Kingdom's feedstock price advantage and availability of capital resources to become a global conglomerate employing 33,000 people in 50 countries. Meanwhile, Saudi Aramco, one of the world's biggest crude oil exporters, has widened its operations to become an integrated energy business with interests in

natural gas, renewables and petrochemicals, employing a global workforce of 70,000. The combined weight of these two multinationals, along with that of their subsidiaries and joint ventures (JVs), provide the backbone of the country's non-oil revenue. Indeed, in December 2018 activities of the two companies accounted for 65.2% of non-oil exports, with a combined value of SR13.7bn (\$3.7bn) in that month alone.

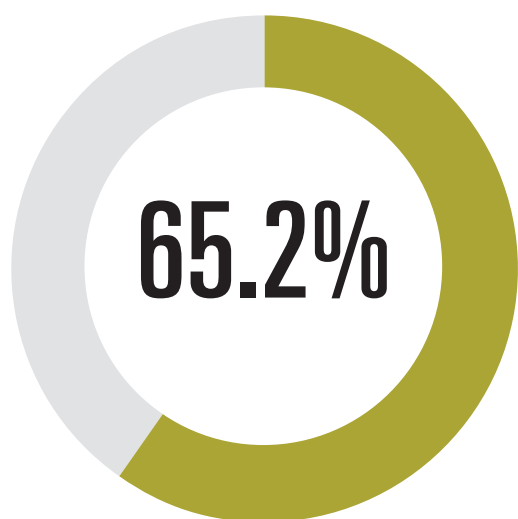
TESTING TIMES: However, the consolidation of the two conglomerates came at a testing time in the world's petrochemicals market. In December 2019 the contribution of petrochemicals to the Kingdom's non-oil exports had fallen to 56.9%, with their combined value declining by 20% to SR10.9bn (\$2.9bn). This came amid the slowdown of the Chinese economy – whose expansion played a decisive role in the rise of Saudi Aramco and SABIC – and increased competition in the global petrochemicals market, which exerted downward pressure on the prices of many key products.

As a result of these factors, SABIC experienced falls in both revenue and profit throughout 2019. Indeed, in the final quarter of 2019 the company's petrochemicals and speciality chemicals segment recorded a loss of SR341.3m (\$91m), with this contributing to an overall loss by SABIC of SR1.5bn (\$400m). For 2019 as a whole, the company made a profit of SR8.5bn (\$2.3bn), a 73% decline from the SR31.9bn (\$8.5bn) recorded in 2018, according to SABIC's 2019 financial statements. Further contraction is expected in 2020, as the global outbreak of Covid-19 has shuttered factories around the world and dampened demand.

EXPANSION: In the face of challenging market conditions, SABIC has sought to diversify its production base and expand operations. Most recently, in March 2020 the company increased its equity shares in Swiss chemical maker Clariant, from 24.99% to 31.5%. SABIC merged two of its wholly owned subsidiaries, Saudi Petrochemical Company (SADAF) and Petrokemya, in October 2019 to raise efficiency. In the same quarter SABIC announced a deal to increase its shareholding in the Saudi Arabian Fertilizer Company (SAFCO) to 50.1%, while SAFCO acquired the SABIC Agri-Nutrients Investment Company, which was formed by SABIC in 2018 to consolidate all of its equity shares and assets in the segment. SABIC owns a 50% stake in both the National Chemical Fertilizer Company (Ibn Al Baytar) and Al Jubail Fertilizer Company (Al Bayroni), as well as 33.33% of shares in Gulf Petrochemical Industries Company.

This followed a move by SABIC in December 2018 to increase its stake in the Ar Razi JV – the world's largest methanol complex – to 75% by purchasing 50% of the shares held by its partner, the Japan Saudi Arabia Methanol Company, while agreeing to extend the partnership for another 20 years.

In December 2018 activities of **SABIC** and **Saudi Aramco** accounted for



of non-oil exports

Additionally, in 2019 SABIC and its JV partner, US energy giant ExxonMobil, broke ground on the Gulf Coast Growth Ventures project, a plastics manufacturing facility in Texas. The completed complex is set to include specialized production units for ethylene, monoethylene glycol and polyethylene production. Operations at the plant are expected to begin in 2022.

CRUDE TO CHEMICALS: Prior to Saudi Aramco signaling its intent to acquire the majority stake in SABIC, the two companies had already been collaborating on a number of projects. Most notably, in October 2018 the two companies announced the final stage of preparations for the construction of a crude oil-to-chemicals facility in Yanbu. In January 2020 the companies announced that they were assessing the risks associated with the project to decide whether to move ahead in the second quarter of the year, and have since reaffirmed their commitment to the facility. Upon becoming fully operational in 2025, the plant is expected to produce 9m tons per year of chemicals from 400,000 barrels per day of crude oil.

GLOBAL LINKS: Saudi Aramco first entered the chemicals market in 1998 and currently operates a number of JVs with international partners in the Kingdom and abroad. In Jubail, the Saudi Aramco Total Refining and Petrochemical Company refines heavy Arabian crude, but also produces the aromatics paraxylene and benzene. Meanwhile, on the Red Sea its Petro Rabigh JV with Japan-headquartered Sumitomo Chemical produces petrochemicals that are used to make detergents, resins, auto interiors, glue, household appliances, toiletries and artificial fibers. Saudi Aramco's most ambitious project in the segment to date is the \$20bn Sadara Chemical Company (Sadara) industrial facility in Jubail Industrial City, a JV with US company Dow Chemical. The original front-end engineering and design for the project was commissioned in 2007, and in 2011 Saudi Aramco and Dow Chemical announced the formal launch of a JV. The facility was designed to

be the largest single-site integrated refining and petrochemicals complex in the world, with a 1.5m-ton-per-year capacity mixed-feed cracker capable of utilizing ethane and naphtha to produce a broad range of chemical products. Coming on-line in stages, the mixed-feed cracker began production in 2016 and the last of the Sadara complex's 26 plants became operational in August 2017. This final unit produces toluene diisocyanate, a product used in the manufacture of foam for mattresses and automotive upholstery. Currently, the site provides products for around 600 customers in 70 countries and employs 4100 staff, most of them Saudis. Efforts have also been made to cluster downstream industrial activities around the facility in order to develop local value chains. These include the establishment of PlasChem Park, a 12-sq-km industrial park built adjacent to the Sadara facility that provides a site specializing in chemical and conversion businesses. The project was formed through a collaboration between Sadara and the Royal Commission for Jubail and Yanbu.

Nevertheless, in a difficult year for the industry, Petro Rabigh recorded a loss of SR603m (\$160.8m) in 2019, compared to a profit of SR658m (\$175.4m) in 2018. Sadara reported a net loss of SR14.5bn (\$3.9bn) over the course of 2019, substantially higher than a loss of SR3.9bn (\$1bn) the previous year. Despite these challenges, a number of deals were signed that are expected to support the continued expansion of chemicals production. In November 2019 Sadara signed a deal with US services firm Baker Hughes to pipe ethylene oxide and propylene oxide to its facility in PlasChem Park for 20 years. The same month the Saudi Arabian General Investment Authority – whose responsibilities were assumed by the Ministry of Investment in February 2020 – signed memoranda of understanding with a combined value of \$2bn with international chemical companies BASF, Anglo Dutch Shell, Mitsui, SNF and AMG Advanced Metallurgical Group for new projects in Jubail Industrial City.



**Petrochemicals accounted
for 57% of non-oil exports
at the end of 2019**

Catalyzed Diversification

Industrial clusters are identified as the vehicle to bring benefits to strategic manufacturing segments

A key objective laid out in Saudi Arabia's Vision 2030 national development strategy is the creation of a sustainable, competitive and diversified manufacturing ecosystem driven by increased private sector participation. The achievement of this objective is underpinned by the National Industrial Strategy (NIS), which outlines a program to boost domestic manufacturing and exports by nurturing strategic industries through the creation of specialized manufacturing clusters.

CLUSTERED DEVELOPMENT: A multi-agency approach is being undertaken by the government to meet these goals. Targets have been established under the National Industrial Development and Logistics Program (NIDLP) for each subsector of the selected industries, supported by studies of the most viable goods to produce in the Kingdom. Under the NIDLP, the strategy has been to generate momentum by launching projects aimed at stimulating the rapid development of specific industries. For example, battery technologies has been identified as a catalyst for the broader machinery and equipment industry.

A key government agency in implementing this strategy is the National Industrial Cluster Development Program (NICDP), which was established in 2008 under the supervision of the former Ministry of Commerce and Investment, and the former Ministry of Energy, Industry and Mineral Resources; responsibility for these areas were divided in late 2019. The NICDP works alongside other agencies, such as the Saudi Authority for Industrial Cities and Technology Zones (MODON) and the Royal Commission for Yanbu and Jubail, to identify gaps in the manufacturing market, and has identified 40 components or products that could be manufactured in Saudi Arabia.

The formation of business clusters is a primary strategy in achieving the Kingdom's diversification aims. These clusters facilitate the

horizontal and vertical expansion of firms, while increasing efficiency and competitiveness. This is done by concentrating corporate and entrepreneurial operations with necessary suppliers and associated institutions in a specific locale. Examples of this set-up include the clustering of automotive production alongside components manufacturing to enable just-in-time production techniques, or biomedical and pharmaceuticals firms near research institutions or major hospitals.

AUTOMOTIVE EXPANSION: The development of a domestic automotive industry cluster has been identified as a top initiative by policymakers. There is high demand for vehicles both within Saudi Arabia and the wider MENA region, but the NIDLP highlighted that the Kingdom is the only country among the top-20 by demand for new vehicles to be without a local or regional production center. Establishing an auto cluster would not only enable the country to meet domestic demand and boost exports to the region, but also provide support for the country's upstream metals, plastics and chemicals industries.

Currently, there are four international commercial truck manufacturers producing vehicles in Saudi Arabia, three of which have commercial operations in Jeddah, namely Volvo Trucks, MAN and Mercedes Benz. The most recent arrival to the market is Japan's Isuzu Motors, which has been producing commercial vehicles for export at its Damman facility since 2012. In October 2019 the Saudi National Automobiles Manufacturing Company (SNAM) signed a licensing deal with the South Korean equipment manufacturer SsangYong Motor for the local assembly of the firm's Rexton Sports and Rexton Sports Kahn sport utility vehicles. Under the deal SNAM aims to produce up to 30,000 units of the two models at its plant in Jubail by 2021. "Ensuring that the highest value is derived from transferring knowledge from South Korea to Saudi Arabia is a priority in order to offer long-term employment to specialized engineers and other professionals in the automotive sector," said Fahd Aldohish, CEO of SNAM, speaking to global research and advisory firm Oxford Business Group (OBG).

Building on this, the NIDLP aims to create an automotive manufacturing cluster in the country that can produce both conventional cars and electric vehicles, while also developing the capacity to manufacture batteries. In August 2019 the country took its first steps towards creating an infrastructure network for electric vehicles with the installation of Schneider Electric charging points at some SASCO filling stations. Furthermore, the Public Investment Fund, the country's sovereign wealth fund, has made inroads into the development of electric vehicles in the US, claiming a \$2bn stake in the electric vehicle

The formation of business clusters is a primary strategy in achieving the Kingdom's diversification aims. These clusters facilitate the horizontal and vertical expansion of firms, while increasing efficiency and competitiveness.

start-up Tesla before shifting its investment focus to Lucid, a Silicon Valley-based firm specializing in electric vehicle battery production. Nevertheless, while the NIDLP remains committed to the creation of an automotive cluster in Saudi Arabia, international conditions present challenges: the sale of new units is set to fall by 22% in 2020 to 70.3m vehicles due to the economic implications of the global Covid-19 pandemic, according to market intelligence firm IHS Markit.

PHARMACEUTICALS: The NIDLP has also identified the Saudi pharmaceuticals industry as a sector with significant potential for further growth. According to the NIDLP roadmap, SR30bn (\$8bn) worth of pharmaceuticals are expected to be sold in the Kingdom by 2021, a quarter of the MENA total, and yet only 20% of demand is met by local production. In addition to high levels of local demand, the Saudi market has a stable economy with access to finance, an existing regulatory structure and free trade agreements with most of the MENA region. Alongside an economic rationale for expanding manufacturing capacity, the NIDLP recognizes a strategic incentive, in that local production can help protect the country from any future supply shortages. Nevertheless, challenges remain to development, including local sourcing of active pharmaceutical ingredients, delayed disbursements to local manufacturers by the authorities, lengthy registration procedures and a multiplicity of agencies involved in the localization of the industry.

The country's pharmaceuticals industry is primarily orientated towards the production of generics for the local market, and domestic operators face strong competition from international firms in terms of developing higher-value products. The general model for global pharmaceuticals firms is to concentrate their resources on the production of profitable patented medicines; however, this requires major inputs

of capital and expertise in high-risk research, making it a difficult market to break into. Nevertheless, progress can be made if research and development (R&D) efforts are consolidated, given that R&D is currently conducted in a patchwork manner by universities and medical centers, according to the NIDLP. In April 2020 Saudi Pharmaceutical Industries and Medical Appliances Corporation (SPIMACO) moved to boost its R&D, signing a marketing and technology transfer deal with international firm Amgen for biotechnologies.

RESEARCH LINKS: The Research Products Development Company (RPDC) was created in 2015 to bridge the gap between patents and commercialization. It leverages the research output of major industrial conglomerates such as SABIC and Saudi Aramco with educational establishments like King Fahd University of Petroleum and Minerals, King Abdullah University of Science and Technology (KAUST), and King Abdulaziz City of Science and Technology.

Among the most important projects supported by RPDC is the Saudi Vaccine and Biomanufacturing Center, which was developed by RPDC in conjunction with KAUST and the domestic vaccines and biopharmaceuticals manufacturer SaudiVax. Construction of the R&D cluster began in December 2018 and is earmarked for completion in 2020. The facility will support clinical trials for new drugs and accelerate the development of vaccines. "The commercialization of Saudi Arabia's intellectual property has not been in line with the Kingdom's aspiration. The entrepreneurship and start-up ecosystem is not yet adequately mature and well developed, thus we face major challenges," Abdulmohsen Almajnoui, CEO of RPDC, told OBG. "However, Vision 2030 recognizes the need to support R&D, and our aim is to focus on solutions that can benefit the country."



**40 components or products
have been identified for
manufacture in
Saudi Arabia**

Wealth of Resources

Extractive activities receive greater focus as the Kingdom continues to diversify its economy

It took explorers five years to find Saudi Arabia's oil in commercial quantities in the early 1930s, and 90 years later the hunt is on to locate other minerals that could provide new sources of wealth for future generations. Rare and precious metals can be found all over the Kingdom, and under Vision 2030, the national development blueprint, the Saudi Geological Survey (SGS) has been tasked with guiding prospectors on where to search for raw materials.

GOLD, COPPER & ZINC: The Saudi Arabian Mining Company (Ma'aden) has been prospecting for gold for over two decades, and is boosting efforts to extract more of the precious metal. Its first mine was Al Amar, which began commercial operations in 2008 and produced 30,331 oz of gold in 2018, according to the company's latest annual report. By that time Ma'aden had five other gold mines in operation: Ad Duwayhi, with 274,519 oz of gold produced in 2018; Bulghah, with 36,972 oz; Mahd Ad Dhahab, with 29,904 oz; As Suq, with 27,536 oz; and Sukhaybarat, with 15,704 oz. As part of the extraction process, 10,000 tons of copper concentrate and 18,000 tons of zinc concentrate were produced as by-products. Looking to the future, the firm plans to begin production by 2023 at Mansourah-Massarrah and Ar Rjum. Ma'aden aims to produce a total of 1m oz of gold annually by 2025, up from 415,000 oz in 2018. Ma'aden's polymetal unit generated revenue of SR2bn (\$533.2m) in 2018, when the average gold price was \$1200 per oz.

On March 9, 2020 gold peaked at \$1680.80 per oz, more than a 40% increase on the 2018 average. Conversely, by mid-March 2020 the price of Brent crude fell to around \$30 per barrel, its lowest point in four years, demonstrating the merits of Vision 2030's objective to diversify the economy away from oil and towards other sectors such as mining. In 2016 the company's 50:50 joint venture (JV) with Canada's Barrick Gold, Ma'aden Barrick Copper Company, started production at an underground mine called Jabal Sayid. The mine produced 132,400 pounds of copper in 2019.

PHOSPHOROUS & BAUXITE: While it started as a gold mining company, Ma'aden evolved in the decade to 2018 to include phosphate extraction to produce fertilizers. Moreover, thanks to a SR41bn (\$10.9bn) investment, the firm takes bauxite and turns it into a range of aluminium products, such as car panels and drink cans. Ma'aden subsidiaries and JVs also produce kaolin, magnesite, caustic soda and ethylene dichloride.

OTHER PLAYERS: Although Ma'aden is the Kingdom's leading mining company, there are others interested in capitalizing on Saudi Arabia's mineral resources. Founded in 2011, Astra Mining has a factory in Al Kharj with an annual capacity of 135,000 tons, where it uses limestone and dolomite to produce a range of products including quicklime and putty, which it sells to

Ma'aden subsidiaries & joint ventures in Saudi Arabia, December 2019

Name	Equity stake	Partners	Activities	Incorporation year
Ma'aden Gold and Base Metals Company	100%		Gold	1989
Ma'aden Phosphate Company	70%	SABIC (KSA)	Phosphates, fertilizers, ammonia	2008
Ma'aden Infrastructure Company	100%		Infrastructure services	2008
Industrial Minerals Company	100%		Drilling, mining, smelting, refining	2009
Ma'aden Rolling Company	100%		Aluminium cans, car body parts	2010
Ma'aden Aluminium Company	74.9%	ALCOA (US)	Aluminium ingots, slabs, billets	2010
Ma'aden Bauxite and Alumina Company	74.9%	ALCOA (US)	Bauxite, alumina	2011
Sahara and Ma'aden Petrochemicals Company	50%	Sahara Petrochemical Company (KSA)	Concentrated caustic soda, chlorine, ethylene chlorine	2011
Ma'aden Wa'ad Al Shamal Phosphate Company	60%	Mosaic (NL) - 25% SABIC (KSA) - 15%	Ammonia, phosphates, phosphoric acid, sulfuric acid, sulfate of potash	2014
Ma'aden Barrick Copper Company	50%	Barrick (CAN)	Drilling, mining, concentrating copper	2014
Ma'aden Fertilizer Company	100%		Mining, fertilizer manufacturing	2019
Ma'aden Marketing and Distribution Company	100%		Fertilizer distribution	2019

Source: Ma'aden

companies in industries such as steel, and oil and gas. Astra is keen to obtain licenses to quarry for lime, magnesite, dolomite, quartz, feldspar, kaolin and pozzolan. "Saudi Arabia has preserved its mineral resources for future generations, but the government has decided the time has come to develop these industries," said Ali Mousa Al Jabrah, CEO of Astra Mining, speaking to Oxford Business Group (OBG), a global research and advisory firm.

Other firms active in the market include Modern Mining Holding Company, which formed a JV with resource trading firm Trafigura in late 2018 to develop an integrated copper, lead and zinc smelting and refining facility. In February 2020 industrial group Rifd Industry broke ground on a 1.5m-sq-meter copper smelting facility in Yanbu Industrial City, a development that will be key in plugging the gap in the midstream value chain. Additionally, Al Masane Al Khobra Mining Company produced some 4m tons of copper and zinc ore between 2011 and mid-2019, and the firm is developing a gold mine that will produce 162,700 oz over the lifetime of the mine.

RARE ELEMENTS: Astra Mining is also among the companies that seek to excavate Saudi Arabia's rare earth elements. Two areas have been found to contain deposits: Jabal Tawlah, where there are concentrations of niobium, tin, yttrium, tantalum, thorium and heavy rare earth elements; and Ghayyah, where there is tantalum, niobium, zirconium and yttrium. Yttrium can be used as an additive in alloys, as well as in the manufacture of radar and lasers, while niobium is used to make strong alloys for jet engines and pipelines. Thorium and zirconium are both used in the nuclear fuel industry. Elsewhere, prospecting surveys conducted from 1979 to 1984 discovered uranium at five sites. In 2017 SGS and the King Abdullah City for Atomic and Renewable Energy began a two-year project to evaluate the possibility of mining uranium, which is used alongside thorium in nuclear power.

IRON & STEEL: In September 2019 local media reported that Hussain Al Otaibi, president of SGS, said the country had 870m tons of proven iron ore that could be used in its steel industry. Al Otaibi noted at the First Saudi International Iron and Steel Conference in Riyadh that month that the Wadi Sawawin mine near Medina had 429m tons of hematite, magnetite and limonite, and a consortium of Ironside Resources, Jupiter Capital Partners

and National Mining Company was expected to build a pellet plant with a capacity of 5.4m tons per annum at the site. Al Otaibi revealed SGS planned to use artificial intelligence to help shorten the exploration cycle by 90%.

SAND & GLASS: One material that is likely to never be in short supply in Saudi Arabia is sand. Muadinoon Mining Company is supplying this raw material as silica to industries including construction and glass manufacturing. Muadinoon estimates the country has reserves of 40m tons of silica sand, and that average annual production in the Kingdom was 950,000 tons between 2006 and 2011. Its products include washed sand, silica powder, silica sand and frac sand. The main ingredients for glass are silica; soda ash, which reduces the melting point of the glass mixture; dolomite, which makes the material easier to shape; and limestone, which helps to improve durability. Most of these raw materials are found in the Kingdom, and by 2022 a new soda ash facility at Ras Al Khair is due to start production. Khair Inorganic Chemical Industries Company is a Saudi closed stock business that will construct, own and operate a greenfield soda ash and calcium chloride plant on a 800,000-sq-meter site at Ras Al Khair Industrial City. The plant will have an annual capacity of 300,000 tons of soda ash and 350,000 tons of calcium chloride. It aims to capture 50% of the GCC market by 2025.

There are a number of glass companies in Saudi Arabia, including the National Company for Glass Industries (Zoujaj), which is listed on the Saudi Stock Exchange (Tadawul). Zoujaj was established in 1991 and makes 150 types of glass containers at its plant in Riyadh, with an annual capacity of 123,000 tons of containers. The company also produces flat glass at Jubail. It has a 55% stake in Saudi Guardian International Float Glass Company. In Yanbu the AGC Obeikan Glass Company produces 800 tons per day of float glass and exports it to 30 countries, while the Arabian United Float Glass Company produces 600 tons per day of float glass, pattern glass and silver mirror.

The automotive glass industry has been identified by the National Industrial Clusters Development Program for its potential. The program forecasts that the automotive glass market – with a 5% share of the total addressable Saudi market plus exports – will produce 170,000 sq meters in 2020, growing at a compound annual growth rate of 5.6% to 210,000 sq meters by 2029.



Ma'aden aims to produce 1m oz of gold annually by 2025

Refined Approach

An in-depth look at how to boost the Kingdom's industrial appeal to international investors

As Saudi Arabia's economy has grown it has developed centers of manufacturing, enterprise areas and industrial cities. Under Saudi Vision 2030, the national economic blueprint, the Kingdom is re-examining the role of those developments in attracting international investment to drive economic diversification forward and lessen its dependence on hydrocarbons. The delivery plan for the National Industrial Development and Logistics Program (NIDLP), published in January 2019, included 84 initiatives that were to be undertaken by key government agencies as part of plans to overhaul this aspect of the economy and pave the way for a new generation of special economic zones (SEZs) and other industry-focused cities. The report is not overtly critical of government institutions, and focuses on investment opportunities in recent years that neighboring countries have capitalized on in order to attract international companies to SEZs. However, in early 2020 the NIDLP's delivery plan was undergoing a number of changes, thus initiatives, targets and focus areas may be amended.

GLOBAL PHENOMENON: Saudi Arabia is not the only country in the world re-examining ways to attract investment through designated zones. According to a report published in 2019 by the UN Conference on Trade and Development (UNCTAD), there were at least 5383 SEZs in 147 countries that year, with at least 500 more in the pipeline. However, despite Saudi Arabia being

home to 10 SEZs, UNCTAD reports flat compound annual growth in trade goods from 2007 to 2017.

While this may be surprising, the UNCTAD report points out that although SEZs are often relatively cheap to establish and may appear to be a magnet for inward investment, many countries see limited overspill of business activity into their wider economies, and often miss out on revenue when they waive taxes or duties in order to attract businesses to the zones. Furthermore, UNCTAD sent out a questionnaire in early 2019 to find out the level of utilization of SEZs. Of the 114 countries that responded, 13% said their SEZs were full, 22% said they were well used, 25% said local SEZs were somewhat under-used and 22% reported that their SEZs were largely vacant.

CURRENT SITUATION: The UNCTAD report noted that there is no universal definition of an SEZ, and that around the world nations have established industrial parks, export-free areas and other zones with unique regulations, as well as outlined special incentives for underdeveloped areas. Within Saudi Arabia there are a number of agencies controlling the distribution of industrial land. Established in 2001, the Saudi Authority for Industrial Cities and Technology Zones (MODON) operates 35 sites – some of which are under development – which host over 3450 factories that collectively employ 435,000 people. These are located around the country and some target what Saudi Arabia calls promising cities or areas where it would like to see more industrial development.

SEZ types in Saudi Arabia

Name	Examples of activities
Logistics Bonded Zone	Logistics, reverse logistics, warehousing, fulfillment, maintenance and repair
Manufacturing Free Trade Zone	Automotive, food processing, pharmaceuticals, medical supplies, renewable energy and manufacturing
Service Free Trade Zone	Trading services, research and development, ICT, consultancy, architecture and design
Single Purpose Zone	Media, health care, education and financial services

Source: NIDLP

The Royal Commission for Jubail and Yanbu (RCJY) was created in 1975, initially to administer the growth of downstream activities around oil production and shipping on the east and west coasts, respectively. Adjacent to the country's Eastern Province oilfields, Jubail Port is currently home to 160 industrial enterprises, including refineries, crackers and chemical manufacturing plants, with new projects under way all the time, such as the PlasChem Park being developed by the RCJY adjacent to Sadara, the giant Saudi Aramco-Dow Chemical mixed-feed cracker. The National Industrialization Company (Tasnee) is Saudi Arabia's second-largest petrochemicals producer, with operations in Jubail. "We are not involved with PlasChem, but I think it is a great idea if they offer new investors plug-and-play solutions, because newer and smaller companies are not equipped to take on the full development of the site," said Tasnee's CEO, Mutlaq Al Morished, speaking to Oxford Business Group, a global research and advisory firm. The RCJY's second city is Yanbu, a Red Sea port located 350 km north of Jeddah, which was established to carry exports through the Suez Canal. The RCJY also administers industrial cities at Ras Al Khair, a port and manufacturing center that lies north of Jubail and serves the minerals industry, and at Jazan City for

Primary and Downstream Industries, which was developed in 2006 on a site 66 km north of the Red Sea city of Jazan in the south-west.

ECONOMIC CITIES: At the same time work began at Jazan under late King Abdullah bin Abdulaziz Al Saud, plans for a number of new economic cities were developed and a government agency known as the Economic Cities Authority (ECA) was formed. The decade through to 2016 experienced a number of global economic shocks – such as the financial crisis of 2008-09 and the slump in oil prices from mid-2014 – and a number of the economic city plans either stalled or developed more slowly than originally planned.

Knowledge Economic City in Medina was founded in 2010 as a joint-stock company listed on the Saudi Stock Exchange (Tadawul), while King Abdullah Economic City was developed by Emaar, The Economic City: a joint venture between the Saudi government and Dubai's Emaar Properties. Significant industrial activity was originally planned for King Abdullah Economic City, but the current focus appears to be on its residential and tourist offering. Ownership of the \$10bn King Abdullah Financial District in Riyadh was transferred to the Public Investment Fund, the sovereign wealth fund, in 2018, according to Reuters. Work to complete its skyscrapers is ongoing in 2020, and there are plans to transform the district into a more mixed-use environment with the possibility of it operating as a special business zone. The King Abdullah Financial District is set to host the G20 Summit in November 2020.


NEW ECOSYSTEM: The development of the RCJY, MODON and the economic cities offers great potential for attracting investment, but it also created a more complex organizational landscape for new investors to navigate. The NIDLP's roadmap, published in January 2019, called for a reappraisal of the approach. Its conclusions were based on international comparisons, but also drew on discussions with the RCJY, MODON and the ECA. It suggested new SEZs would benefit from a one-stop shop for administrative matters, tax incentives, zone-specific labor laws, foreign ownership permission, customized financial incentives, import/export duty exemptions, and lean Customs operations and inspections. Other ideas included bonded corridors between zones, such as between ports and airports; greater empowerment for decision-making at the zone level; increased cooperation among zones and zone management bodies; and clear mechanisms for dispute resolution.

The NIDLP concluded that a future-proof strategy for SEZs should protect existing zones and their businesses, as well as pave the way for new zones.

ZONE STRATEGY: The NIDLP sets out a strategy to ensure the future success of SEZs, identifying logistics, mining, energy and industry as sectors that could benefit from such zones. It also suggested developing clusters aligned with the National Industry Strategy, such as those for automotive, pharmaceuticals, machinery, renewables, food processing, plastics and building materials. Moreover, the NIDLP notes that digital, professional services, tourism and entertainment companies would benefit from their own spaces. The plan identified archetypes for free zones, including logistics bonded zones, which would offer advanced logistics in Customs-free areas; manufacturing free trade zones (MFTZs), which aim to be global centers for export-oriented manufacturing and trade; service free trade zones (SFTZ), where talent from specific industries such as ICT or entertainment would gather; and single-purpose zones (SPZs) for specific seed industries. MFTZs and SFTZs would have a standard pre-approved founding law, while SPZs would have an ad-hoc regulatory system.

The National SEZ Supervisory Board will have advisory committees for each archetype, offer advice and drive the approval process for entities wishing to become licensed SEZs. It was suggested that the ECA Board, chaired by Crown Prince Mohammed Bin Salman bin Abdulaziz Al Saud, should be repurposed to conduct this role; instead the ECA was subsequently rebranded as the Economic Cities and Special Zones Authority. In October 2018, before the NIDLP roadmap was published, a royal decree declared the establishment of an Integrated Logistics Bond Zone – the first of the new SEZs – at King Khalid International Airport under the supervision of the General Authority of Civil Aviation.

Analysis conducted by the Saudi Arabian General Investment Authority (SAGIA) has also identified several areas of potential for foreign investors across the Kingdom's economy. These encompass the industrial and manufacturing sectors, including the food and beverage segment, fisheries and the halal market; building materials such as cement, ceramics, tiles, stone, glass and sanitary ware; and industrial spare parts for defense, energy, renewables, water, petrochemicals and infrastructure.



84 initiatives are being undertaken to overhaul the country's special economic zones

