

# Country Report



Country Report by The Singapore Contractors Association Ltd

For 45<sup>th</sup> ACF Council Meeting

9 March 2018

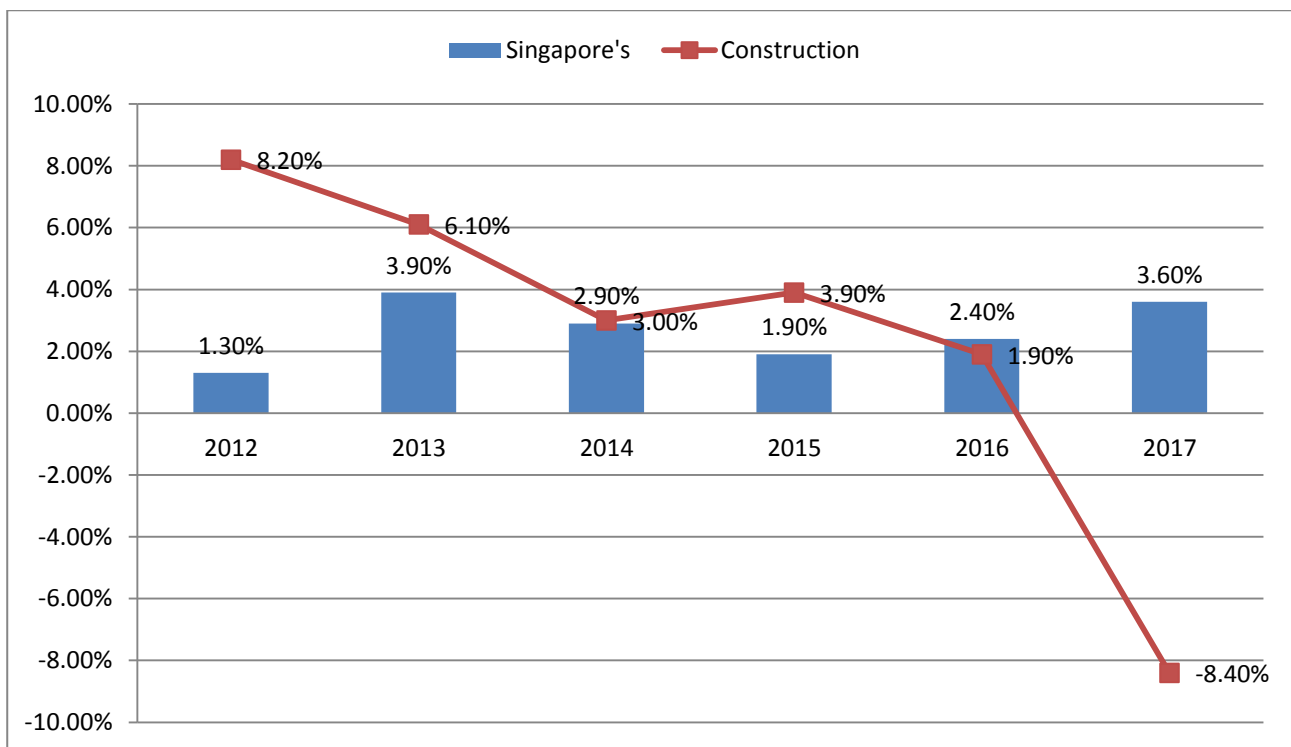
Manila, Philippines

# 1 Overview of the Macroeconomic of Singapore for the Year 2017

## 1.1 The Singapore Economy Performance in 2017

The Singapore economy expanded by 3.6%, better than the 2.4% growth in the previous year. On a quarter-on-quarter seasonally-adjusted annualised basis, the economy expanded by 3.6% in the fourth quarter of 2017, similar to the 3.7% growth in the preceding year.

However, the construction sector contracted by 8.4% on a year-on-year basis in 2017, reversed from the 1.9% growth in 2016. The moderated performance was due to the weakness in the private sector construction activities, despite growing again in the second half of 2017.



Source: Ministry of Trade and Industry

## 1.2 Economic Outlook for 2018

In view of a growth in the global economic outlook, the Ministry of Trade and Industry has moderated the GDP growth forecast for 2018 from 1.5 to 3.5%, from 1.0 to 3.0% in 2017.

Global growth is expected to pick up marginally in 2018 on the back of stronger growth in the US and some emerging markets and developing economies. However, growth in several of Singapore's key external demand markets such as China and the Eurozone is projected to ease in the coming year. In the US, growth is expected to pick up slightly in 2018, with continued support coming from private consumption and investment expenditure. On the other hand, the Eurozone's growth is projected to ease in 2018 following the rebound in 2017.

Growth will continue to be supported by gradual improvements in labour market conditions and largely accommodative monetary policies. In Asia, China's growth is also expected to moderate in 2018 on the back of a slowdown in investment, even as consumption is likely to remain stable and provide support to growth. Meanwhile, growth in the key ASEAN economies is expected to stay resilient, supported by domestic demand and merchandise exports. At the same time, there continues to be downside risks in the global economy.

First, global policy uncertainty remains elevated, reflecting in part uncertainty over the US administration's policies and lingering concerns over the rise in protectionist sentiments. At the same time, geopolitical tensions in North Korea remain, and could affect the economies of regional countries if tensions escalate.

Second, at this relatively advanced stage of the US' economic recovery, an upside surprise in inflation cannot be ruled out. Should this happen, monetary policy in the US could normalise faster than expected, thereby causing global financial conditions to tighten more than anticipated. Against this external backdrop, the pace of growth of the Singapore economy is expected to moderate in 2018 as compared to 2017 but remain firm. With the implementation of steel and aluminium tariffs by the US, this could potentially trigger a new round of trade war in the next few years.

The manufacturing sector is likely to continue to expand and provide support to overall GDP growth. In particular, the electronics and precision engineering clusters are expected to see sustained expansions on the back of healthy demand conditions in the global semiconductor and semiconductor equipment markets, although the pace of expansion is likely to taper in 2018 given less favourable base effects.

Externally-oriented services sectors such as wholesale trade, transportation & storage and finance & insurance are expected to benefit from the global economic recovery, although their growth

momentum may ease in tandem with the moderation in growth in key advanced and regional economies.

Sectors such information & communications and education, health & social services sectors are likely to remain resilient, supported by domestic drivers of growth like the Smart Nation initiatives and expansions in healthcare facilities respectively. Unlike most of the other sectors, the performance of the construction sector is expected to remain lacklustre, weighed down by the continued weakness in construction demand.

Considering the global and domestic economic environment, the Singapore economy is expected to grow by “1.5 to 3.5%” in 2018. Barring unexpected outcomes in the global economy and key sectors in the domestic economy, MTI’s central view is that GDP growth in 2018 is likely to come in around the middle of the forecast range.

*Source: Ministry of Trade and Industry*

## **2 Singapore Construction Industry Performance**

### **2.1 Construction Sector Overview for 2017**

The construction sector’s annualised GDP moderated by 8.4% in 2017, further declining from 1.9 % in the preceding year.

Total construction demand fell by 6.1% to US\$18.9 billion as a result of continued weakness in private sector construction demand. On the other hand, public sector construction demand provided some support for growth.

Public-sector construction demand rose by 2.9% to reach US\$12.1 billion. Growth was mainly supported by a 99% increase in the demand for industrial building works and a 10% rise in the demand for civil engineering works. Some of the major projects awarded included Housing Development Board’s Defu Industrial City, JTC Corporation’s Logistics Hub @ Gul and the North-South Corridor.

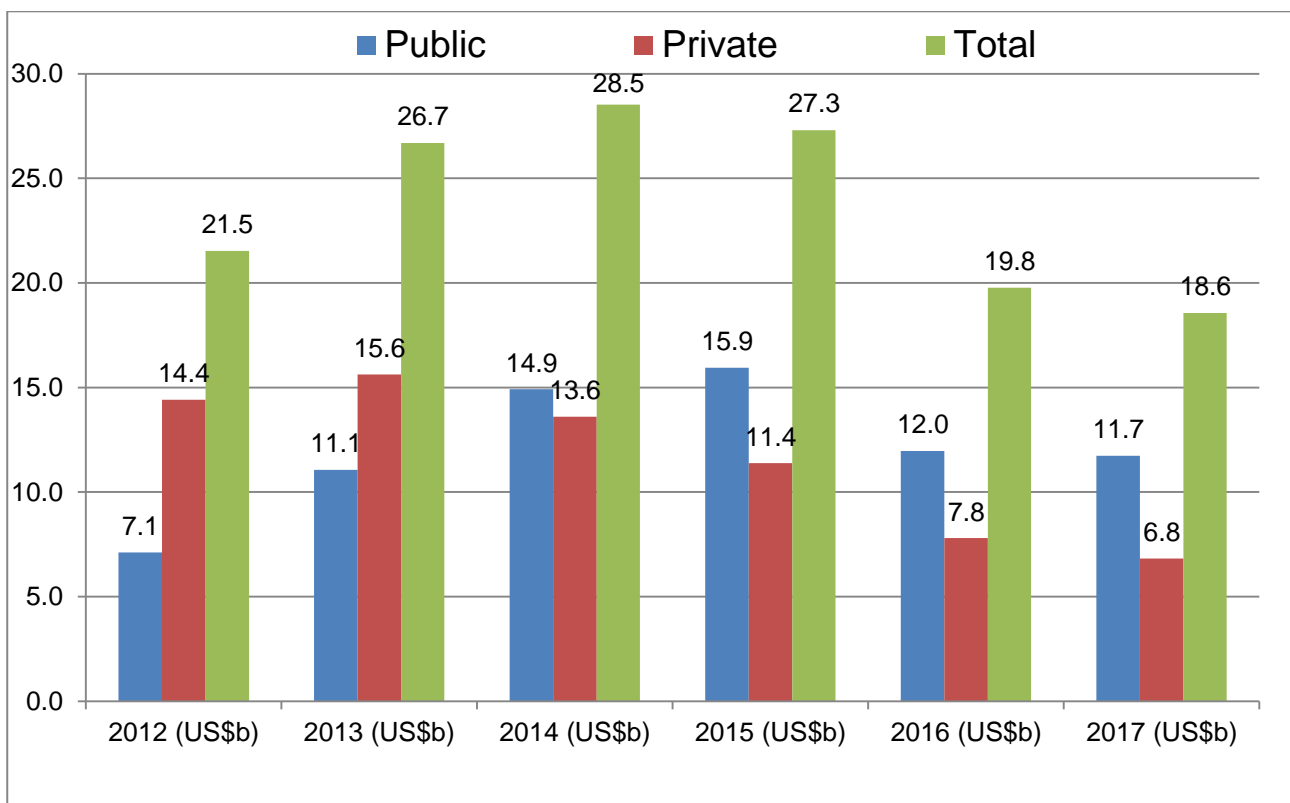
Singapore’s private sector construction demand shrank by 19% from US\$8.3 billion in 2016 to US\$6.8 billion in 2017. Private construction demand for all development types, except for institutional and other building projects, fell. Despite overall sluggish private sector construction demand, a number of notable projects were awarded in 2017, including the construction of the fourth Desalination Plant at Marina East and Project Glory at Market Street (redevelopment of the Golden Shoe Carpark to a mixed use commercial development) as well as the refurbishment of Raffles Hotel.

Total construction output contracted by 21% to US\$21.2 billion, likewise dragged down by private and public-sector construction works.

Public sector construction output declined by 11% to US\$11.4 billion, pulled down by a drop in residential building works (-30%) and civil engineering works (-13%). On the other hand, construction activities for institutional & other building developments, industrial developments, and commercial developments rose. Major on-going projects in these areas include the expansion of the Liquefied Natural Gas (LNG) Terminal (Phase 3), JTC Space @ Tuas, Sengkang General and Community Hospital and Woodlands Integrated Health Campus.

Private construction output fell by 29% to US\$9.85 billion, due to a broad-based decline in all types of construction activities.

## 2.2 Construction Demand up to 2017



\*BCA Infonet, US\$1= S\$1.32 as of 27.2.2018

### 2.3 Impact on Construction Output and GDP

In the third quarter of 2017, the total nominal construction output fell to US\$5.2 billion, a decrease of 20% year-on-year. The public sector remained similar at US\$2.8 billion, supported by notable projects which include Phase 3 of the Liquefied Natural Gas (LNG) Terminal at Jurong Island, Sengkang Community Hospital and various stations and tunnels for the Thomson-East-Coast Line (TEL).

Total private sector construction output decreased significantly to US\$2.4 billion for the third quarter of 2017, a decrease of 28.3% year-on-year. Nonetheless, the construction output continues with residential and industrial building developments of up to 63% of the overall private sector construction activities. These includes the condominiums such as Sol Acres at Choa Chu Kang Grove and Symphony Suites at Yishun Avenue 6/9.

Alongside the moderating growth of the economy, construction GDP decreased by 3.7% quarter-on-quarter.

## 2.4 Construction Demand Outlook for 2019

Anticipating a strong pipeline of construction projects, the Building and Construction Authority (BCA) forecasts construction demand to improve in 2019. to be between US\$19.7 to US\$25.0 billion.

Public sector construction demand is expected to gradually strengthen from US\$11.7 billion in 2017 to between US\$12.1 to US\$15.1 billion in 2019. In tandem with the current slow progression in property market and continued economic uncertainties, private sector construction demand is projected to remain subdued. With the deferment of some projects, construction demand in the private sector will increase from US\$6.8 billion in 2017 to between US\$7.6 to \$9.8 billion in 2018.

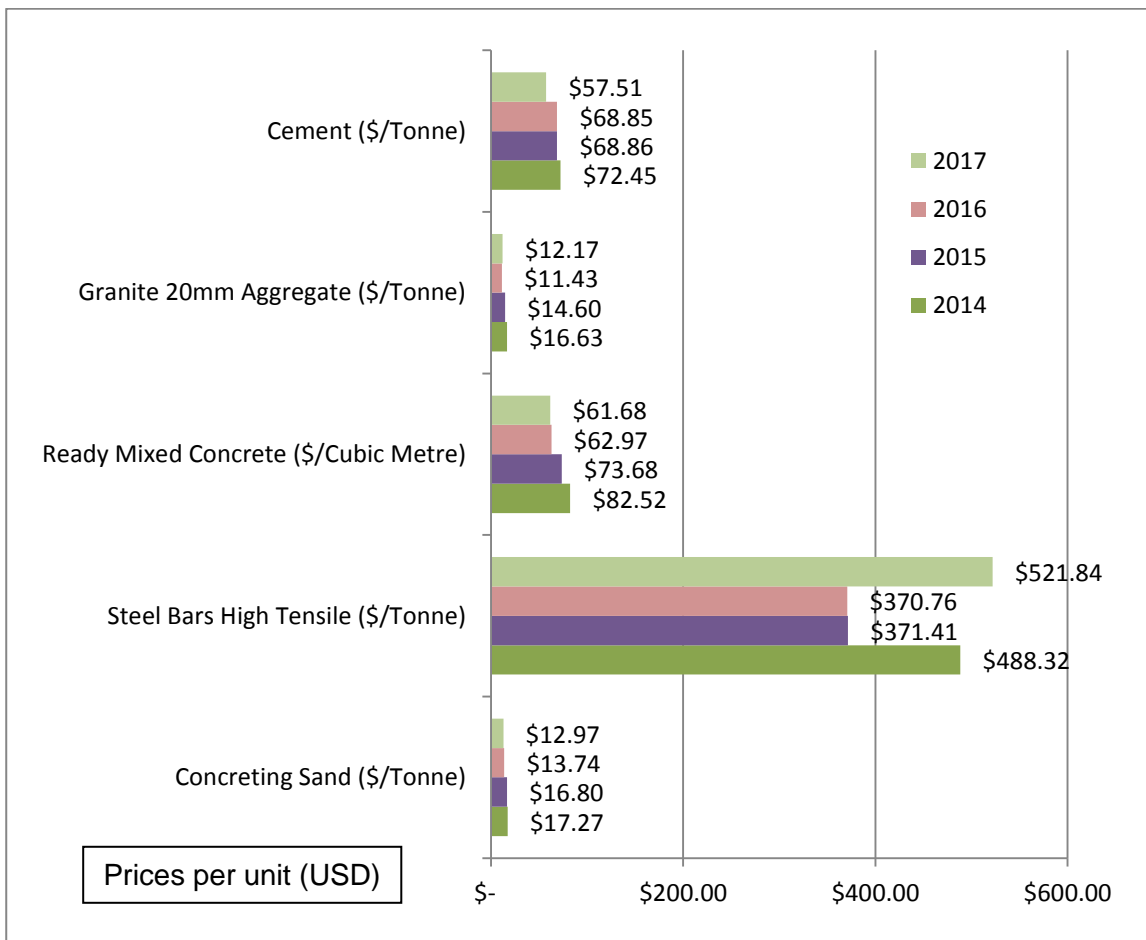
## 2.5 Summary

- 1) Total construction demand moderated due to the decline in the private sector projects but still within the estimated range, while the public sector construction works sustained with upcoming demands.
- 2) Public sector construction is sustained with the upcoming support by notable public infrastructure developments and industrial projects.
- 3) With the strengthening economy, the construction demand forecast for 2017 was moderated from the original forecast announced and it sustained within the estimates. In 2018, it is projected that the total construction demand will expand.

*\*Source – BCA*

### 3 Building and Construction Cost Indices

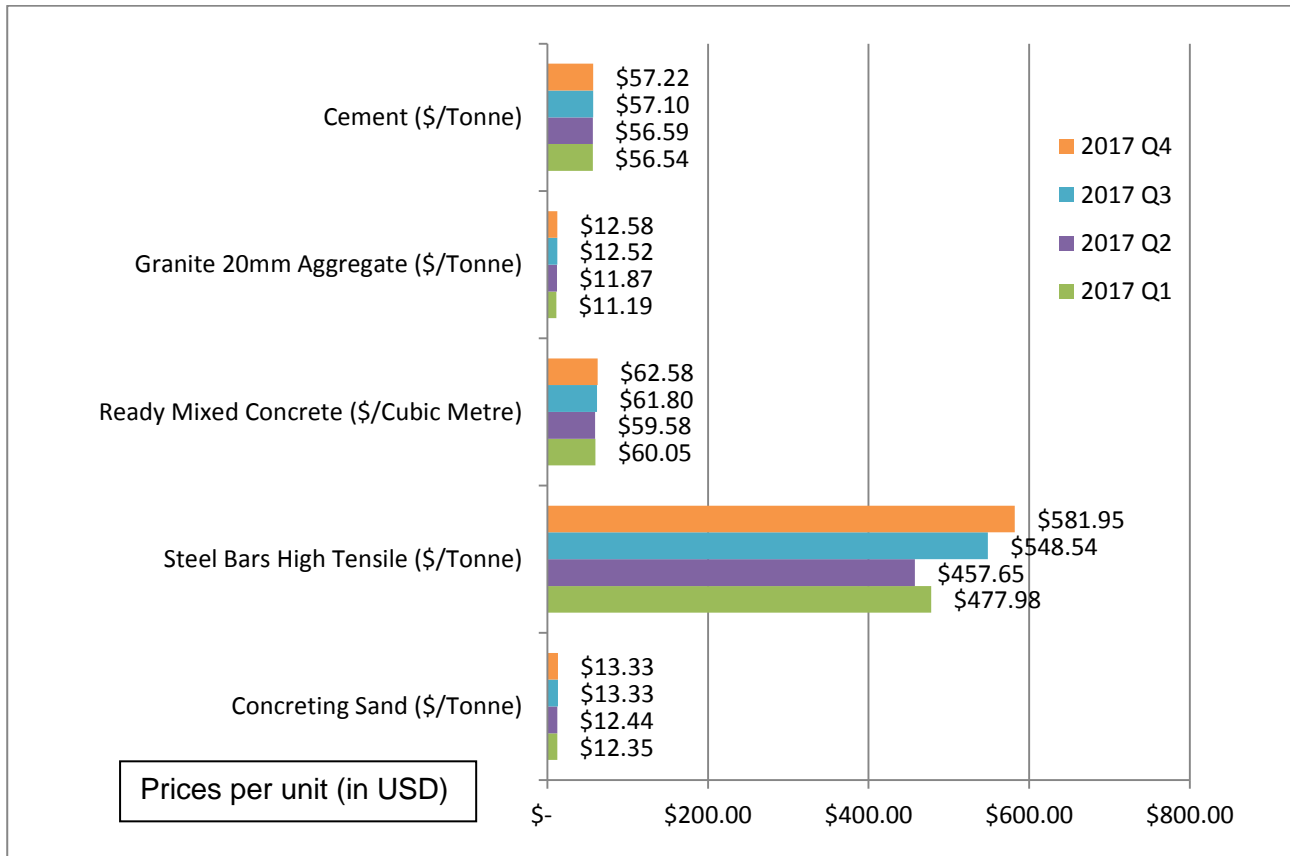
#### 3.1 Prices of Construction Materials Yearly from 2014 to 2017



\*BCA Infonet, US\$1= S\$1.32 as of 27.2.2018

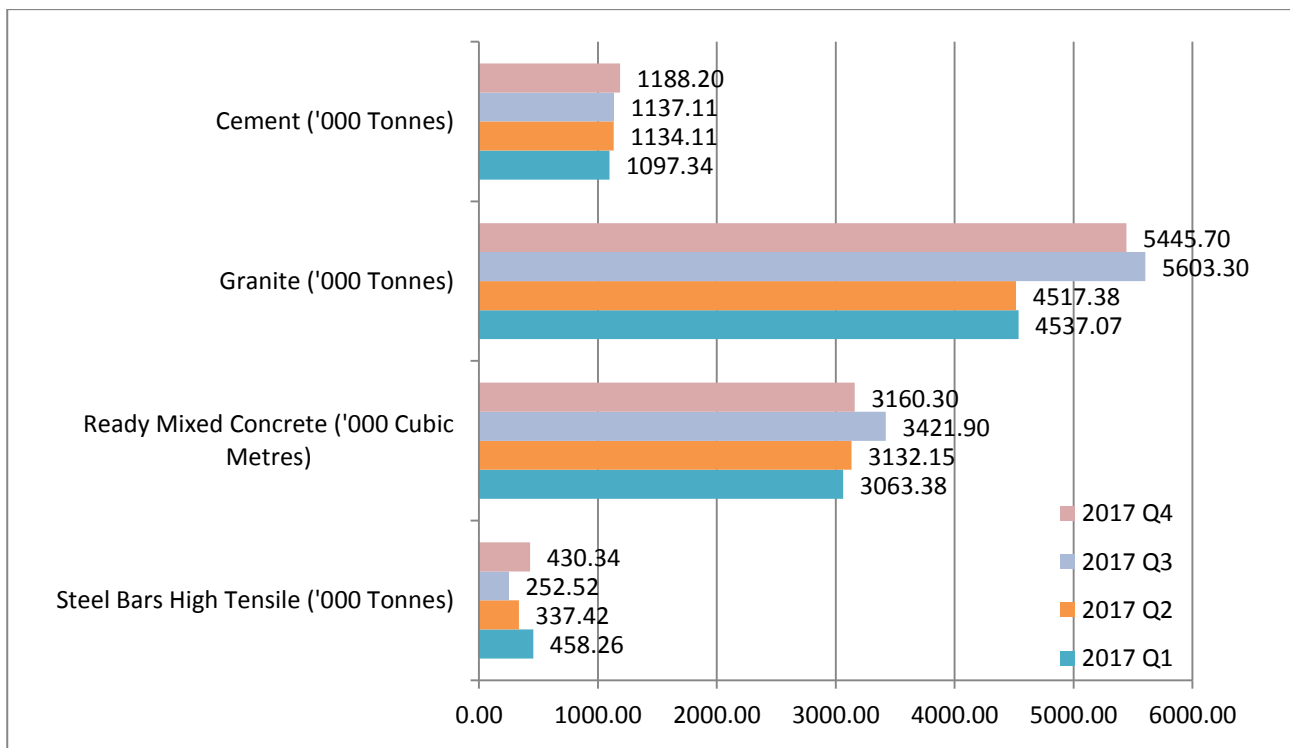


### 3.2 Prices of Construction Materials Quarterly from 2017 Q1 to 2017 Q4



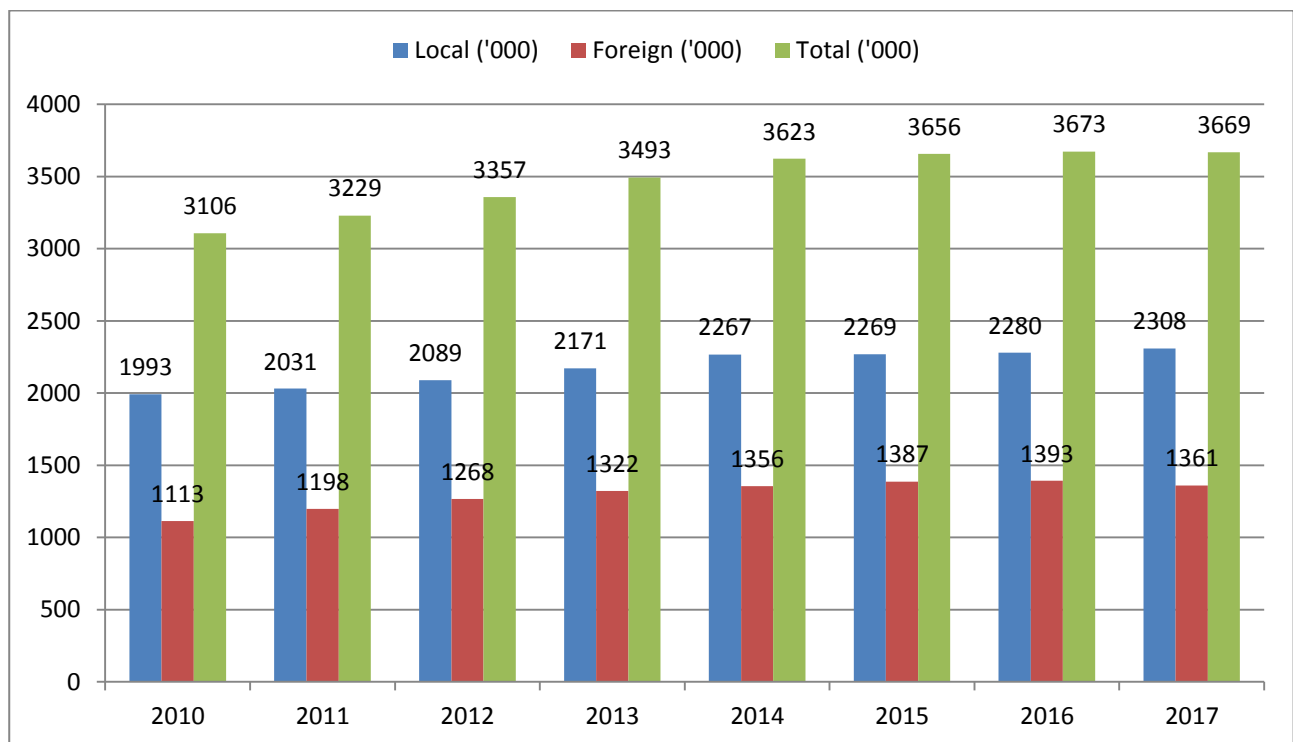
\*BCA Infonet, US\$1= S\$1.32 as of 27.2.2018

### 3.3 Demand of Construction Materials Quarterly from 2017 Q1 to 2017 Q4



\*BCA Infonet

## 4 Labour & Human Resource

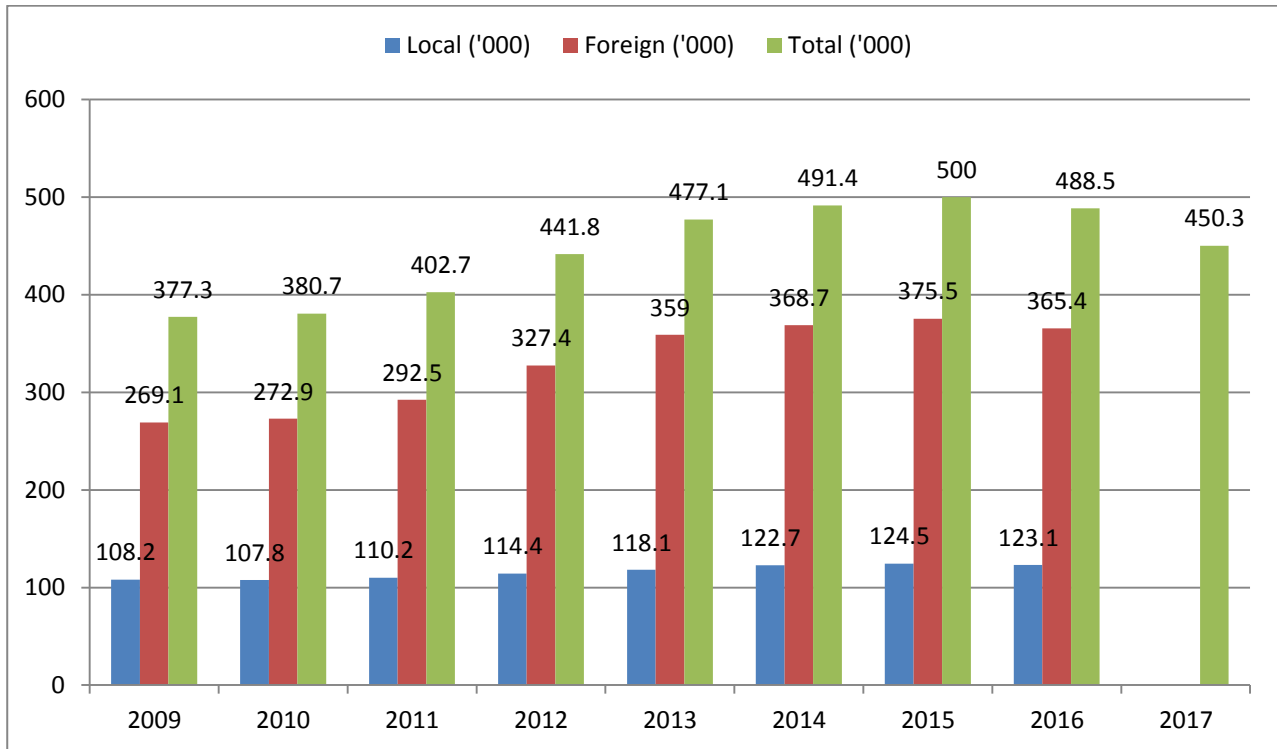


\*Source – Ministry of Manpower

### 4.1 Manpower Capacity

Overall employed manpower contracted by 3,600 for 2017, based on estimation, due to the decrease in Work Permit Holders in mainly the construction and marine sector.

## 4.2 Construction Industry's Employment



\*Source – Ministry of Manpower

## 5 Workplace Safety and Health

### 5.1 Workplace Fatal Injuries in 2017

Workplace fatal injuries in the construction sector have previously shown a downward trend since 2006 with 2011 having the lowest rate and number. The workplace fatal injury rate in the Construction sector dropped to an estimated rate of 1.2 per 100,000 employed persons in 2017. The construction sector took extra precautions on safety with only 12 accounts of workplace fatal injuries or 29% of the total number of incidents in 2017. It has seen a huge decrease of 50% from 2016.

### 5.2 Number of workplace fatal injuries by industry in 2016 and 2017

	2017	2016
<b>All Sectors</b>	<b>42</b>	<b>66</b>
Construction	12	24
Marine	2	6
Manufacturing	7	9

### 5.3 Workplace Major Injuries in 2017

The construction sector 110 cases in 2017, down from 153 cases in 2016. This brought down the rate to 24.2 per 100,000 employed persons from 30.9 per 100,000 employed persons in of 2016.

### 5.4 Number of Workplace Major Injuries by Industry in 2016 and 2017

	<b>2017</b>	<b>2016</b>
<b>All Sectors</b>	<b>574</b>	<b>594</b>
Construction	110	153
Marine	22	33
Manufacturing	124	125

*\*Source – Workplace Safety & Health Institute*

## **6 Contracts and Practices**

### 6.1 Standard Conditions of Construction Contracts (According to Law)

There are 3 main Condition of Contracts used in Singapore namely:

- 1) PSSCOC (Public Sector Standard Condition of Contracts)
- 2) Singapore Institute of Architects Articles and Conditions of Contracts
- 3) REDAS Conditions of Contracts

*\*Source – BCA*

These contracts could be used for different methods of procurement and the usual procurement methods as follows:

- 1) Conventional method where the developer employs the Consultant team and the builder build according to the design provided.
- 2) The Design and Build method
- 3) Public Private Partnership method

### 6.2 Construction Quality Assessment System (CONQUAS)

The Construction Quality Assessment System (CONQUAS), introduced in Singapore since 1989, serves as a standard assessment system on the quality of building projects. A de-facto national yardstick for the industry, CONQUAS has been periodically fine-tuned to keep pace with changes in technology and quality demands of a more sophisticated population. In 1998, BCA introduced a number of new features to CONQUAS resulting in the launch of CONQUAS. Such refinements make CONQUAS scoring more comprehensive and customer oriented.

By using CONQUAS as a standardized method of quality assessment, developers are able to use the CONQUAS Score to set targets for contractors to achieve and also assess the quality of the finished building.

The assessment consists of 3 main components:

1. Structural Works
2. Architectural Works
3. M&E Works

Each component is further divided into different items for assessment. The sum of the 3 components will give the CONQUAS score for the project.

The building is assessed based primarily on workmanship standards through site inspection. The assessment is done throughout the construction process for Structural and M&E Works and on the completed building for Architectural Works.

The assessment also includes tests on the materials and the functional performance of selected services and installation. These tests help to safeguard the interest of building occupants in relation to safety, comfort and aesthetic defects, which surface only after some time.

### 6.3 New Constructability Score Requirement

While the Buildable Design Score focuses on the use of buildable designs by designers during the upstream design process, the introduction of a new Constructability Score for builders would impact on the construction methods used during the downstream construction phase. To encourage builders to move away from traditionally labour-intensive construction methods and switch to more labour-efficient construction processes, builders would be required to comply with a new minimum Constructability Score.

The Constructability Score would assess the builders' choice on their usage of labour efficient systems and processes under the structural, architectural, mechanical, electrical and plumbing scope of construction works. For example, under the structural component, the use of traditional timber formwork and external scaffolding would be given much lower points to disincentivise their use.

Comparatively, a builder who adopts the use of system formwork and climbing scaffolding, which would reduce the manpower usage on site, would be awarded with more points. Besides labour efficient construction methods, the adoption of good site practices, such as good project and site management is also critical to improving site productivity. Thus, the Constructability Score

framework also awards points for Good Industry Practices such as the use of Building Information Modelling (BIM) and trade productivity monitoring on site to achieve higher productivity.

The Constructability Score requirement applies to all new building works and projects involving repairs, alterations or additions to existing buildings (A&A works) with GFA of 5,000m<sup>2</sup> or more which are submitted for planning permission on and after 15 July 2011. Builders are required to submit the Constructability Score for their projects:

(a) When they apply for the permit to commence work or

(b) Within 3 months (6 months for Design and Build projects) after the permit has been issued in the event that they require more time to plan for the type of construction methods / technologies to be adopted in the project.

#### 6.4 Man-Year Entitlements and Foreign Workers Levy Increase

From July 2011, foreign workers levies will be increased while the Man-Year Entitlements (MYE) will be progressively cut by a cumulative of 45% by July 2013. This is to encourage builders to seek alternative technologies and design to improve construction productivity rather than relying on foreign labour.

Year	Higher Skilled (R1) US \$	Basic Skilled (R2) US \$	MYE (R1) Exempted US \$	MYE (R2) Exempted US \$
July 2011	136	174	288	288
January 2012	142	227	341	341
July 2012	189	265	379	379
January 2013	212	303	417	492
July 2013	227	341	455	568
July 2014	227	417	530	720
July 2015	227	417	455	720
July 2016	227	492	455	720
July 2017	227	530	455	720

*\*BCA Infonet, US\$1= S\$1.32 as of 27.2.2018*

The basic tier levy for R2 workers has raised from US\$492 to US\$530 on 1 July 2017. The MYE-waiver levy rate for R1 workers is lowered from US\$530 to US\$455, since 1 July 2015. The implementation adopted aims to propel the upgrading of existing R2 workers and hiring of higher skilled R1 workers to increase productivity.

## 6.5 Upgrade of Basic Skilled worker to Higher Skilled worker

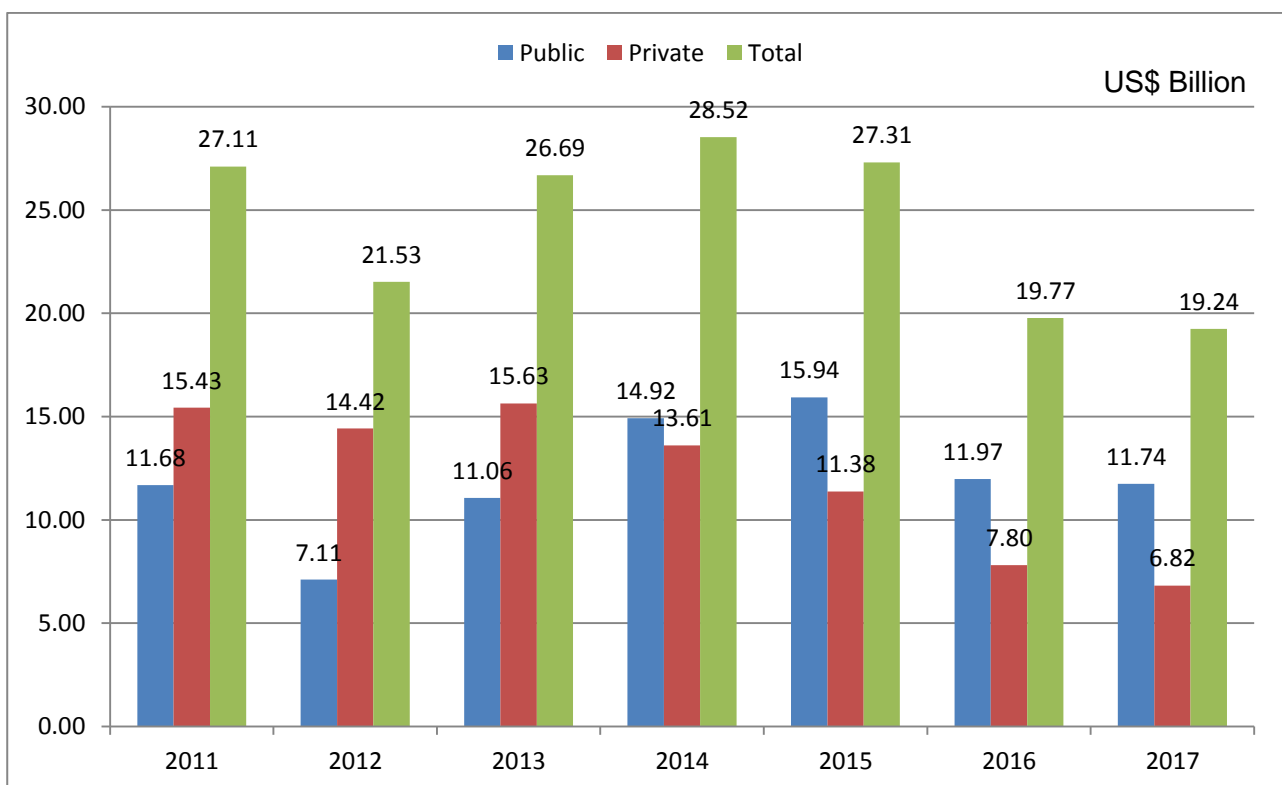
The introduction of a new Market-based Skills Recognition Framework is to complement the existing upgrading pathway whereby employers can upgrade Basic Skilled workers to Higher Skilled workers when they have worked in Singapore for at least 6 years and earn at least US\$1,212.

## 6.6 Extension of Experienced Workers

The maximum Period of Employment for Higher Skilled workers will be extended from 18 years to 22 years to help retain skilled workers.

# 7 Local and Global Demand

## 7.1 Local Demand Public and Private Sector for Year 2011 to 2017



\*BCA Infonet, US\$1= S\$1.32 as of 27.2.2018

## 7.2 Mega Projects

JTC Automotive Hub @ Jalan Terusan:



Automotive Hub, envisioned to be 8-storey high, that offers up to 21 heavy vehicle workshop units and 185 passenger car vehicle workshop units.

*Project worth: US\$90.91 million*



## Woodlands Integrated Health Campus:

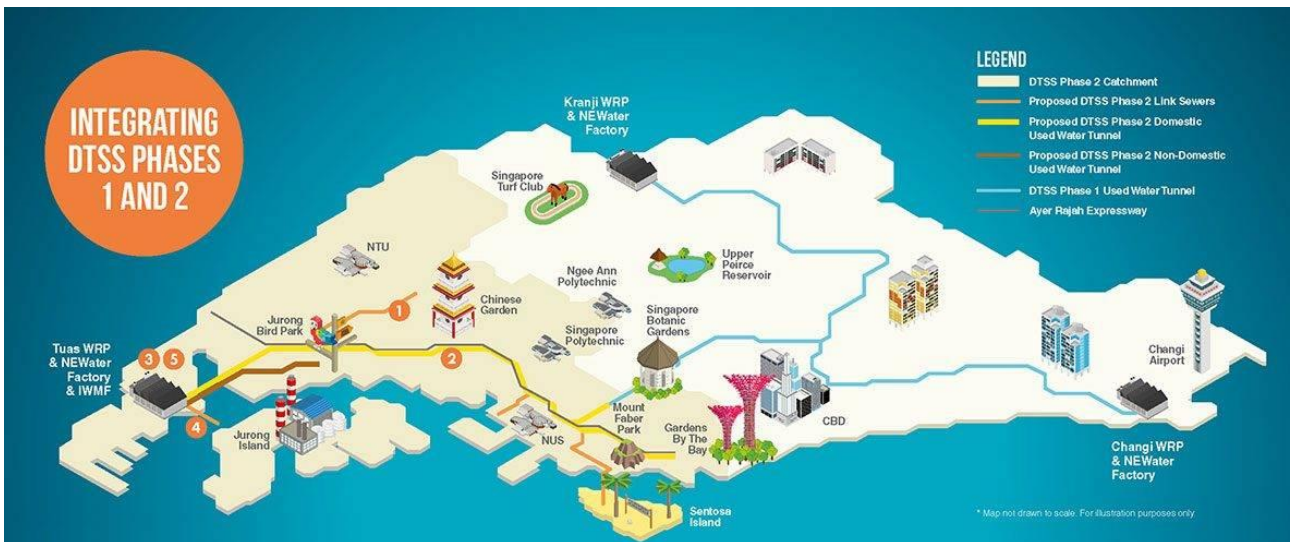


The first hospital facility in Woodlands, 1,800-bed and heavily dependent on artificial intelligence to improve patient care.

This project, located within walking distance to Woodlands South MRT, that opens in 2019, is the first where both the acute and community hospitals, a nursing home and specialist clinics, are all built together at the same building. The medical professionals will be shared within the hospitals and new technology is being used to reduce manual work. With the new care models in place, the WHC with 7.66 hectares of land space, includes a Healing Forest Garden for exercise, quiet areas and community gardening plots. Together with Khoo Teck Puat Hospital and Yishun Community Hospital, they will be supporting the growing population in the north.

*Project worth: US\$606 million*

## Deep Tunnel Sewerage System (DTSS) Phase 2:



The first batch of deep tunnels and link sewers, amounting to 30km, together with the other phases, is expected to complete by 2025. It will be connected to the Tuas Water Reclamation Plant to transport water into the 3 centralised water reclamation plants, with the aim of increasing water recycling rate.

*Project worth: US\$1144 million*

## 8 Conclusion - Forecast for 2019 and Beyond

Singapore's construction demand is projected to reach around US\$19.7 billion to US\$25 billion per annum in 2019 and 2020 and US\$21.2 billion to US\$26.5 billion per annum in 2021 and 2022.

The public sector will continue to be in demand and is expected to register between US\$12.1 billion and US\$15.2 billion annually from 2019 to 2022, with about half of total demand coming from building projects while the other half from civil engineering projects. Construction demand is anticipated to continue strong in the following years supported by new public housing construction and industrial mega infrastructure projects coming on stream beyond 2018.

Private-sector construction demand, on the other hand, will gradually improve to a range between US\$7.6 billion and US\$9.8 billion in 2019, boosted by the redevelopment of old flats sites and the improved performance in the other economic sectors.

The outlook for 2019 and onwards takes into consideration information and research from the Ministry of Trade and Industry and the Building and Construction Authority in Singapore.

*\*Source – BCA Infonet*