AsiaConstruct23

Country Report – Hong Kong

Prepared by

AsiaConstruct Hong Kong Team

Research Centre for Construction and Real Estate Economics

The Hong Kong Polytechnic University

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About the Research Centre for Construction and Real Estate Economics (RCCREE):

The RCCREE is the Hong Kong Polytechnic University's Research Centre for solution oriented research and consultancy in construction and real estate economics. It undertakes internationally relevant multi-disciplinary research that supports the advancement of the construction and real estate industries in the following areas: Economic Policy and Institutional Analysis, Real Estate Economics, Construction Economics, Housing, Human Behaviour in Economic Decision Making, and Value Management and Facilities Performance. For further information, please contact Professor Eddie C.M. Hui, Deputy Director (bscmhui@polyu.edu.hk).

I. Executive Summary

The economic growth of Hong Kong expanded by 4.7% in real terms in the first quarter of 2018, in contrast to the increase of 3.4% in the fourth quarter of 2017. The seasonally adjusted GDP increased by 2.2% in real terms when compared with the preceding quarter. In addition, for 2017 as a whole, the value of total export of goods escalated by 8.0% over 2016. Service exports increased by 4.0% in real terms over the previous year in the fourth quarter of 2017. Expenditure on building and construction registered a marginal growth of 0.1% in real terms in the fourth quarter of 2017, compared with the increase of 3.4% in the third quarter.

The overall labour market remains stable. The domestic demand, being a key force to drive economic growth, is attributed to the sustained solid labour demand. The unemployment rate dropped from 3.4% in 2016 to 3.1% in 2017. Total employment reached 3,028,243 in December 2017, representing an increase of 1.1%, when compared with the previous year. Furthermore, the implementation and construction of major infrastructure projects, such as the Tung Chung New Town Development and the Shatin-Central Link, supported a favorable employment condition. Wages and earnings registered a moderate growth. Concomitantly, Hong Kong's construction industry has to face challenges including labour shortage, the soaring labour and production costs, and the drag on international markets.

II. Macro-Economic Review and Outlook

1. Overview

In the first quarter of 2018, the Hong Kong economy registered a modest growth of 4.7% in real terms, after the growth of 3.4% in an earlier quarter. The seasonally adjusted GDP rose by 2.2% from the preceding quarter. In addition, the total export value of goods has gradually increased after the decline in 2016, and reached an overall increment of 8.0% in 2017. Service exports increased by 4.0% in real terms by the end of 2017. The previous weakness in export performance was caused by the slow down in global economy and trade, in light of the then economic trend. Hence, private consumption and investment becomes a crucial approach in sustaining Hong Kong's growth. Table 1 shows that there is an increasing number of infrastructure projects, the Kai Tak Development being one of the main focal points. It is anticipated that the demand for construction services, especially services from the public sector, will remain at a high level. Besides, further integration with the mainland by implementing a series of cross-boundary infrastructure projects, such as the Guangdong-Hong Kong-Macao Bay Area Development and the Joint Development of The Lok Ma Chau Loop by Hong Kong and Shenzhen, may sustain a favorable employment condition.

The net output of the services sector was enhanced moderately by 3.5% in real terms in 2017, up from the 2.3% growth in 2016 (Table 3). Amongst the major services sectors, for 2017 as a whole, the net output in the import and export, wholesale and retail trades sector inclined by 3.6% in real terms over the preceding year. The accelerated growth in this sector in 2017 was mainly attributable to the vibrant regional trading activities and the revival in retail trade. For the net output in the financing and insurance sector, it grew by 5.6% in real terms, which is higher than the growth of 4.2% in 2016. The solid growth in this sector in 2017 was underpinned by the active stock trading activities. The net output in the information and communications sector registered an increase of 3.9% in real terms, followed by the real estate, professional and business services sector which recorded an increment of 2.5% in real terms. Other services sectors, including transportation and storage, accommodation and public administration services, further expanded. In general, for 2017 as a whole, the net output registered a sustained moderate growth.

As for the secondary sector, after the decline from the previous two consecutive years, the net output of the manufacturing sector saw a minimal growth by 0.4% in real term in 2017. Meanwhile, the construction sector registered a mild increase of 2.3% in real terms for 2017 as a whole, despite the decline of 2.6% in the fourth quarter from a year earlier, as against the increase of 2.0% in the third quarter. Expenditure on building and construction increased by 9.6% in real terms substantially in the first quarter of 2017 over the preceding year, compared with the increment of 7.5% by the end of 2016. Both the private building works and public infrastructure works expanded solidly, in spite of the incline in the prices of steel reinforcement products, timber formworks and galvanised mild steel products (Table 10). In the first quarter of 2017, expenditure on private and public building works escalated by 5.3% and 18.0% in real terms respectively.

The Hong Kong construction industry embraces the following distinctive features: a small number of large local contractors, with a substantial proportion of companies being both developers and contractors, a large number of overseas contractors and a high level of subcontracting. A majority of the construction companies, that are responsible for contracts with values less than HK$300 million each, are small or medium in size (Table 4). The high construction costs and persistent labour shortage problem remain deeply rooted, and, if unaddressed properly, would hinder the development of Hong Kong's construction industry.

The overall labour market conditions remain stable (Table 7 and 8), whilst the domestic demand, that plays an important role to support the local economic growth, is attributed to maintain the solid labour demand. Unemployment rate dropped from 3.4% in 2016 to 3.1% in 2017. The total employment reached 3,028,243 persons in December 2017, representing an increase of 1.1% compared with the previous year.

In the construction industry, a total of 200,554 workers were employed in the principal jobs in June 2017, edging up by 16.7% from March 2015. The number of general workers and skilful workers accounted for 20.5% and 79.5% respectively (Table 5). Nonetheless, the number of persons directly engaged in the building and civil engineering establishments were 179,556 by the end of 2016, which recorded an overall decline of 10.2% from the previous year (Table 6). The value added per employee was HK$0.33 million in 2016 (Table 7). The gross floor area of buildings completed in 2016 (including private residential premises, office buildings, hotels and boarding houses, multi-purpose commercial premises, and flatted factory blocks and warehouses) was 8,562 thousand square meters, whereas the gross floor area of buildings increased by 6.6% compared with the preceding year (Table 8). Furthermore, wages and earnings expanded modestly in 2017 (Table 11 to Table 13). However, Hong Kong has been confronting external and internal challenges, such as the slackened international markets, the surge in labour cost and production cost, and the insufficient labour supply.

2. Main Economic Indicator

Table 3: Main Socio-Economic Indicators

ECONIMIC INDICATOR					
	2013	2014	2015	2016	2017
GDP & Components					
GDP in chained (2016) dollars* (HK$ million)	2,199,254	2,260,005	2,313,565	2,358,619	2,585,210
GDP at Current Market Price (HK$ million)	2,138,305	2,260,005	2,398,408	2,489,109	2,660,983
Real GDP Growth (%)	3.1	2.8	2.4	2.2	3.8
Agriculture, fishing, mining and quarrying sector	4.9	-6.0	-6.8	-2.0	-0.5
Manufacturing Sector	0.1	-0.4	-1.5	-0.4	0.4
Electricity, gas, water supply, & waste management sector	-2.9	0.8	-2.6	-0.8	0.6
Services Sector	2.7	2.5	1.7	2.3	3.5
Construction Sector	4.2	13.0	5.4	5.1	2.3

Table 3 (Cont'd)

Demographic and Inflation Indicators					
Population	7,210,900	7,252,900	7,309,700	7,374,900	7,409,800
Population Growth Rate (%)	0.6	0.6	0.8	0.9	0.5
Total Labour Force	3,855,100	3,871,100	3,903,200	3,920,100	3,946,600
Labour Force Growth rate (%)	1.9	0.4	0.8	0.4	0.7
Unemployment Rate (%)	3.4	3.3	3.3	3.4	3.1
Inflation Rate (%)	4.0	3.5	2.5	2.3	1.7
Financial Indicators					
Interbank interest rate per annum at year end (%)	0.87	0.84	0.85	1.58	1.53
Short term interest rate** (%)	0.11	0.04	2.05	0.31	0.33
Long term interest rate*** (%)	2.31	0.04	1.66	1.5	1.431
Exchange Rate against US$	7.75	7.76	7.75	7.75	7.83

*Exchange rate, US $1 ≈ HK$7.8

**Yield of 91-day exchange fund bills (mid-year)

*** Yield of 10-year exchange fund notes (mid-year)

Sources: GDP, Demographic and Inflation Indicators: Census and Statistics Department, 2018. *End-2017 Population*. [online] Available at: <https://www.censtatd.gov.hk/hkstat/sub/so20.jsp>; Census and Statistics Department, 2018. *Gross Domestic Product First Quarter 2018*. [pdf] Available at: <https://www.statistics.gov.hk/pub/B10300012018QQ01B0100.pdf >

Labour Force: Census and Statistics Department, 2018. *Labour Force, Unemployment and Underemployment*. [online] Available at: <https://www.censtatd.gov.hk/hkstat/sub/sp200.jsp?tableID=006&ID=0&productType=8>

Short- and long-term interest rates: Hong Kong Monetary Authority, 2018. *Monthly Statistical Bulletin*. [online] Available at: <https://www.hkma.gov.hk/eng/market-data-and-statistics/monthly-statistical-bulletin/>

III. Overview of the Construction Industry

1. Construction Investment

As shown below, construction works are divided into "buildings" and "structures & facilities". The overall expenditure of construction activities carried out by main contractors in Hong Kong registered a consecutive solid growth. The overall construction sector produced an approximate HK$163 billion worth of works in 2017, with a consistent increase of about 2.4% over 2016. The public construction sector posted a continuous solid growth (Table 4 and 5).

Table 4: Gross Value of Construction Contracts/Expenditure

Type of Contract / Expenditure (HK$ million)	2013	2014	2015	2016	2017	Q1 2018
Buildings	59,400	68,206	89,632	101,358	106,056	28,327
Residential	38,186	45,488	57,618	65,145	67,262	17,880
Commercial	7,659	8,223	13,116	17,402	18,114	5,015
Industrial & Storage	3,127	3,282	4,906	3,900	1,948	275
Services	10,428	11,213	13,991	14,910	18,731	5,156
Structures & facilities	52,367	54,571	55,391	57,675	56,744	14,827
Transport	41,540	44,606	48,262	50,164	50,395	12,824
Other utilities & plant	3,397	2,572	2,073	2,059	1,321	366
Environment	7,030	6,710	4,187	4,395	3,327	1,167
Sports & recreation	400	683	870	1,058	1,702	469
Overall total	111,767	122,777	145,023	159,033	162,800	43,154

Source: Census and Statistics Department, 2018. *Report on the Quarterly Survey of Construction Output First Quarter 2018*. [pdf] Available at: <https://www.statistics.gov.hk/pub/B10900022018QQ01B0100.pdf>

Table 5: Forecast of Public Construction Works

Architectural Services Department (ASD)			
Title of Contract	**Scheduled Project Start**	**Scheduled Project Completion**	**Estimate of Cost (HKD)**
Re-provisioning of Fu Shan Public Mortuary at Sha Tin	2018-19	2021-22	≥ $500M
Provision of columbarium at Cape Collinson Road in Chai Wan	2018-19	2021-22	≥ $500M
Re-provisioning of the Hongkong Post's Headquarters	2018-19	2022-23	≥ $500M
Re-provisioning of Victoria Public Mortuary	2019-20	2023-24	≥ $500M
Expansion of Wo Hop Shek Crematorium	2018-19	2022-23	$100M - $200M
Installation of air-conditioning system at Tai Wai Market	2018-19	2020-21	$100M - $200M
Construction of Disciplined Services Quarters for the Fire Services Department at Pak Shing Kok, Tseung Kwan O	2018-19	2021-22	≥ $500M
Construction of Departmental Quarters for Customs and Excise Department at Tseung Kwan O Area 123 (Po Lam Road)	2018-19	2022-23	≥ $500M
Construction of Departmental Quarters for Customs and Excise Department at No. 57 Sheung Fung Street, Tsz Wan Shan	2018-19	2021-22	≥ $500M
Signature Project Scheme (Wan Chai District) – Construction of Moreton Terrace Activities Centre	2018-19	2020-21	$100M - $200M
Provision of Air Traffic Control Facilities to support the Three-Runway System at Hong Kong International Airport	2018-19	2023-24	≥ $500M
Provision of Aviation Weather Services Facilities to support the Three-Runway System at the Hong Kong International Airport	2018-19	2024-25	$200M - $300M
Redevelopment of Queen Mary Hospital, phase 1	2018-19	2024-25	≥ $500M
New Acute Hospital at Kai Tak Development Area – preparatory works	2017-18	2021-22	≥ $500M
Redevelopment of Prince of Wales Hospital, phase 2 (stage 1) – preparatory works	2017-18	2021-22	≥ $500M
New Acute Hospital at Kai Tak Development Area – foundation, excavation and lateral support, and basement excavation works	2018-19	2021-22	≥ $500M
Building a Government Data Centre Complex	2018-19	2021-22	≥ $500M
Joint-user Government Office Building in Cheung Sha Wan	2018-19	2022-23	≥ $500M
Inland Revenue Tower in Kai Tak Development	2018-19	2022-23	≥ $500M
Joint-user building in Area 67, Tseung Kwan O	2019-20	2023-24	≥ $500M
Immigration Headquarters in Area 67, Tseung Kwan O	2018-19	2023-24	≥ $500M

Table 5 (cont'd)			
Title of Contract	**Scheduled Project Start**	**Scheduled Project Completion**	**Estimate of Cost (HKD)**
Relocation of Supporting Operational Facilities of TST Fire Station Complex, FS Club and Other FS Accommodations at To Wah Road, Kowloon	2018-19	2021-22	≥ $500M
Provision of fire services facilities to support the Three-Runway System at the Hong Kong International Airport	2018-19	2024-25	≥ $500M
Chai Wan Government Complex and Vehicle Depot	2019-20	2022-23	≥ $500M
A 30-classroom secondary school at Site KT2e, Development at Anderson Road, Kwun Tong	2019-20	2021-22	$300M - $400M
Provision of Heated Pool at the Morse Park Swimming Pool Complex, Wong Tai Sin	2018-19	2022-23	≥ $500M
Re-provisioning of recreational facilities at Hiu Ming Street Playground, Kwun Tong	2018-19	2020-21	$100M - $200M
Swimming pool complex and open space in Area 107, Tin Shui Wai	2018-19	2022-23	≥ $500M
A 30-classroom primary school at Tonkin Street, Cheung Sha Wan	2018-19	2021-22	$300M - $400M
First 30-classroom primary school at Queen's Hill, Fanling	2019-20	2021-22	$400M - $500M
Second 30-classroom primary school at Queen's Hill, Fanling	2019-20	2021-22	$400M - $500M
Open space in Area 47 and 48, North District	2018-19	2020-21	$100M - $200M
Open space in Area 6, Tai Po	2018-19	2020-21	<$100M
District open space adjoining public housing development at Anderson Road	2018-19	2020-21	$200M - $300M
District open space adjoining San Po Kong public housing development	2018-19	2020-21	$100M - $200M
Waterfront promenade adjacent to the Hong Kong Children's Hospital	2018-19	2020-21	<$100M
Signature Project Scheme (Kwun Tong District) – Construction of music fountains at Kwun Tong Promenade	2018-19	2020-21	<$100M
Improvement of Hoi Bun Road Park and adjacent area	2018-19	2021-22	$100M - $200M
Station Square at Kai Tak	2018-19	2022-23	≥ $500M
The demolition of existing superstructures at Caroline Hill Road site, Causeway Bay	2018-19	2019-20	<$100M

Civil Engineering and Development Department (CEDD)			
Title of Contract	**Scheduled Project Start**	**Scheduled Project Completion**	**Estimate of Cost (HKD)**
West Kowloon Reclamation – main works (remainder) – footbridge at the junction of Sham Mong Road and Tonkin Street West in Sham Shui Po	28 Sep 2016	Q3 2019	$368.9M
Providing Sufficient Water Depth for Kwai Tsing Container Basin and its Approach Channel	30 Aug 2013	2020	$488M
Kai Tak development – infrastructure works for developments at the southern part of the former runway	23 Nov 2015	End 2019	$5.757B
Kai Tak development – stages 3B and 5A infrastructure works at former north apron area	28 Sep 2016	End 2020	$2.152B
Development of Anderson Road Quarry Site	21 Dec 2016	Early 2022	$10.8B
Tseung Kwan O – Lam Tin Tunnel	11 Jul 2016	Mid 2021	About $15.1B
Liantang/Heung Yuen Wai Boundary Control Point and associated works – site formation and infrastructure works	Apr 2013	Early 2021	$25B
Disposal of Contaminated Sediment – dredging, management and capping of sediment disposal facility at Sha Chau	4 Jan 2017	Jan 2021	$770.9M
Cycle Tracks Connecting North West New Territories with North East New Territories – Tuen Mun to Sheung Shui section (Remaining)	30 Jun 2016	Early 2020	$890.90M
Universal Accessibility Programme – Expanded Programme	13 Apr 2015	Mid 2020	$1.9B

Drainage Services Department (DSD)			
Title of Contract	**Scheduled Project Start**	**Scheduled Project Completion**	**Estimate of Cost (HKD)**
Upgrading of West Kowloon and Tsuen Wan Sewerage – Phase 1	28 Sep 2017	Mid 2022	About $280M
Yuen Long Effluent Polishing Plant – Consultants' Fee and Investigation	19 May 2016	2022	About $61.8M
Upgrading of San Wai sewage treatment works – phase 1	May 2016	March 2021	About $2,572.3M
Shek Wu Hui sewage treatment works – further expansion phase 1A – advance works, consultants fees and investigation	11 May 2015	End 2026	About $503M
Relocation of Sha Tin Sewage Treatment Works to Caverns – Consultants' Fee and Investigation	29 Sep 2014	2022	About $637.7M
Construction of Additional Sewage Rising Main and Rehabilitation of the Existing Sewage Rising Main between Tung Chung and Siu Ho Wan	19 Aug 2016	End 2025	About $1,400M
Construction of dry weather flow interceptor at Cherry Street box culvert	19 Dec 2017	End 2022	About $664.6M

Source: Development Bureau, 2018. *Public Works Project Information*. [online] Available at: <https://www.devb.gov.hk/en/links/public_works_project_information/index.html>

2. Construction Companies

Table 6: Number of Contractors by Size

<table>
<tr><td></td><td colspan="12">No. of registered contractors
(by July 2018)</td></tr>
<tr><td>Buildings Department (Registered General Building Contractors)</td><td colspan="12">731</td></tr>
<tr><td rowspan="2">Development Bureau (List of Approved Contractors for Public Works)</td><td colspan="3">Group A</td><td colspan="3">Group B</td><td colspan="3">Group C</td><td colspan="3">Total</td></tr>
<tr><td colspan="3">102</td><td colspan="3">142</td><td colspan="3">118</td><td colspan="3">362</td></tr>
<tr><td rowspan="2">Housing Authority (Counterparty Lists)</td><td colspan="4">NW1</td><td colspan="4">NW2</td><td colspan="4">Total</td></tr>
<tr><td colspan="4">15</td><td colspan="4">25</td><td colspan="4">40</td></tr>
</table>

Notes:
'Group A' denotes contractors eligible to tender for contracts with value up to HK$100M.
'Group B' denotes contractors eligible to tender for contracts with value up to HK$300M.
'Group C' denotes contractors eligible to tender for contracts with any values exceeding HK$300M.
'Group NW1' denotes contractors eligible to tender for new work contracts with a value of up to HK$550M.
'Group NW2' denotes contractors eligible to tender for new work contracts with an unlimited value.

Sources:
Buildings Department, 2018. *List of Registered General Building Contractors*. [online] Available at: <https://mwerdr.bd.gov.hk/REGISTER/RegistrationSearch.do?method=PageRegistration&regType=GBC>

Development Bureau, 2018. *List of Approved Contractors for Public Works*. [online] Available at: <https://www.devb.gov.hk/Contractor.aspx?section=80&lang=1>

Hong Kong Housing Authority, 2018. *HKHA Counterparty List*. [online] Available at: <http://comis.housingauthority.gov.hk/ha/eng/ctp_list.jsp?LIST_CD=BLG&LIST_CAT_GRP_CD=BLG/>

3. Employees and Construction Labour

Table 7: Number of Workers Employed in the Principal Jobs of Construction, Building, and Civil Engineering and Related Disciplines

Job Levels	March 2015	June 2017	Changes (%)
Professional/Technologist	22,924	25,240	+10.10
Technician	36,414	43,319	+18.96
Skilled & Semi-Skilled Worker	75,755	90,835	+19.91
General Worker	36,800	41,160	+11.85
Total	**171,893**	**200,554**	**+16.67**

Source: Vocational Training Council, 2018. *Manpower Survey of the Building, Civil Engineering and Built Environment Industry, 2017*. [pdf] Available at: <http://www.vtc.edu.hk/uploads/files/publications/building_and_civil_engineering_training_board/en/Manpower_Survey_Report.pdf>

Table 7 shows the division of the number of workers employed in the construction sector and the related disciplines into different job levels. Generally, the total number of workers had an increasing trend from March 2015 to June 2017. In addition, the number of technicians and skilled & semi-skilled workers grew significantly when compared with the previous years.

Table 8: Number of Persons Directly Engaged in the Building and Civil Engineering Establishments

Main industry group	**2012**	**2013**	**2014**	**2015**	**2016**
Construction of buildings	24,025	22,442	25,921	25,963	26,259 (+1.1%)
Civil engineering	20,732	23,717	24,195	25,887	24,833 (-4.1%)
Demolition and site preparation	7,673	8,206	8,474	9,735	11,137 (+14.4%)
Building services installation and maintenance activities	73,828	73,165	66,592	71,357	57,518 (-19.4%)
Building finishing and other specialized construction activities	58,305	58,243	64,272	66,918	59,809 (-10.6%)
All construction activities	**184,563**	**185,773**	**189,454**	**199,861**	**179,556 (-10.2%)**

Source: Census and Statistics Department, 2017. *Key Statistics on Business Performance and Operating Characteristics of the Building, Construction and Real Estate Sectors in 2016.* [pdf] Available at: <https://www.statistics.gov.hk/pub/B10800112016AN16B0100.pdf>

Table 8 shows the number of persons directly engaged in the building and civil engineering establishments. For the total number of persons engaged in all construction activities, it encountered a remarkable decrease from 199,861 persons in 2015 to 179,556 persons in 2016 (minus 10.2%). Although the number of persons who participated in the construction of building and demolition & site preparation experienced a slight increase, the significant decline in the number of people engaging in building services installation & maintenance activities and building finishing & other specialized construction activities mostly contributed to the overall decrease.

4. Productivity

Table 9: Value Added Per Employee

Year	Value added per employee (HK$million)
2012	0.30
2013	0.29
2014	0.33
2015	0.34
2016	0.33

Sources: Value added by Construction activity: Census and Statistics Department, 2017. *Chain volume measures of Gross Domestic Product (GDP) by economic activity - in chained (2016) dollars*. [pdf] Available at: <https://www.censtatd.gov.hk/hkstat/sub/sp250.jsp?tableID=037&ID=0&productType=8>

Employed Persons by Industry (Construction): Census and Statistics Department, 2017. *Hong Kong Annual Digest of Statistics 2017 Edition.* [pdf] Available at: <https://www.statistics.gov.hk/pub/B10100032017AN17B0100.pdf>

As shown in Table 9, the overall productivity level has been hovering at slightly over HK$0.3 million per employee with no significant break-through in the technology being employed. Hopefully, with the use of increased prefabrication (good progress being made) and the adoption of construction robots on site (progress is still slow), productivity will be enhanced.

Table 10: Physical Measurement of Construction Production

(Unit: Thousand sq.m.*, and % change over last year)

End use of building	**2012**	**2013**	**2014**	**2015**	**2016**
Private residential premises+	5,282 (-9.5%)	5,235 (-0.9%)	5,957 (+13.8%)	5,609 (-5.9%)	6,139 (+9.5%)
Office buildings	471 (+173.8%)	486 (+3.1%)	526 (+8.3%)	779 (+48.0%)	632 (-18.8%)
Hotels and boarding houses	322 (-19.7%)	247 (-23.3%)	310 (+25.4%)	443 (+43.2%)	548 (+23.6%)
Multi-purpose commercial premises	494 (+8.6%)	711 (+44%)	793 (+11.6%)	840 (+5.9%)	873 (+3.9%)
Flatted factory blocks and warehouses	486 (+34.3%)	327 (-32.7%)	288 (-11.9%)	363 (+25.8%)	370 (+2.1%)
Total	**7,055 (-2.4%)**	**7,006 (-0.7%)**	**7,875 (+12.4%)**	**8,033 (+2.0%)**	**8,562 (+6.6%)**

Notes: * Area refers to the gross floor area of buildings when completed;
+ Includes buildings purely for residential purposes and combined residential and non-residential buildings.

Source: Census and Statistics Department, 2017. *Key Statistics on Business Performance and Operating Characteristics of the Building, Construction and Real Estate Sectors in 2016.* [pdf] Available at: <https://www.statistics.gov.hk/pub/B10800112016AN16B0100.pdf>

5. Construction Cost

Table 11: Building Works Tender Price Index (BWTPI)

Year	**Building Works Tender Price Index (BWTPI)**			
	Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
2018	1755	N/A	N/A	N/A
2017	1779	1776	1773	1768
2016	1775	1776	1783	1781
2015	1732	1761	1777	1775
2014	1621	1648	1679	1703
2013	1516	1532	1559	1590

Note: The value in the first quarter of 1970 is taken as the base index value of 100, and subsequent values are expressed in index form based on the first quarter 1970 value.

Source: Architectural Services Department, 2018. *Building Works Tender Price Index (BWTPI)*. [online] Available at: <https://www.archsd.gov.hk/en/reports/building-works-tender-price-index.aspx>

Table 12: Major Construction Material Average Prices (in HK$)

		2014	2015	2016	2017	Mar 2018
Aggregates (HK$ per tonne)		76	75	76	63	67
Bitumen (HK$ per tonne)		7,150	8,250	7,150	4,983	6,750
Concrete blocks, 100mm thick ($ per square metre)		76	77	76	76	77
Diesel fuel	For industrial use (light) ($ per 200-litre drum)	1,843	1,957	1,843	1,962	2,335
	For road use (HK$ per 100 litre)	840	941	840	934	1,095
Glass - Clear sheet glass, 5mm thick (HK$ per square metre)		157	157	157	157	160
Glazed ceramic wall tiles	White tiles, 108mmx108mm ($ per 100 pieces)	233	233	233	243	243
	Colour tiles, 200mmx200mm ($ per 100 pieces)	443	401	433	440	440
Hardwood	Sawn hardwood, 50x75mm column ($ per cubic metre)	5,707	5,707	5,707	5,707	6,105
Homogeneous floor tiles	Non-slip tile, 200mmx200mm ($ per square metre)	160	160	160	163	174
Galvanised mild steel	Steel plates (HK$ per tonne)	8,578	9,577	8,578	9,139	11,986
	Steel angles (HK$ per tonne)	11,469	11,967	11,469	12,716	17,626
	Steel flats (HK$ per tonne)	9,926	10,319	9,926	10,255	12,308
Metal formwork	Steel plate, 4mm thick (HK$ per tonne)	4,615	5,683	4,615	4,941	5,779
Mosaic tiles	Unglazed tiles, 18mmx18mm ($ per square metre)	119	119	119	119	122
	Glass tiles, 25mmx25mm ($ per square metre)	50	50	50	50	50
	Glazed tiles, 45mmx45mm ($ per square metre)	134	132	134	143	145

		2014	2015	2016	2017	Mar 2018
Paint	Emulsion paint (HK$ per litre)	53	52	53	53	54
	Acrylic paint (HK$ per litre)	51	49	51	50	52
Portland cement (ordinary) (HK$ per tonne)		738	729	739	713	692
Sand (HK$ per tonne)		189	119	189	180	144
Steel reinforcement	Mild steel round bars, 6mm to 20mm ($ per tonne)	5,037	5,470	5,073	5,675	5,900
	High tensile steel bars, 10mm to 40mm ($ per tonne)	3,242	4,349	3,242	4,264	5,092
Timber formwork	Plywood, formwork, 19mm thick ($ per square metre)	75	75	75	73	76
	Sawn hardwood, 25mm thick plank ($ per cubic metre)	4,026	3,814	4,026	4,556	4,654
uPVC pipes	32mm diameter pipes, 4m long (HK$ per number)	52	55	52	53	52

Source: Census and Statistics Department, 2018. *Average Wholesale Prices of Selected Building Materials March 2018*. [pdf] Available at: <https://www.statistics.gov.hk/pub/B10600052018MM03B0100.pdf>

The average prices of the majority of construction materials had an increasing trend from 2014 to 2018. However, the average prices of bitumen, galvanized mild steel products increased sharply from 2017 to 2018. The average prices of bitumen, galvanized mild steel products, metal formwork and steel reinforcement products experienced remarkable fluctuations within the concerned period (Table 10).

Table 13: Construction Industry Salaries and Wages – Unskilled Workers

	Unskilled Workers Daily Wage (HK$)
Dec 2013	743
Dec 2014	856
Dec 2015	916
Dec 2016	1,011
Dec 2017	1,013
Apr 2018	1,002

Source: Census and Statistics Department, 2018. *Average daily wages of workers engaged in Public Sector Construction Projects as reported by main contractors April 2018.* [pdf] Available at: <https://www.statistics.gov.hk/pub/B10500132018MM04B0100.pdf>

Table 14: Construction Industry Salaries and Wages – Construction Professionals

(Unit: Median monthly salary in HK$)

Professionals in building and construction and related trades	**June 2013**	**June 2014**	**June 2015**	**June 2016**	**June 2017**
Accountant	34,900	34,300	34,300	36,700	37,800
Architect	N/A	N/A	N/A	N/A	N/A
Building Services Engineer	35,600	36,100	37,200	38,000	39,900
Mechanical Engineer	29,900	32,700	33,900	36,000	37,900
Personnel Manager/ Human Resources Manager/ Staff Relations Manager	45,200	48,300	50,400	51,900	53,500
Project Manager	64,100	65,800	64,900	67,700	71,500
Safety Officer	38,200	41,200	42,900	44,600	46,200
Structural Engineer	39,600	42,200	44,500	48,200	50,500

Source: Census and Statistics Department, 2017. *2017 Report of Salaries and Employee Benefits Statistics - Managerial and Professional Employees (Excluding Top Management).* [pdf] Available at: <https://www.statistics.gov.hk/pub/B10500102017AN17B0100.pdf>

Professionals in most of the disciplines had a gradual increase in their wages, such as building services engineers, mechanical engineers, project managers and structural engineers (Table 14).

Table 15: Construction Industry Daily Wages – Skilled Workers (in HK$)

	Dec 2015	**Dec 2016**	**Apr 2017**	**Apr 2018**
Concretor	1,895	1,959	1,947	1,925
Bricklayer	1,212	1,244	1,328	1,340
Drainlayer	1,502	1,605	1,662	1,657
Mason	1,082	1,038	1,120	1,010
Bar bender and fixer	1,899	2,108	2,074	2,146
Metal worker	1,159	1,156	1,187	1,291
General welder	1,324	1,382	1,422	1,375
Structural steel erector	1,470	1,506	1,496	1,524
Structural steel welder	1,472	1,399	1,388	1,447
Rigger/metal formwork erector	1,628	1,698	1,680	1,681
Carpenter (formwork)	1,838	2,033	1,963	1,915
Joiner	1,184	1,220	1,225	1,281
Plumber	1,259	1,374	1,428	1,444
Construction plant mechanic	1,219	1,276	1,276	1,343
Plant & equipment operator (load shifting)	1,129	1,177	1,199	1,252
Truck driver	828	856	903	914
Rock-breaking driller	1,380	1,371	1,338	1,799
Asphalter (road construction)	893	909	920	1,076
Bamboo scaffolder	1,706	1,868	1,860	1,869
Diver	2,172	2,180	2,194	2,271
Plasterer	1,344	1,378	1,363	1,335
Glazier	1,258	1,445	1,560	1,318
Painter and decorator	1,122	1,168	1,253	1,210
Leveller	1,342	1,364	1,413	1,348
Marble worker	1,200	1,278	1,237	1,144
Electrical fitter (incl. electrician)	1,033	1,132	1,218	1,252
Mechanical fitter	798	841	934	969
Refrigeration/AC/ventilation mechanic	821	957	991	976
Fire services mechanic	1,042	1,104	1,306	1,236
Lift and escalator mechanic	749	735	796	899
Building services maintenance mechanic	742	818	814	888
Power cable jointer	1,200	1,200	1,200	945

Source: Census and Statistics Department, 2018. *Average daily wages of workers engaged in Public Sector Construction Projects as reported by main contractors April 2018.* [pdf] Available at: <https://www.statistics.gov.hk/pub/B10500132018MM04B0100.pdf>

Table 15 summarizes the wages of 32 categories of skilled workers. There was an increasing trend of the average daily wages of skilled workers from December 2015 to April 2018. However, the daily wages of a number of categories had a mild decline, such as concretor, mason, carpenter, glazier, marble worker, fire services mechanic and power cable jointer.

6. Import and Export of Construction Services

A significant decline was registered in both import and export of construction services in 2016 (Table 16). The import value decreased from HK$1,317 million in 2015 to HK$953 million in 2016. The net export value of construction services decreased from HK$23 million in 2015 to negative HK$9 million in 2016. The import of architectural, engineering and other technical services has been increasing since 2012, and experienced a mild decrease in 2016, while the export decreased slightly from HK$4,302 million in 2015 to HK$3,972 in 2016. The net export value of architectural, engineering and other technical services declined from HK$1,379 in 2015 to HK$1,273 in 2016. In addition, the majority of the export and import of both construction and consultancy services was carried out within the Asian region. However, exports to the Asian markets were mostly subdued in 2016.

Table 16: Annual Import/Export of Construction and Consultancy Services (in HK$million)

Major service group	**Year**	**Export of services**	**Import of services**	**Net export of services**
Construction services (mainly to Asia)	2012	2,564	2,500	64
	2013	3,043	2,710	333
	2014	2,818	2,690	128
	2015	1,340	1,317	23
	2016	944	953	-9
Architectural, engineering and other technical services	2012	3,946	2,544	1,402
	2013	3,815	2,593	1,222
	2014	4,107	2,837	1,270
	2015	4,302	2,923	1,379
	2016	3,972	2,699	1,273

Notes: "Construction services" include general construction work (including new work, additions and alterations, repair and maintenance) and installation work at sites, buildings and structures that generally last for less than one year. "Consultancy services – Architectural, engineering and other technical services" include advisory architectural services; architectural design services; contract administration services; advisory and consultative engineering services; engineering design services for construction projects or industrial processes; and urban planning and landscape architectural services.

Source: Census and Statistics Department, 2018. *Hong Kong Trade in Services Statistics in 2016*. [pdf] Available at: <https://www.statistics.gov.hk/pub/B10200112016AN16B0100.pdf>

Conclusion

Hong Kong is facing an acute problem of labour ageing and shortage. The number of vacancies of construction industry has kept on soaring. The percentage change of the number of vacancies increased by a whopping 62% in December 2017 from December 2016, indicating the rapid growth of the demand. The number of employed person in principal jobs of construction, building, and civil engineering and related disciplines reached 200,554 in 2017. For 2017 as a whole, the unemployment rate was 4.4% whereas the underemployment rate was 5.2%. Wages and earnings grew moderately in 2017 (Census and Statistics

Department, 2018). The overall demand for construction workers shows an upward trend owing to the ongoing mega infrastructure projects, for instance, the Guangdong-Hong Kong-Macao Bay Area Development and the Joint Development of The Lok Ma Chau Loop by Hong Kong and Shenzhen. As stated in the Report of Construction Industry Council (CIC) Manpower Forecasting Model 2014, the demand for construction workers will reach 285,000 by 2023, which represents a general increase of 6.0% in the upcoming 6 years (CIC, 2014).

The Hong Kong construction industry is facing the challenges of insufficient labour supply and ageing workforce. As the construction industry is one of the pillar industries to drive Hong Kong's economy, forecasting workforce demand accurately and maintaining a sufficient labour supply are vital to support future development. Upon the completion of the Ten Major Infrastructure Projects, such as the Hong Kong-Zhuhai-Macau Bridge and the Hong Kong section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link, it is anticipated that a considerable amount of the labour force can be released, which can hopefully alleviate the short term labour shortage problem. Yet long term planning is still needed. For the ageing workforce, hopefully it can be resolved by accumulating a workforce reserve through encouraging youngsters to enter into the construction workforce, under the circumstances that sufficient training and allowances are provided to the new blood. Adoption of technology to reduce labour intensity and improve productivity may also help. Regarding the aforementioned deep-seated challenges, strategic plans should be formulated carefully through the cooperation between the Hong Kong SAR government, the whole construction sector and the construction-related associations.

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