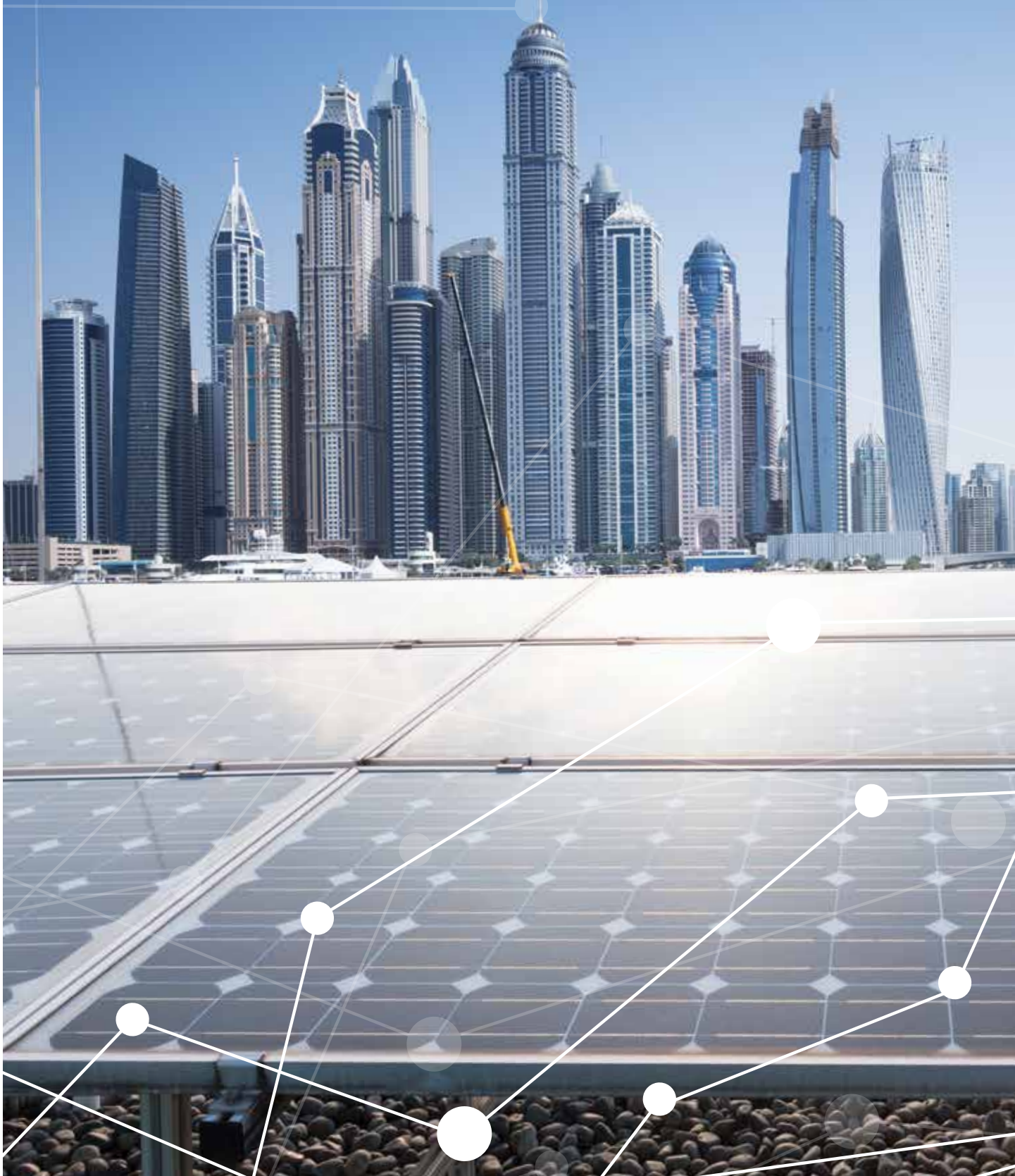


CHAPTER 7 | 

# Industry



### Performance Indicators:



Manufacturing is targeted to generate an additional **AED 18 billion** in real value added



Create **27,000 new skilled jobs** in manufacturing



Boost exports by **AED 16 billion**



Invest **AED 700 million** in R&D

1

### Dubai Industrial Strategy 2030

Multi-faceted initiative to boost Dubai's global competitiveness in the industrial sector and transform the sector into an economic growth engine.

## Industry is a Pillar of the Economy

Manufacturing, construction, electricity, water and gas, mining and quarrying form Dubai's second largest economic sector.



**↑ 4.5%**

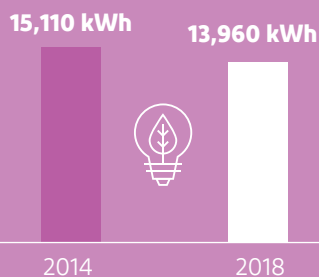
in constant prices in 2018

2

### Growth in Construction

Construction activities value added grew by 4.5% in constant prices in 2018, twice the rate of real GDP growth, spurred by preparation for Expo 2020 and expansion in the stock of retail space and residential units.

### Average per capita Electricity Consumption



3

### Electricity and Water

The Emirate's growing urban population and hot climate have made it one of the world's highest energy-consuming regions. However energy conservation programs have enabled Dubai's average per capita electricity consumption to drop from about 15,110 kWh in 2014 to 13,960 kWh in 2018, in line with the directives of DSCE and Dubai Integrated Energy Strategy 2030.



## Overview

Dubai's industrial sector comprises the value added produced in manufacturing, construction, electricity, water and gas, and mining and quarrying. The industrial sector is one of the primary pillars of the economy due to its numerous contributions to economic and social development and importance in supporting the output of other sectors. In addition, it is collectively the second largest main economic sector in the economy of Dubai.

The total industrial sector's value added in constant prices stood at AED 79.2 billion in 2018, up from AED 78.4 billion in the previous year, registering a slight growth of around 1.0 per cent despite challenging international and domestic economic environments. Manufacturing accounting for the highest share of industrial output accounting for 57 per cent, followed by construction (32 per cent), electricity water and gas (9 per cent) and mining and quarrying (2 per cent). Collectively the sector accounted for 20 per cent of GDP (in constant prices). The three main indus-

tries (manufacturing, construction and electricity, gas and water) have maintained their current shares in the GDP for the past five years. The contribution of mining and quarrying to GDP decreased slightly from 2 per cent in 2015 to 1.7 per cent in 2016, then plateaued in 2017 and decreased to 1.6 per cent in 2018.

Recognizing the importance of stimulating the industrial sector in order to drive economic growth, in 2016 the Emirate of Dubai launched the Dubai Industrial Strategy 2030. This initiative aims to transform Dubai's industrial sector to become a global platform for knowledge-based, sustainable and innovative industries. Since the start of the implementation of the strategy, various government and private entities as well as industrial free zones were assigned specific roles and tasks. To this end, key performance indicators (KPIs) were set to assess achievements of the initiatives they adopted to drive growth and increase the sector's contribution to the Emirate's GDP.

# Manufacturing Industries

## Manufacturing Value Added

**7.1** The value added of manufacturing (in constant prices) amounted to AED 36.8 billion in 2018, remaining at the same level as the previous year. However the rate of growth in manufacturing was lower than that of the GDP in 2018. The strengthening US dollar, which is aligned with the AED, and the difficulties faced by Dubai's main export partners resulted in a slight fall in real value added by 0.3 per cent in that year.

Manufacturing accounted for 9.2 per cent of real GDP in 2018. The average annual contribution to GDP in the past ten years has been slightly higher (9.6 per cent), but did not exceed 10 per cent of GDP in any of the previous years, (Figure 7.1).

**7.2** In terms of international comparisons, the average share of manufacturing value added (MVA) in Dubai's constant GDP is considerably less than the average of 13.9 per cent of GDP in industrialized economies and the average of 20 per cent in developing and emerging industrial economies, according to the UNIDO's Industrial Development report 2018. The high MVA share of GDP in the latter countries was attributed to the relocation of manufacturing production from industrialized countries to the developing countries over the past decades.

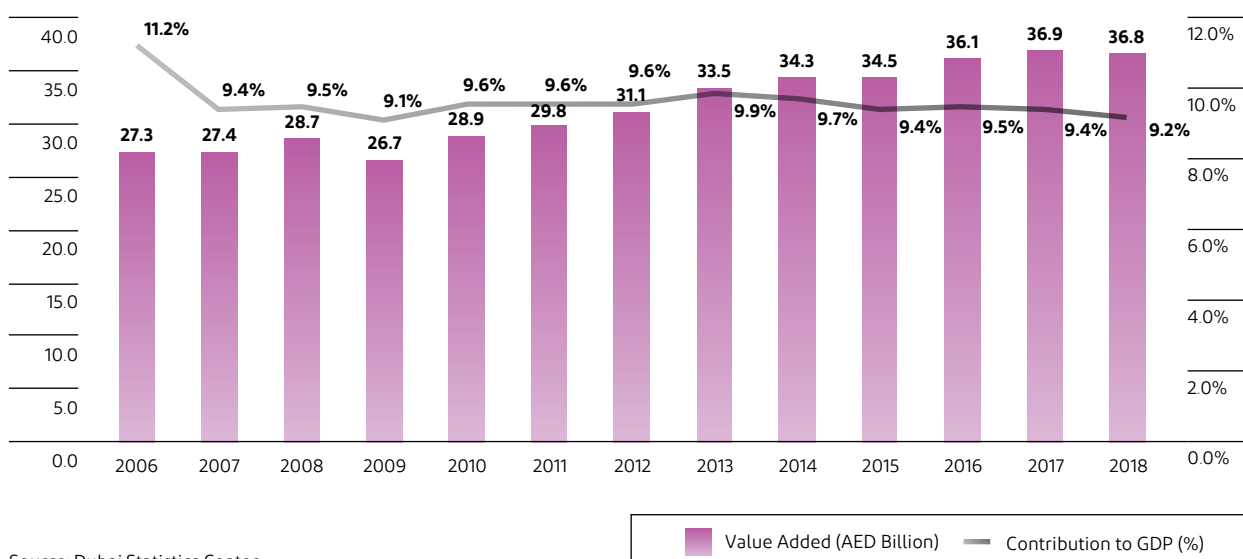
Even when Dubai's manufacturing value added is compared to relatively small developed or emerging economies it remains relatively small. For example, in 2018 manufacturing accounts for 22.0 and 14.6 per cent of the GDP, respectively, in Singapore and Belgium, (Table 7.1).

**Table 7.1: Average Shares of Manufacturing in GDP and Employment in Selected Economies in 2018**

	Dubai		Singapore		Belgium	
	GDP (%)	Employment (%)	GDP (%)	Employment (%)	GDP (%)	Employment (%)
<b>Construction</b>	6.4	21.9	3.4	4.7	4.6	5.8
<b>Manufacturing</b>	9.2	9.4	22	10.4	14.6	11.7
<b>Wholesale retail trade</b>	26.4	20.6	17.6	16	17.1	20.8
<b>Finance &amp; insurance</b>	10.2	1.7	13	8.9	5.6	2.5

Sources: National Statistics Centers. For Belgium, manufacturing includes extractive industries and wholesale retail trade includes hotels and restaurants.

**Figure 7.1: Manufacturing Value Added (AED billion) and Contribution to GDP (%)**



Source: Dubai Statistics Center

## Manufacturing employment

**7.3** In 2018, the manufacturing sector employed around 261 thousand workers, or 9.4 per cent of Dubai's total workforce, estimated at around 2.8 million workers. Despite its importance, the contribution of manufacturing to total employment has remained steady between 2010 and 2018, (Figure 7.2).

The following data on employment by main manufacturing industries was gathered from a survey on manufacturing conducted by the Dubai Statistics Center. In 2018, 56,042 workers were employed in the manufacture of fabricated metal products, except machinery and equipment, or 21 per cent per cent of total employed manufacturing. The manufacture of machinery and transport equipment and motor repairs employed around 43,000 or 16 per cent of the total employment in manufacturing, the manufacture of wood and paper products around 42,000 workers (16 per cent), the manufacture of rubber and mineral products about 37,000 workers (14 per cent) and the manufacture of Food & Beverages equalled around 35,000 (13 per cent). Together these 5 industries made up 80 per cent of total employment in manufacturing, (Figure 7.3).

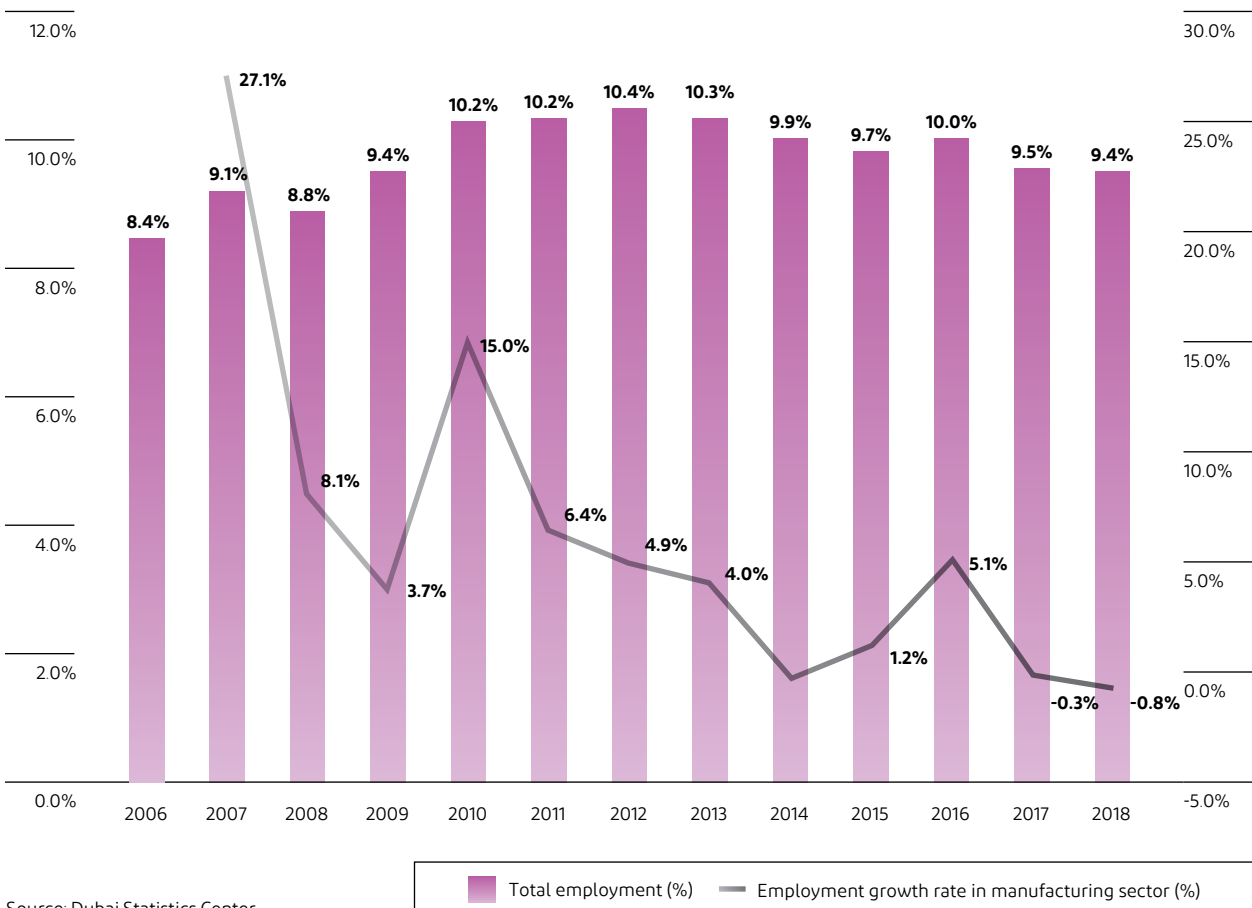
## Capital Formation in Manufacturing

**7.4** Capital formation (investment) is one of the main drivers of growth in manufacturing value added. It is also an important indicator determining future growth and sustainable development in the sector. A large flow of investment has numerous benefits as it allows the manufacturing sector to employ capital-intensive technology, thus raising labour productivity and competitiveness in global markets.

Capital intensity and technological 'know-how' also play a vital role in the global production network or so-called Global Value Chains (GVCs). Foreign capital, in particular, accelerates technological change in manufacturing and intensifies the output of high-tech products. This also can be achieved through active participation of manufacturing industries in GVCs, which allows companies in many geographical locations worldwide to cooperate with each other to manufacture one product.

Despite the important role played by the manufacturing sector in Dubai's economy, the sector has been less successful in attracting investment. Available data on capi-

**Figure 7.2: Share of Manufacturing in Total Employment in Dubai**



tal formation by economic sector shows that investment in manufacturing received only 8 per cent of total capital formation in 2018 and was ranked in fifth place, lagging behind economic sectors such as wholesale and retail trade, transportation and storage, and real estate activities. Nevertheless, it outperformed other sectors such as construction, and scientific, information and communication, (Figure 7.4).

### Manufactured Exports

**7.5** Manufactured exports (from Dubai’s main zone) accounted for 93.3 per cent of Dubai’s merchandise exports in 2018, decreasing slightly from 94.5 per cent in 2017. Manufactured exports attained AED 102.4 billion in 2018, decreasing from AED 116.9 billion in 2017.

Most manufactured exports are resource-dependent, low-tech products reflecting the nature of Dubai’s manufacturing base, which is dominated by low and medium-tech industries. The share of these low to medium-tech manufactured exports accounted for 88.7 per cent in 2018, after decreasing steadily from 96 per cent in 2010.

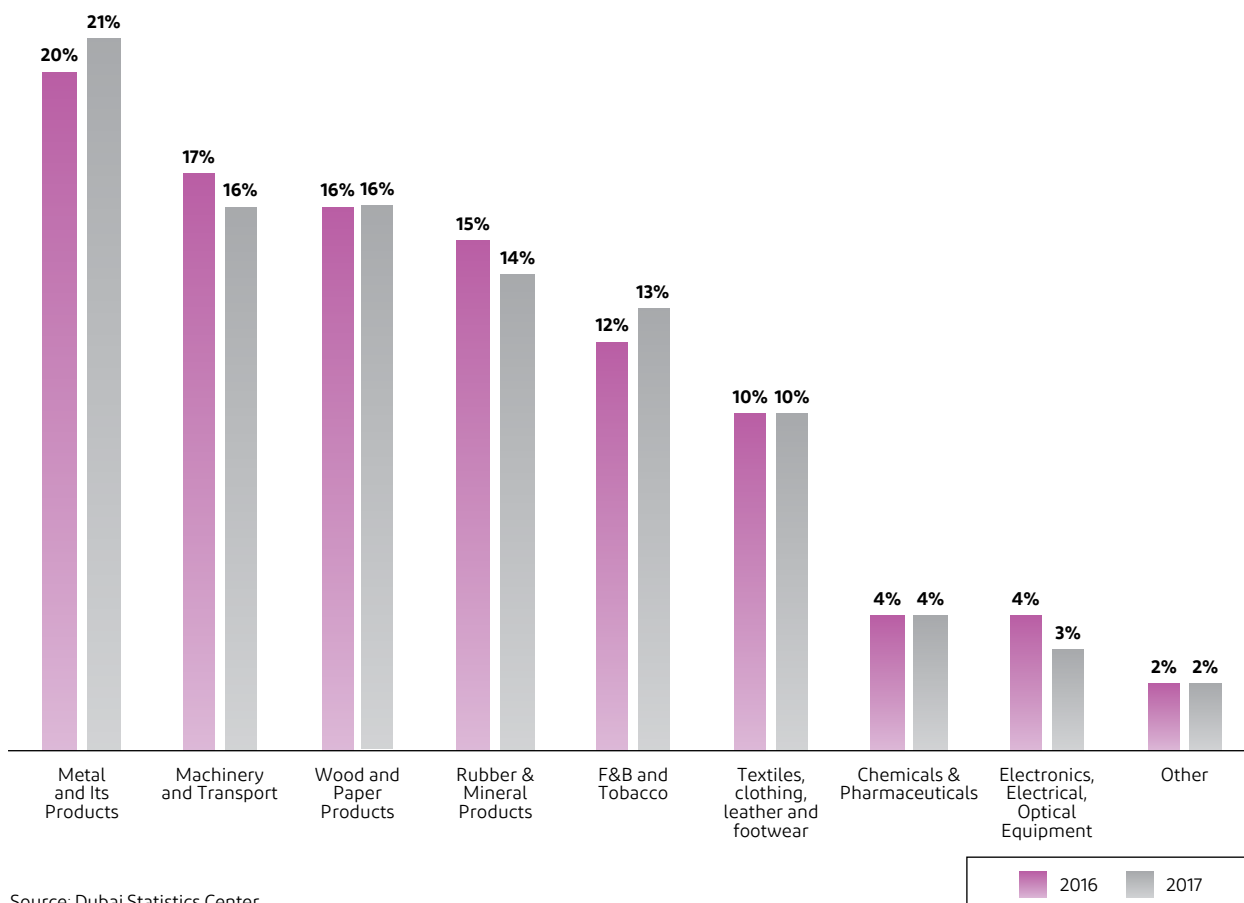
In contrast, the share of medium to high-tech manufactured products such as chemicals, machinery and transport equipment, and communication equipment significantly increased reaching 11.3 per cent of all manufactured exports in 2018 compared to only 4.0 per cent in 2010. The robust increase in the share of high-tech industries’ exports indicates Dubai’s success in creating an industrial diversification path, which has been aimed at inducing a stronger technological emphasis in manufacturing, (Figure 7.5).

### Dubai Industrial Strategy 2030

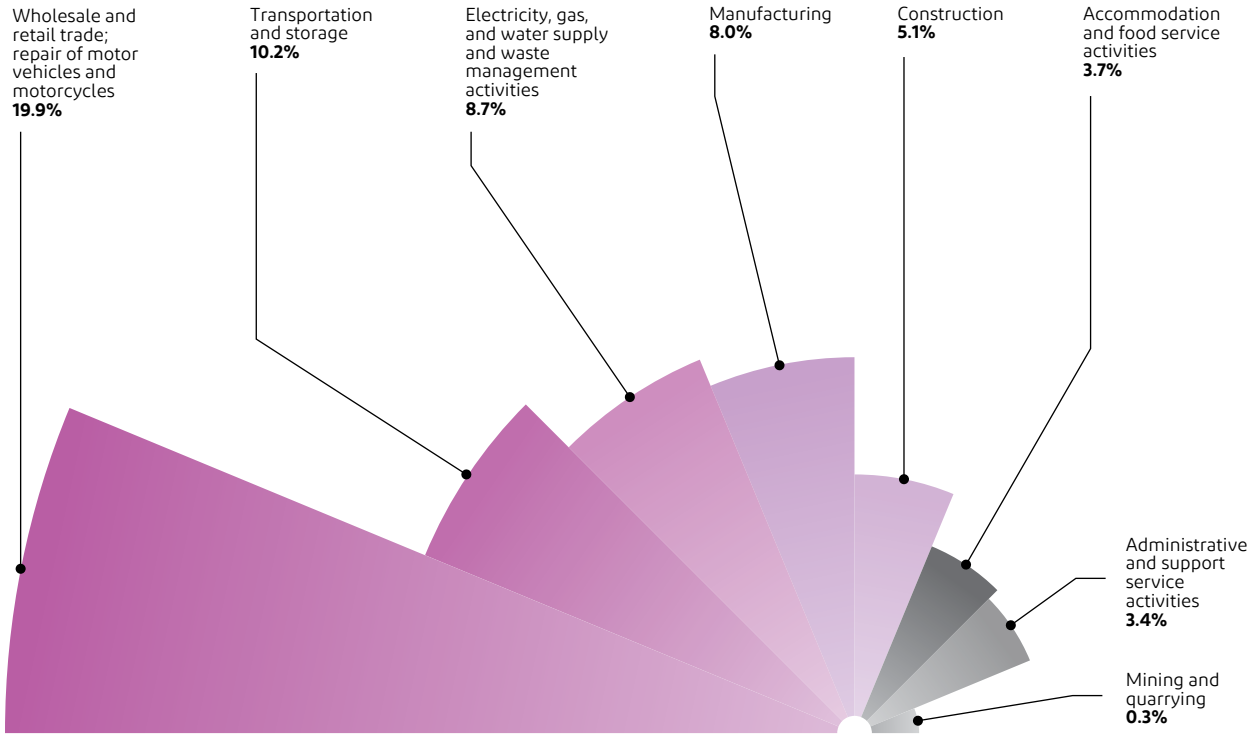
**7.6** To create economic stimulus and growth in this important sector, Dubai government launched the Dubai Industrial Strategy 2030. It aims at transforming the Emirate to become a global platform for knowledge-based and innovative industries in order to achieve the economic growth targeted by the Dubai Plan 2021.

The strategy has laid down 5 objectives: Dubai’s industrial sector to be a growth engine; to be innovation-based; to be a home for global businesses; to be environmentally sustainable supporting the green economy; and, to

**Figure 7.3: Contribution of Main Manufacturing Industries to Total Manufacturing Employment**

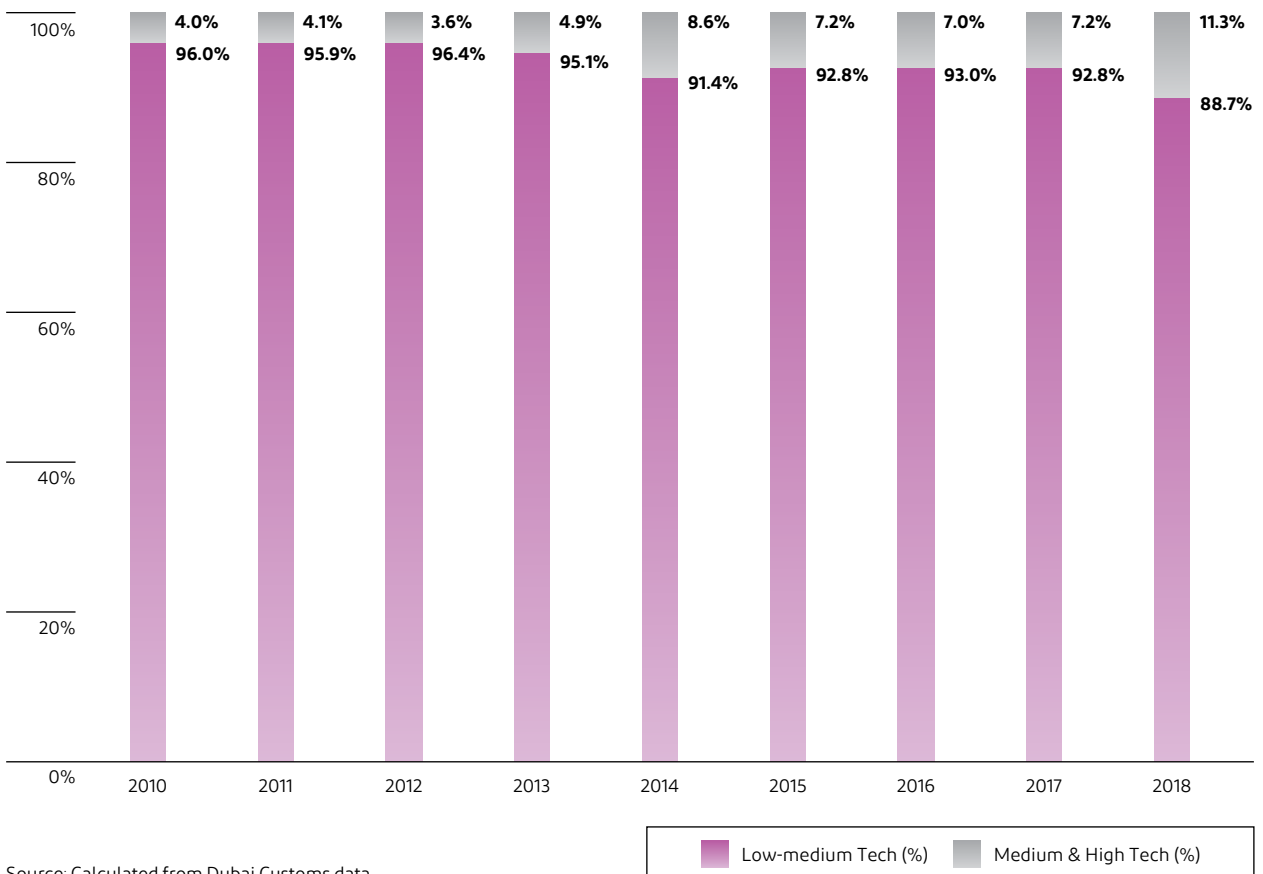


**Figure 7.4: Share of Manufacturing in Total Capital Formation by Economic Sector, 2018**



Source: Dubai Statistics Center

**Figure 7.5: Technology Composition of Manufactured Exports**



Source: Calculated from Dubai Customs data

adopt Islamic standards to manufacture “Halal” products and to contribute to Dubai’s goal to become the capital of the Islamic economy.

The strategy has identified six industrial sectors to lead its economic transformation: Aviation; Ships; Pharmaceuticals & Medical equipment; Fabricated Metals; Machinery & Equipment; and Consumer goods.

The strategy also has set key performance indicators (KPIs): (1) manufacturing is targeted to generate an additional AED 18 billion in real value added, half as much again as existing manufacturing value added; (2) to create 27,000 new skilled jobs in manufacturing; (3) to boost exports by AED 16 billion; and (4) to invest AED 700 million in R&D, catalysing Dubai’s transition to a knowledge-based economy. Current R&D expenditure is estimated to be around 0.7 per cent of GDP in 2013, which is well below the 2.8 per cent average achieved by the G7 economies, according to OECD data.







There are a number of challenges that the Dubai Industrial Strategy has to overcome in order to succeed in achieving its objectives. One challenge is to change the technological structure by intensifying its use in manufacturing and

reducing the employment rate for labour and especially non-skilled labour. Such structural change is necessary for the strategy to succeed in increasing the percentage of the high-tech group of products and achieving a technological upgrade in manufacturing.

The Dubai Industrial Strategy also aims to raise the productivity of its workforce by attracting Foreign Direct Investment (FDI) and ‘know-how’ into the targeted six strategic industries. This will require a better skilled workforce to provide incentives for technological innovation, which will be integrated into global production networks.

Another main achievement that the strategy has called for is the growth in exports of high-tech products. This can be achieved through an active participation in Global Value Chains (GVCs), which will further the adoption of international standards, increase awareness of technological advancements, and provide an overall gain of competitiveness in global markets. Dubai’s logistic network and its excellent air, sea and land transport capabilities, in addition to its strategic location between East and Western Europe, will be instrumental to Dubai’s industrial transformation.

## THERE ARE SIX INDUSTRIAL SECTORS HAVE BEEN IDENTIFIED TO LEAD ITS ECONOMIC TRANSFORMATION:

-  | Aviation
-  | Ships
-  | Pharmaceuticals & Medical equipment
-  | Fabricated Metals
-  | Machinery & Equipment
-  | Consumer goods

**Dubai Industrial Strategy has to overcome the challenge of intensifying technology upgrades and reducing the employment rate of non-skilled labour to succeed in increasing the production of high-tech products.**



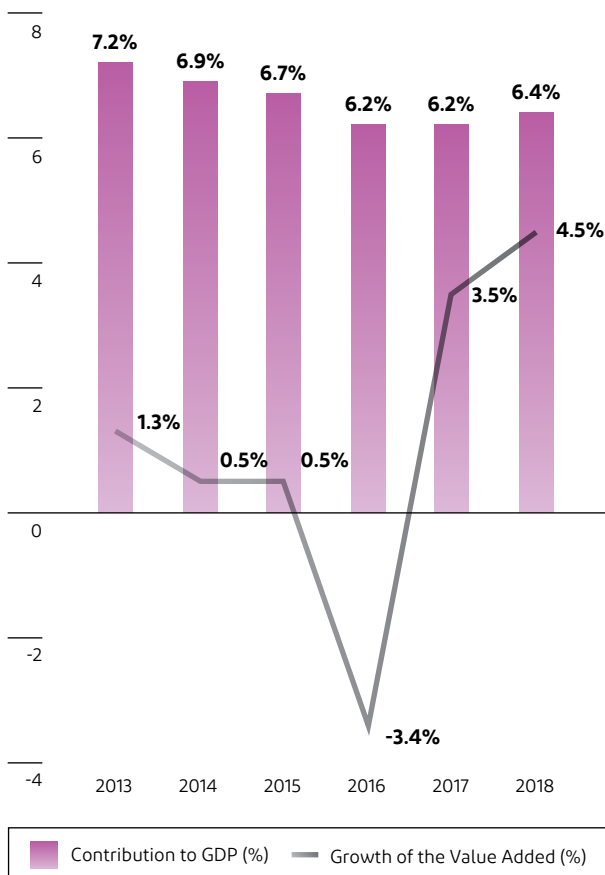
# The Construction Sector

**7.7** Construction is the activity of building real estate assets, residential and commercial buildings, and infrastructure such as roads, bridges and pipelines. The activity is affected by the demand from both the public and private sectors. Construction activities' value added grew by 4.5 per cent in constant prices in 2018, compared to 2.7 per cent in 2017. The sector's expansion was over twice the rate of real GDP growth as investment continued in anticipation of the hosting of Expo 2020 and as the stock of retail space and residential units continued to expand. Value added growth in construction is expected to slow to 0.6 per cent in 2019 as many projects are completed and to rise to 1.7 per cent in 2020. The sector's contribution to Dubai's GDP in constant prices rose slightly from 6.2 per cent to 6.4 per cent, (Figure 7.6).

## Labour & Productivity in the Construction Sector

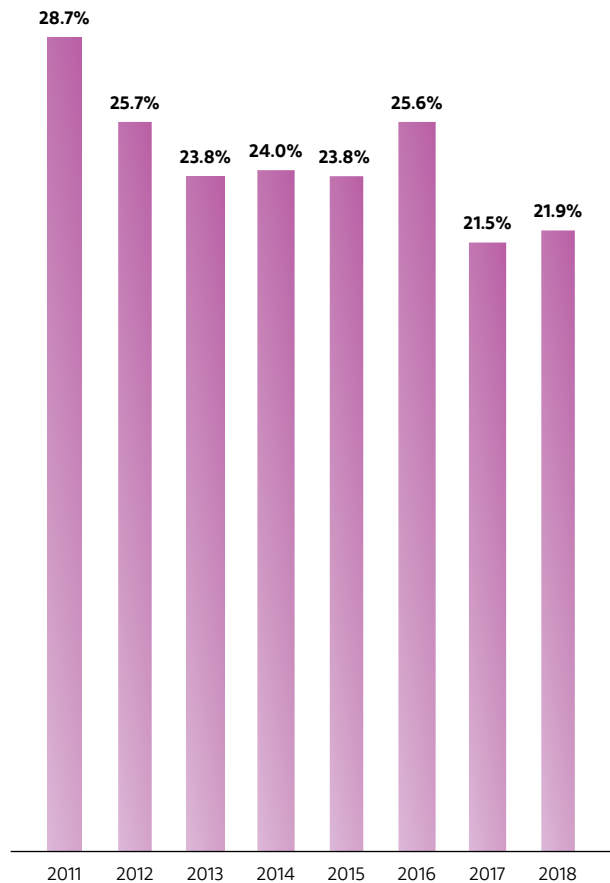
**7.8** It is well known that the construction sector has played a significant role in the development of Dubai's infrastructure, housing, schools, hospitals, hotels and other assets for the past 2 decades. However, construction is the most labour-intensive sector in Dubai. It employed 607,640 workers in 2018 and the sector's share of total employment in Dubai has risen slightly from 21.5 per cent in 2017 to 22.0 per cent by 2018 as construction activities picked up in the context of preparations for Expo 2020, (Figure 7.7).

**Figure 7.6: Development of the Construction Sector (%)**



Source: Dubai Statistics Center

**Figure 7.7: Share of the Construction Sector in Dubai's Total Employment**



Source: Dubai Statistics Center - Labour Survey, 2018

**7.9** The average annual compensation of workers in the construction sector was about AED 31,000 per worker in 2018, the lowest among the key economic sectors' in Dubai's GDP and lower than average annual compensation of total workers in Dubai (AED 69,000). Compensation of workers represented 68 per cent of value added in the construction sector in 2018. There was a large increase in the number of workers in the construction sector between 2014 and 2018, with the total rising by about 90,000 workers during that period. On the other hand, the value of capital formation in the construction sector reached AED 3.9 billion in 2018 and increased by 11 per cent over the previous year. Likewise output per worker increased from AED 130,000 in 2017 to AED 135,000 in 2018 but growing at a slower pace by 3.5 per cent, during the same period.

**7.10** Labour productivity in the construction sector at 44,860 per worker is the lowest in the economy. However, unlike the period between 2014 and 2017, in 2018, average worker productivity (worker's

share of added value) increased after a period of decline due to the stability in the value of capital formation in the construction sector in the period 2014-2017 and its growth in 2018. Lagging productivity in the construction sector is a global problem that affects many countries in the developed world as well as in emerging markets where labour costs are relatively cheap. According to consultants McKinsey in a 2017 report on the industry global labour-productivity growth in construction has averaged only 1 percent a year over the past two decades, compared with growth of 2.8 percent for the total world economy and 3.6 percent in manufacturing<sup>1</sup> (Figure 7.8).

### How is construction linked with the rest of Dubai's economy?

Value added in Construction accounts for more than one third (39 per cent), while about two thirds (61 per cent) correspond to intermediate inputs. The Construction is highly linked to manufacturing, wholesale and retail trade and financial services, (see Box 7.1).

### Government Support for SMEs in the Construction Sector

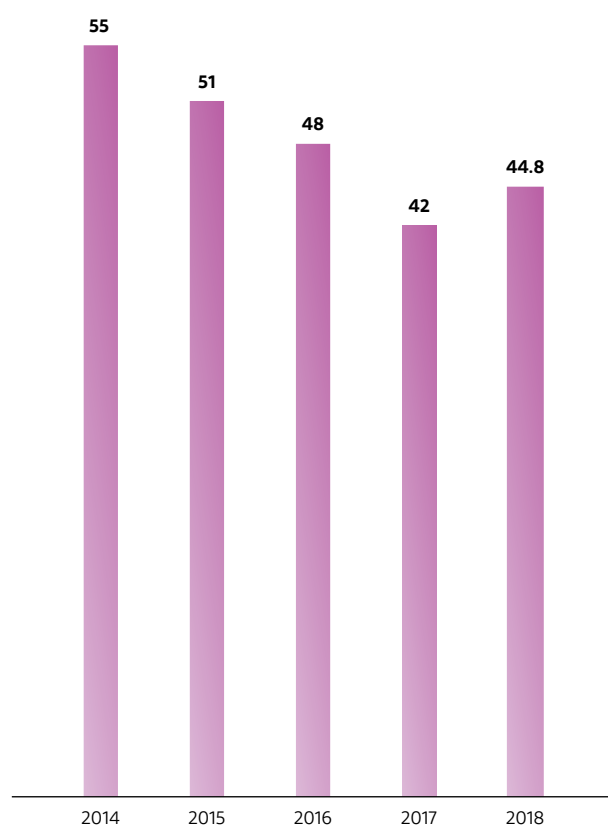
**7.11** Small and micro-enterprises (less than 50 workers) play a vital role in the construction sector, numbering about 12,000 companies, representing 91 per cent of the total number of construction enterprises operating in Dubai. Small and micro-enterprises employ a total of about 146,000 workers, 26 per cent of the total number of workers in the sector. Given the important role of small and micro-enterprises in stimulating growth in Dubai, the Government of Dubai undertook a number of initiatives in 2018 to support them. One in particular, accelerating the settlement of dues to small companies by government departments, will help them to have sufficient liquidity to continue their operations and increase their investment. In addition, the percentage of government tenders allocated to small and micro-enterprises was raised from 10 per cent to 20 per cent, which will boost the demand for their services, help expand the business turnover of small entrepreneurs and create more jobs.

To ease the economic burden of employers, the UAE Cabinet decided to cancel the bank guarantee paid by the employer, which amounts to AED 3,000 per worker, and replace it with an annual insurance system under which the employer pays AED 60 per worker annually.

### Cost of Construction Materials

**7.12** The Dubai Statistics Center's Construction Cost Index tracks changes in the prices of construction materials and services and includes 421

**Figure 7.8: Average Worker Productivity in Construction (AED Thousand)**



Source: Dubai Statistics Center

<sup>1</sup> <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/improving-construction-productivity>

## BOX 7.1

## Extent of Construction Linkages with Other Sectors of Dubai's Economy



The construction sector contributed just over 6 per cent to Dubai's GDP in 2018, but it played a significant role in the functioning of many other economic activities. Construction drives growth in the demand for the outputs of other economic sectors used up in the construction sector. These inter-relationships can be analysed through the medium of an input-output (I-O) table developed by Dubai Statistics Center which quantifies the economic relationships between each industry and every other industry.

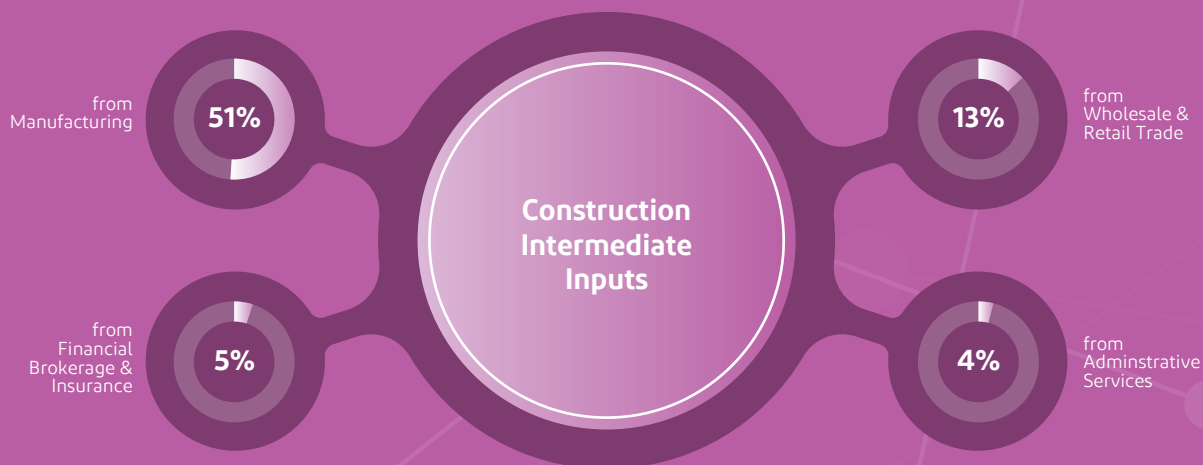
The sector has a high degree of interconnectivity with other economic sectors in Dubai's economy. Consequently, an economic boom in construction has a multiplied effect invigorating the economy and creating demand for the products of other economic sectors. The value of the back interconnection multiplier of the construction sector is estimated around 2.4, which means that every extra AED spent on the services of the construction sector increases demand in the other

economic sectors which support the construction sector by around AED 2.4.

These other economic sectors provide the construction sector with 61 per cent (around AED 45 billion) of its output value, while added value generated by the sector from using these products accounts to around 39 per cent of the sector's output value. The three main economic sectors supporting the construction sector through the provision of intermediate inputs are manufacturing, the wholesale and retail trade sector and financial brokerage and insurance, (Figure 1).

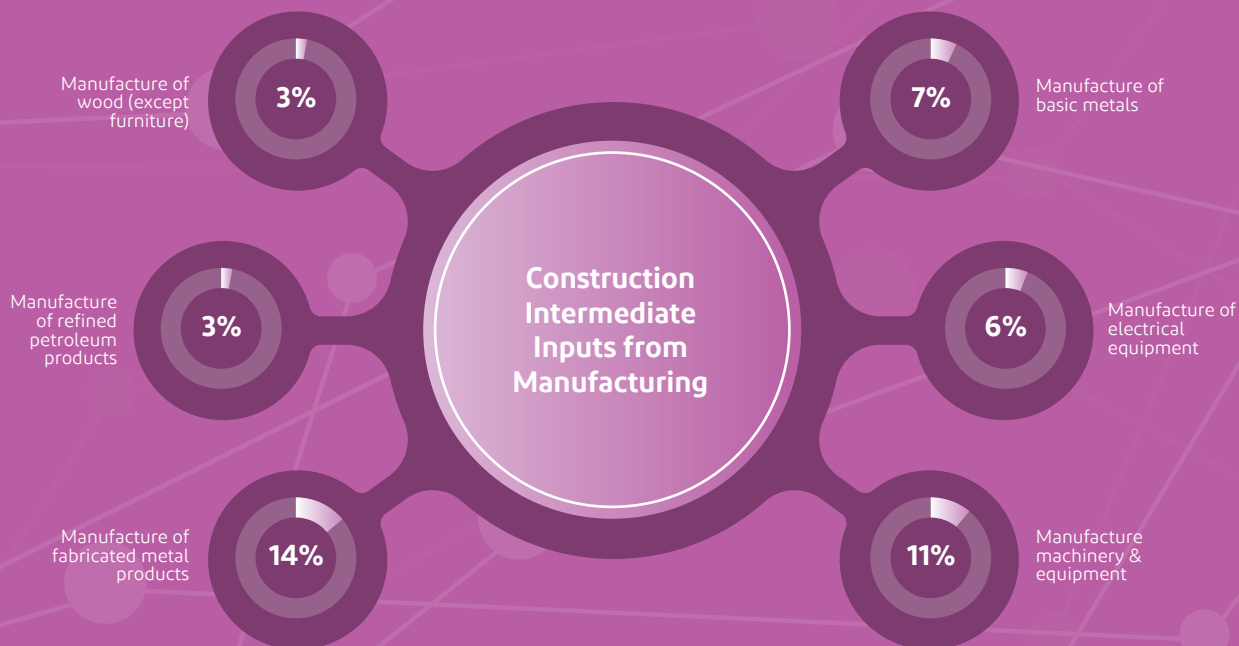
The manufacturing sector provides the basic materials used in the construction of real estate, roads, railways, bridges and other assets created. For example, the sector uses energy, wood, metals, machinery and electronic equipment. The percentage breakdown of the main inputs of the construction sector from manufacturing have been calculated by using the I-O table for Dubai, (Figure 2).

**Figure 1: The Main Inputs of the Construction Sector (% of total primary inputs)**



Source: Dubai Statistics Centre Inputs and Output Table

**Figure 2: Main inputs of the Construction Sector from Manufacturing (% of total Intermediate Inputs)**



Source: Dubai Statistics Centre Inputs and Output Table

goods and services. The index was stable between 2012 and 2017, fluctuating by around 2.0 per cent. However, it rose by 7.74 per cent in 2018, which may be attributable to growing activity in the construction sector and the increase in demand for building materials as Expo 2020 nears. The rise in global prices of some building materials such as metal products, particularly steel (which was subject to US imposition of tariffs on imports to the US, followed by retaliatory measures), are all factors which threaten further volatility in the market for building materials in the future, (Figure 7.9).

### Implications of Expo 2020 for the Construction Sector

**7.13** As part of preparations for hosting Expo 2020, the Government of Dubai has allocated a total budget of AED 33 billion for the Expo project, of which AED 23 billion (70 per cent) will be invested in infrastructure projects. This expansionary fiscal policy of the Government of Dubai aims at increasing government spending to establish lasting economic impact through the organization of Expo. One of the most important construction projects for Expo 2020 is the construction of a unique complex for the exhibition and the development of Dubai South (the area which will host the event), creating a new economic and cultural centre in Dubai. The Government of Dubai is also building bridges, rail networks and new

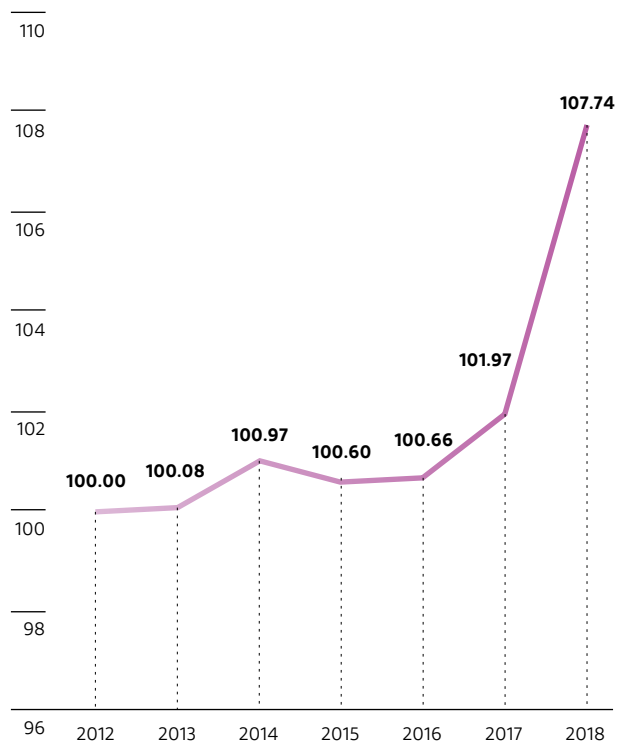
roads in Dubai South, expanding highways, and connecting utilities and water and electricity networks to the area. In addition, it is building a new 15-kilometer-long metro line to the Expo site and a new airport that will be the largest in the world. Dubai expects 25 million visitors to Expo, an average of 300,000 visitors per day. All of this will contribute to boosting the construction sector in the coming years.

### Private Sector's Projects in Construction

**7.14** In addition to mega government projects, real estate developers are expecting large economic opportunities to expand their investment in preparation for the Expo 2020 in Dubai. The exhibition also provides a window for them to showcase their new projects. A number of large-scale current projects will increase the demand for construction. Most prominently, the Dubai Creek project includes the development of a residential and shopping area around the Dubai Creek Tower, which is expected to be a new global icon similar to the Burj Khalifa. The construction of the new Mohammed bin Rashid City, which will include a number of residential communities and commercial spaces, is also underway. It is expected to comprise 1,500 villas by 2020. There is also the construction of Deira Islands, which consist of 4 islands covering an area of 15 kilometres and contain a number of residential, tourist, retail and marina projects.

The Construction of Dubai Creek Tower is expected to be a new global icon similar to the Burj Khalifa.

Figure 7.9: Construction Cost Index



Source: Dubai Statistics Center

# Electricity, Gas and Water Supply

## Recent Development in the Sector's Value Added and Employment

**7.15** The electricity and gas sector, as defined in National Accounts of Dubai, includes the supply of electricity, gas and water supply and waste management activities. The sector has made important progress in recent years achieving a value added in constant prices of AED 10.6 billion in 2018 and growing at 2.7 per cent from the year before.

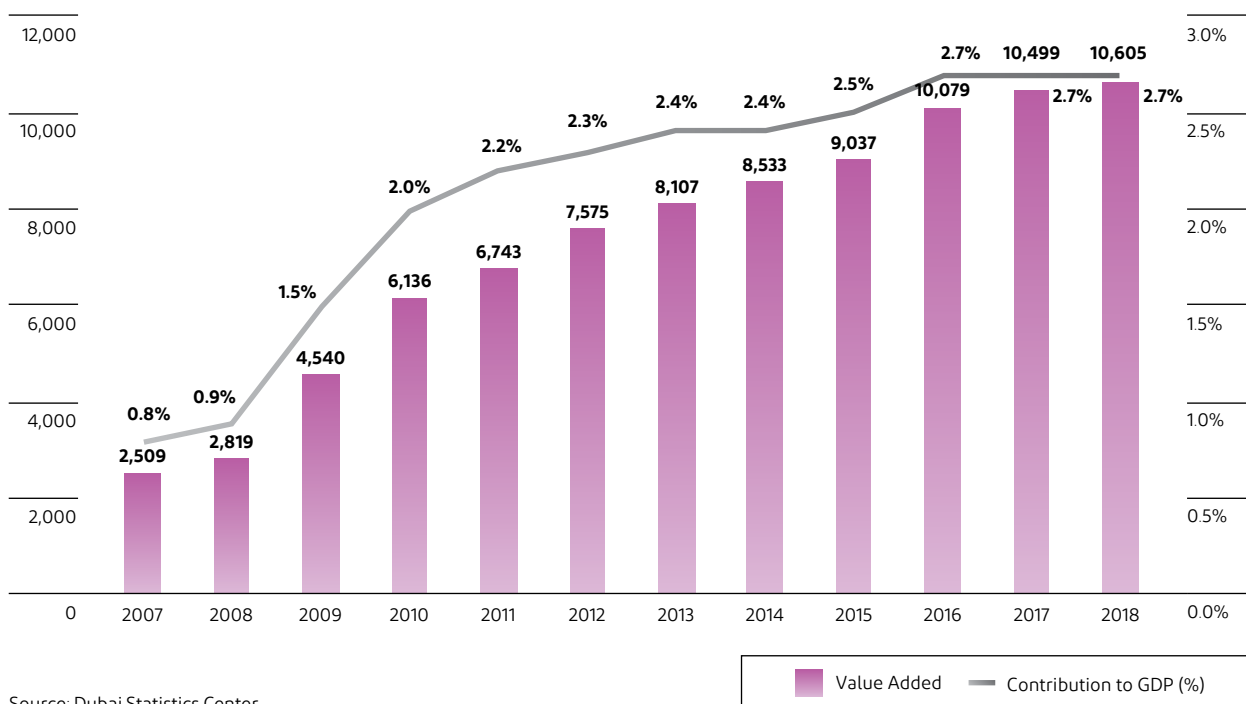
The sector's total output more than doubled over the period 2009-2018 and its contribution to GDP rose from around 1.5 per cent in 2009 to 2.7 per cent in 2018. The employed workforce in electricity and gas is small and accounts for around one half per cent of the total workforce in Dubai. The rise in employment in the electricity sector resulted from the growing demand for electricity and gas due to the rapid growth in population and the increasing demand from the industrial, real estate and tourism sectors, (Figure 7.10).

**7.16** DEWA<sup>2</sup> is the exclusive producer and distributor of electrical power in the Emirate. Since its establishment, DEWA has built an integrated production and distribution system that matches the best international standards. It has been continuously expanding and developing that system to cope with the rapid growth in the Emirate's electricity needs.

The electricity needs of Dubai are covered by 11 power plants in different areas. Power generation capacity in the Emirate has increased from 10 gigawatts (one gigawatts is equal to one billion watts) in 2016 to 11.1 gigawatts in 2018. Electricity is generated in Dubai using gas turbines, which make up about 75 per cent of the installed capacity. In addition to domestic electricity sources, Dubai is connected to the UAE national grid and to the GCC interconnection grid, (Figure 7.11).

**7.17** Dubai has gone through a period of rapid population growth that has led to a corresponding growth in the Emirate's energy needs, especially

**Figure 7.10: Electricity, Gas and Water Supply: Value Added (AED million) and Contribution to Constant Price GDP (%)**



Source: Dubai Statistics Center

2 DEWA: Dubai Electricity and Water Authority

for electricity. The total number of DEWA customers increased from 796,764 residential, commercial, industrial and other consumers in 2017 to 844,920 consumers in 2018, a growth rate of 6.0 per cent. The residential sector accounts for 75 per cent of the total number of customers, (Figure 7.12).

**7.18** The Emirate’s electricity consumption increased from about 43,777 GW-hours in 2017 up to about 44,570 GW-hours in 2018, growing slightly by 1.8 per cent. The demand for electricity is expected to continue increasing in the near future as a result of the economic growth in the Emirate. Energy efficiency in general, and electricity efficiency in particular, is expected to be enhanced in line with the Demand Side Management Strategy 2030 and the Dubai Integrated Energy Strategy 2030, (Figure 7.13).

**7.19** Rapid growth in the needs of urban centres in the Emirate for electricity and air conditioning in Dubai’s hot summers have made it one of the world’s highest energy-consuming regions. Dubai’s average per capita electricity consumption has dropped from about 15,110 kWh in 2014 to 13,960 kWh in 2018, in line with the directives of DSCE and Dubai Integrated Energy Strategy 2030. In fact, DEWA has adopted many energy conservation programs that have led to significant efficiency gains in the consumption of electricity in Dubai. International comparisons show that the average per capita electricity consumption in Canada is at 15,588, the USA at 12,994 kWh, Saudi Arabia at 9,401 kWh and Russia at 6,600 kWh, (Figure 7.14).

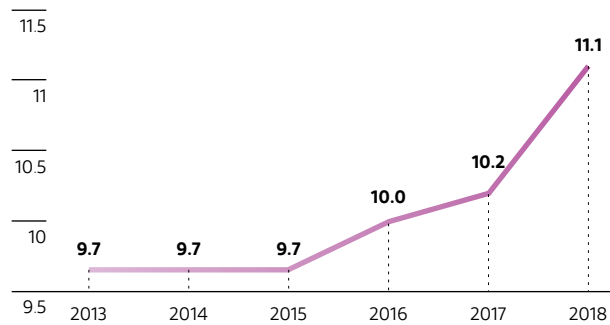
### Water Production and Consumption

**7.20** DEWA also supplies the Emirate’s water needs and achieves this mission with high efficiency by operating 8 desalination plants located in Jebel Ali. In 2018, combined water desalination installed capacity remained at the same level as that of 2016-2017 (470 million gallons per day), while the groundwater production capacity was 32 million gallons per day. DEWA has 11 power and water plants; 3 power plants in Al-Awir area, and 8 power and water plants in Jebel Ali. Annual demand for desalinated water reached a peak of 368 million gallons per day in 2018, compared to 362 million gallons per day in 2017, (Figure 7.15).

**7.21** Because Dubai’s desert climate means significant quantities of water are needed, large amounts of energy are consumed to provide water for homes, facilities, irrigation and industry. In 2018, the total consumption of desalinated water reached 124.56 billion gallons, compared to 120.81 billion gallons in 2016, an increase of 3.1 per cent. This also means that the average per capita water consumption in Dubai is one of the highest

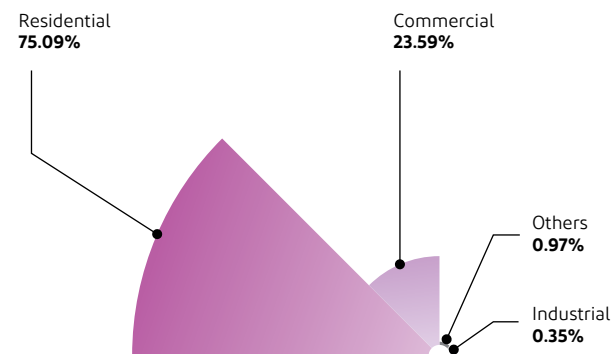
in the world: it reached 39.04 thousand gallons in 2018, down by 4.2 per cent from its peak of 40.68 thousand gallons in 2017. Groundwater covers a small percentage of the Emirate’s needs, while desalination plants provide the rest. As a result, these plants are a major energy consumer in Dubai, (Figure 7.16).

**Figure 7.11: Electricity Capacity Installed in Dubai (GW)**



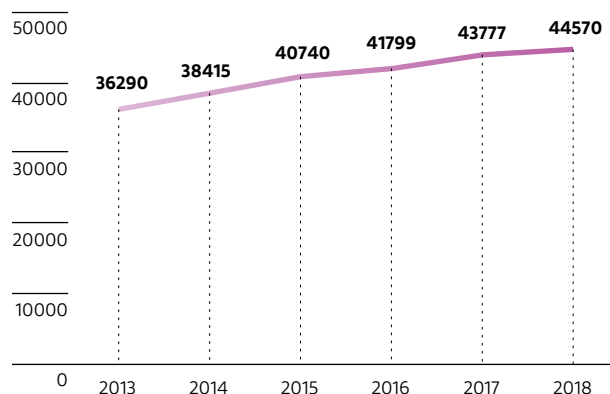
Source: Dubai Electricity & Water Authority

**Figure 7.12: The Pattern of Electricity Consumption in Dubai in 2018**



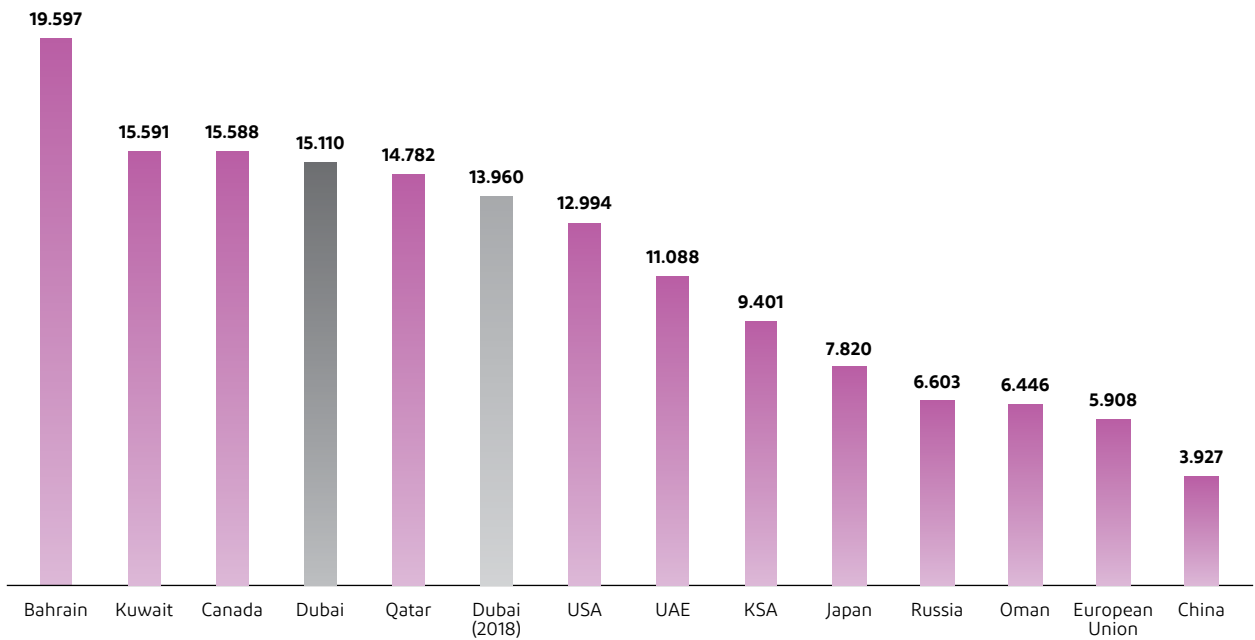
Source: Dubai Electricity & Water Authority

**Figure 7.13: Electricity Consumption in Dubai (GW-hours)**



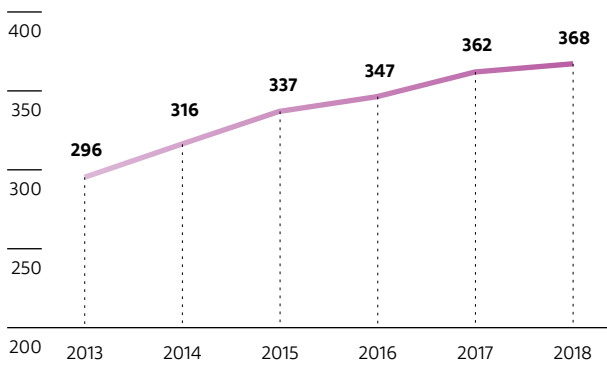
Source: Dubai Electricity & Water Authority

**Figure 7.14: Average Per Capita Electricity Consumption (1000 KW/ hour a year)**



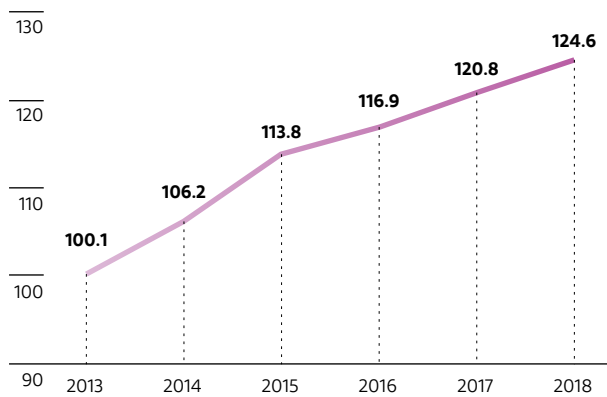
Source: World Bank and Dubai Statistics Center

**Figure 7.15: Peak Demand for Desalinated Water in Dubai (Million Gallons/Day)**

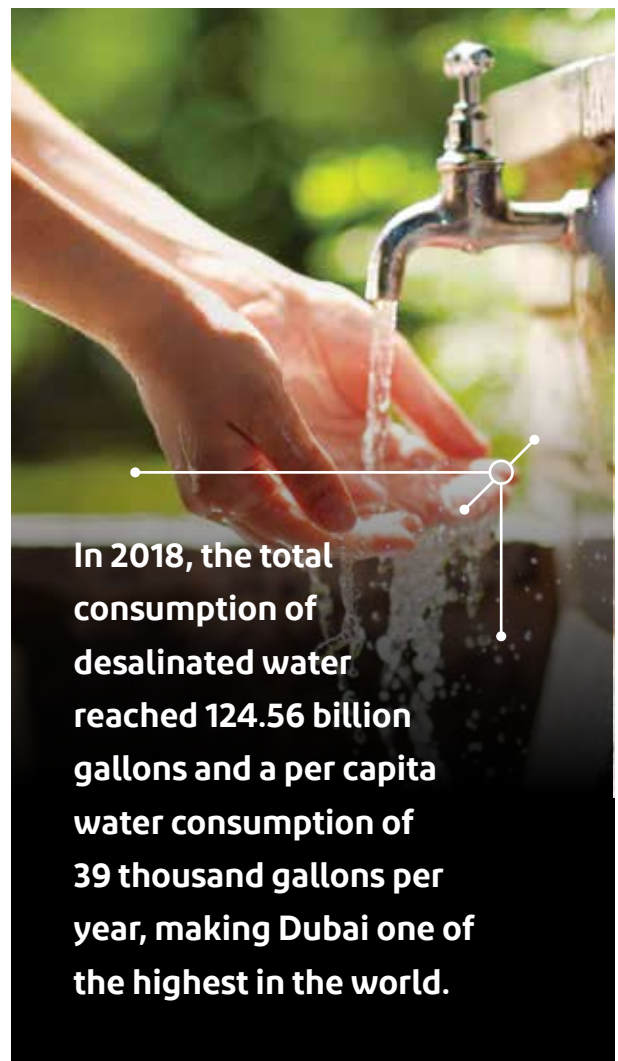


Source: Dubai Electricity and Water Authority

**Figure 7.16: Consumption of Desalinated Water in Dubai (billion gallons/year)**



Source: Dubai Electricity and Water Authority



**In 2018, the total consumption of desalinated water reached 124.56 billion gallons and a per capita water consumption of 39 thousand gallons per year, making Dubai one of the highest in the world.**





**New power plants have been built and existing ones expanded, which enables Dubai to cover 100 % of the electricity and water needs for the population and manufacturing.**

## Mining and Quarrying

**7.22** Extractive industries rely on materials extracted by mining and drilling including oil, natural gas and mineral and non-mineral ores. The extractive sector is not considered to be a major part of Dubai's economy, but it makes a contribution in terms of employment and it also covers the market demand for the primary, intermediate and final products related to the sector. The value added generated in constant prices of mining and quarrying activities amounted to AED 6.4 billion in 2018 declining from AED 6.7 billion in 2017. The mining sector saw a reverse in its fortunes falling by 5.2 per cent in 2018 compared to a growth of 3.4 per cent the year before.

The sector's contribution to GDP has declined, dropping from 2.0 per cent in 2014 to 1.7 per cent in 2016, and to 1.6 per cent in 2018. This downturn has been partly attributable to the sharp decline in the international prices of primary commodities due to falling demand, which in turn had adverse effects on the local production and exports of primary commodities and energy. Another contributing factor was the depletion of the resources of traditional energy that Dubai was endowed with, (Figure 7.17).

**Figure 7.17: Value Added of Mining and Quarrying (AED million) and Contribution to Constant Price GDP (%)**

