3. Domestic economy

Hong Kong's economic recession deepened in the first half of 2020 as the pandemic dealt a severe blow to private consumption and investment, as well as external goods trade and tourism. In response, the Government and the HKMA swiftly introduced a series of large-scale measures to support the real economy. Economic performance for the second half of the year is still highly challenging given the lingering COVID-19 pandemic, the US-China tensions and uncertainties surrounding the development of the global economy. Given multiple headwinds, the labour market will continue to be under stress while local inflationary pressures are expected to recede further in the near term.

3.1 Real activities

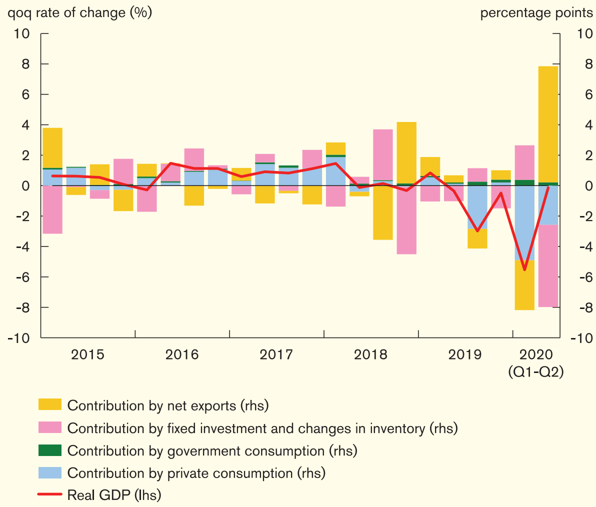
Hong Kong's economic recession deepened in the first half of 2020 amid the COVID-19 pandemic. On a year-on-year comparison, real gross domestic product (GDP) fell by 9.1% in the first quarter, marking the most acute single-quarter contraction on record, and similarly by 9.0% in the second quarter (Table 3.A). The latest sectoral GDP data indicate that almost all economic sectors recorded a year-on-year decline in activities in the first quarter, with the trade, retail and tourism-related sectors even seeing double-digit decreases.

Table 3.A
Real GDP growth

		Year-on-year growth rate (%)	Seasonally adjusted quarter-on-quarter growth rate (%)
2019	Q1	0.7	0.8
	Q2	0.4	-0.3
	Q3	-2.8	-3.0
	Q4	-3.0	-0.5
2020	Q1	-9.1	-5.5
	Q2	-9.0	-0.1

Source: C&SD.

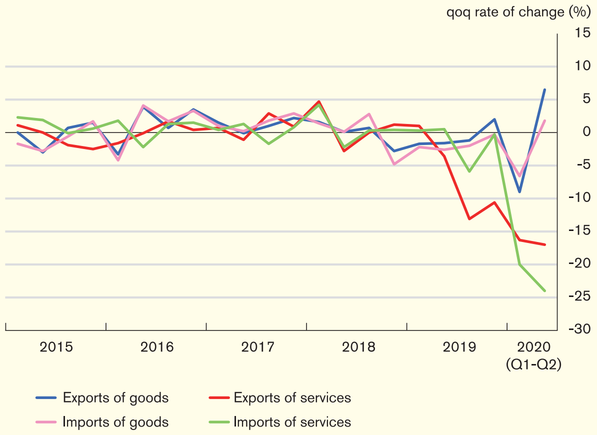
Chart 3.1
Real GDP growth and contribution by major expenditure components



Note: Growth rates are seasonally adjusted.
Sources: C&SD and HKMA staff estimates.

On a quarter-on-quarter basis, real GDP declined at a record rate of 5.5% in the first quarter and edged down by 0.1% in the second quarter (Table 3.A and Chart 3.1). Domestically, private consumption plunged within the first half of the year, partly reflecting austere labour market conditions and disruptions to consumption-related activities caused by social distancing measures. Overall investment spending also retreated in the second quarter amid weak business sentiment. Externally, trade in goods declined in the first quarter due in part to pandemic-induced supply chain disruptions, but the goods trade performance picked up in the second quarter as production activities in Mainland China largely resumed (Chart 3.2). Service trade recorded an enlarged decline within the first half of the year partly because global tourism came to a halt.[17] Overall, net trade contributed negatively to GDP in the first quarter, but added to GDP in the second quarter partly because merchandise exports picked up faster than imports.

Chart 3.2
Exports and imports in real terms



Note: Growth rates are seasonally adjusted.
Source: C&SD.

In response to the pandemic, the Government swiftly launched relief measures[18] of unprecedented scale to support enterprises and individuals and to safeguard jobs, including the HK$10,000 Cash Payout Scheme and the provision of wage subsidies through the Employment Support Scheme. The HKMA has also taken a three-pronged approach to bolster the banking sector in support of the real economy. The measures comprise proactive coordination with the banking sector to ease cash-flow pressures on enterprises and households, releasing buffers to boost the lending capacity of banks and ensuring that banks have abundant liquidity to meet their needs and support domestic economic activities.

Hong Kong's economic performance for the rest of 2020 is still highly challenging given the lingering pandemic, which poses substantial downside risks to the global and domestic economies. On the external front, exports will continue to struggle because of a standstill in inbound tourism and weak global demand.[19] Domestically, weak private consumption will likely persist amid social distancing, weakening labour market conditions and easing household income. As for fixed capital formation, fragile business confidence may dampen capital expenditure, as well as building and construction activities. Nonetheless, increased public demand (e.g. government consumption) and the massive relief measures introduced by the authorities are anticipated to provide some support to the economy. Taking into account the multiple headwinds, the Government and private-sector analysts revised downwards their forecasts of real GDP growth for the whole of 2020 to a range between -6% and -8% and a mean of -6.8% respectively. This subdued economic outlook is subject to a number of risks and uncertainties as discussed in previous chapters. In particular, the economy could fluctuate in the ebb and flow of the COVID-19 pandemic until an effective vaccine or treatment is widely available.

[17] For example, inbound tourist arrivals have nosedived since the onset of the outbreak in late January 2020, or falling by 90% year-on-year during the first half of 2020. In April, the average number of visitors fell to as low as about 140 per day.

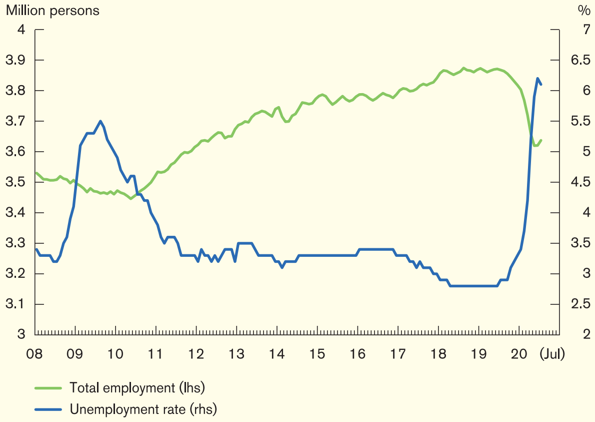
[18] These massive measures include the three rounds of Anti-epidemic Fund measures and the one-off relief measures in the 2020/21 Budget. Their total size amounts to over HK$300 billion, representing about 10-11% of GDP. The Government estimated that there would be a supporting effect of slightly more than 5 percentage points of GDP on the Hong Kong economy.

[19] The US president signed an executive order on 14 July 2020, revoking Hong Kong's preferential trade status. Consequently, goods exported to the US from Hong Kong could be subject to the same tariffs or export controls as goods of Mainland origin. This will have limited direct impact on Hong Kong's economy since domestic exports to the US made up only 0.1% of total exports. Moreover, the majority of re-exports to the US from the Mainland is already subject to additional tariffs. For imports, the US supplied just 4.8% of our total imports, with strategically sensitive goods such as high technology products constituting a negligible share.

3.2 Labour market conditions

The labour market has come under significant pressures between January and July. The seasonally adjusted unemployment rate rose to 6.1% in July, surpassing the peak of 5.5% in the aftermath of the 2008 global financial crisis (Chart 3.3). The construction, retail, accommodation and food services sectors even saw their unemployment rates rising to over 10%.[20] The underemployment rate also climbed visibly to 3.5% in July. The labour force participation rate edged down to a record low of 59.1% in May, partly reflecting a cyclical response to the sharp deterioration in economic conditions. On the demand side, Box 3 analyses the recent changes in labour demand using a timely big dataset of online job advertisements, and the results reveal that vacancies stayed low recently. As for labour compensation, real payroll recorded a year-on-year decline of 0.3% in the first quarter. Looking ahead, the Employment Support Scheme introduced by the Government should help retain jobs, but the labour market will continue to face challenges given the sluggish economic outlook discussed above.

Chart 3.3
Labour market conditions



Source: C&SD.

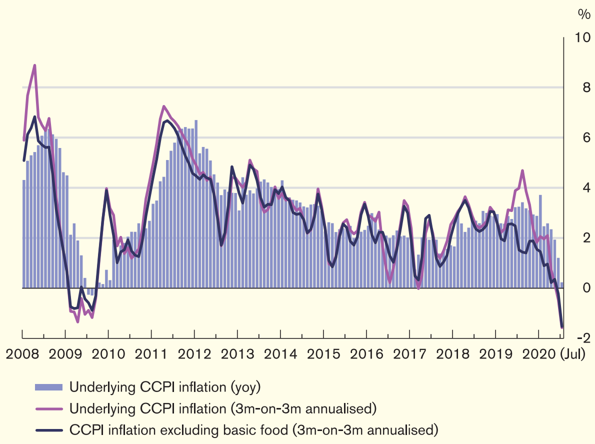
3.3 Inflation

Local inflationary pressures softened further in the first seven months of 2020 alongside the deepened economic recession. On a year-on-year comparison, the underlying consumer price inflation rate decelerated from 2.9% in the first quarter to 1.8% in the second quarter, and receded further to 0.2% in July (Chart 3.4).[21] Inflation momentum, as measured by the annualised three-month-on-three-month underlying inflation rate, also recorded an enlarged decline, falling below zero in recent months. The weak inflation momentum reflected a fairly broad-based moderation in the composite consumer price index (CCPI) components. In particular, prices of basic food items recorded a mild decline in recent months after reaching a peak early this year, and prices of other consumable items, such as durable goods, also saw further declines. For services, growth in the housing rental component of the CCPI continued on its downward trend, reflecting the feed-through of the earlier consolidation in fresh-letting residential rentals (Chart 3.5). Prices of meals bought away from home declined markedly in July owing to the deeper discounts offered by restaurants. That said, real unit labour costs increased cyclically in the first quarter as labour productivity declined at an even faster rate than labour compensation amid the sudden fall-off in GDP (Chart 3.6). A similar situation occurred after the 2008 global financial crisis, and the impact of increased unit labour cost on inflation is expected to be small at the current juncture given the sharp contraction in aggregate demand.

[20] For example, the unemployment rate of the food and beverage services sector rose to 14.6% and that of the construction sector reached 11.3% in July.

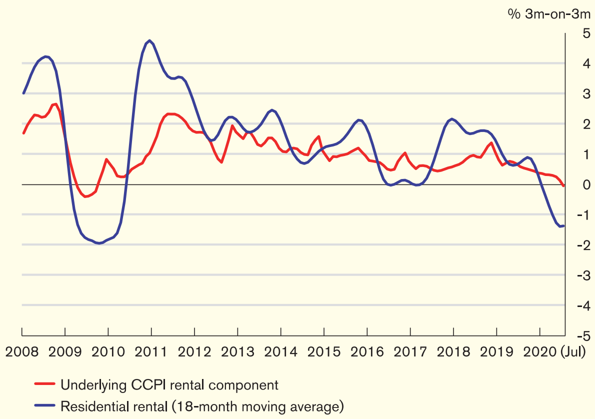
[21] The headline inflation rate turned negative in July, with the price index declining by 2.3% year-on-year due in part to the payment of one-month rentals for public housing tenants by the Government.

Chart 3.4
Different measures of consumer price inflation



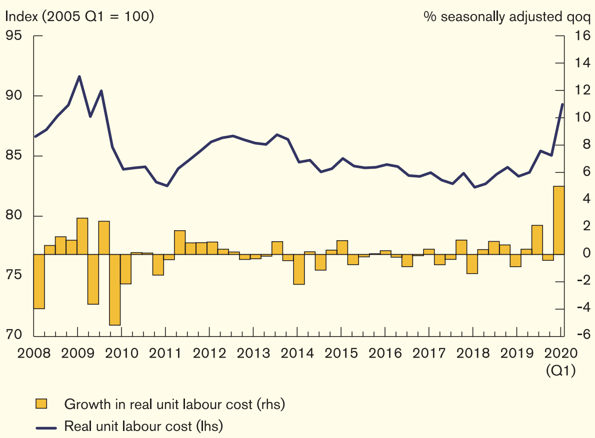
Sources: C&SD and HKMA staff estimates.

Chart 3.5
CCPI rental component and market rental



Sources: C&SD and R&VD.

Chart 3.6
Unit labour cost



Sources: C&SD and HKMA staff estimates.

Local inflation is expected to recede further in the near term. Domestically, weak economic conditions, as reflected in the negative estimated output gap, will continue to ease local inflation. Meanwhile, the earlier decline in fresh-letting residential rentals will exert dampening pressure on the housing component of the CCPI in the near term. Externally, the sluggish global demand is anticipated to keep imported inflation in check. Against this background, the Government adjusted downward its projections of underlying and headline inflation rates for 2020 to 1.8% and 0.8% respectively. The latest market consensus forecasts the headline inflation rate for 2020 to be 0.9%.

Box 3
A big data analysis of Hong Kong's labour demand using online job advertisements

Introduction

With the deepening economic recession and the lingering COVID-19 outbreak, Hong Kong's labour market is facing unprecedented pressures. Against this backdrop, this Box explores big data of online job advertisements to track domestic labour demand in recent months.[22] As these online job postings offer real-time access with high granularity, we can detect labour demand changes in a more timely manner and take a more nuanced look at the companies' hiring situation. Our analysis also highlights some caveats for using online job advertisement data.

How to collect online job advertisement information?

Nowadays, job vacancy websites are one of the major sources for job seekers looking for job opportunities, as well as for companies' hiring. We choose a representative online job searching platform called JobMarket for our analysis, as it has a long history[23] and its print version is the first bilingual classified recruitment publication in Hong Kong. Unlike some other online platforms, an advertising fee is required for posting job advertisements on JobMarket so they are more likely to reflect genuine labour demand. In addition, these job advertisements are available almost real-time, compared favourably with the quarterly official job vacancy data which have a time lag.

In practice, we collect job advertisements from JobMarket through daily web scraping. Each job advertisement contains considerable information, including employment types, education and skill requirements, and sometimes the remuneration package, such as salaries and benefits. Because companies or recruitment agencies may post the same job advertisement multiple times to increase the chance of hiring, we filter out any duplicated job advertisements before transforming them into a structured database for further analysis.

Recent changes in labour demand through the lens of online job advertisements

<u>Overall labour demand</u>

Although the unemployment rate only started to rise more visibly in the third quarter of 2019, the weakness of the overall labour demand could be identified earlier, as the total number of new job advertisements posted on JobMarket peaked in January 2019 (Chart B3.1) amid the US-China tensions. This suggests that online job vacancy postings are quite useful as an early indicator. With the "double whammy" of local social incidents and later the COVID-19 outbreak, the total number of new job advertisements has dropped at a faster pace since the second half of 2019, and the overall labour demand remains lacklustre in the near term.

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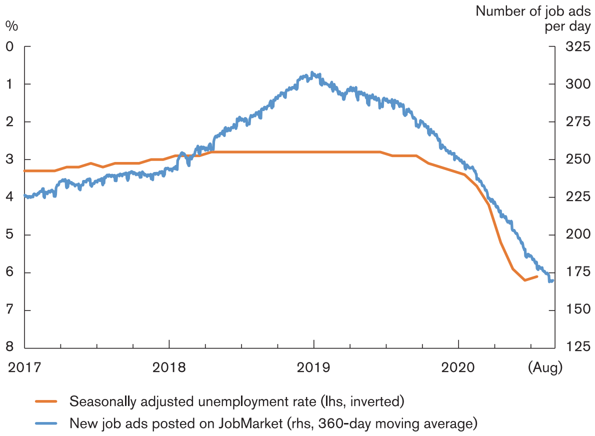
[22] Apart from vacancy there are other indicators of labour demand, such as employment numbers or sentiment, which are not discussed in this study.

[23] The print version of JobMarket was first published in 1985 and its online platform was established in 1999.

Chart B3.1
Online job advertisement number and unemployment rate



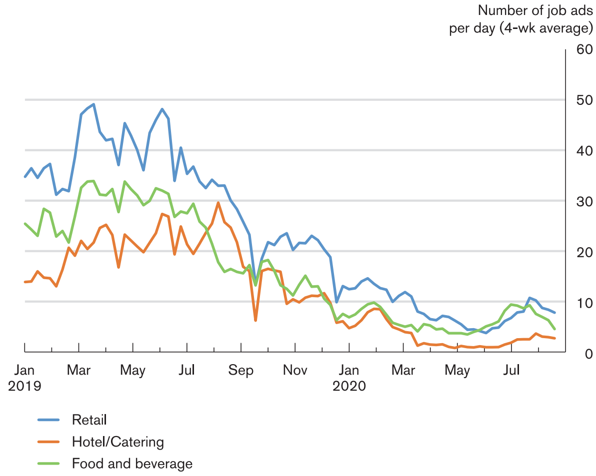
Note: To have a better comparison between the job advertisement numbers and the seasonally adjusted unemployment rate, we take the 360-day moving average to remove the seasonality of job advertisement postings.
Sources: C&SD, JobMarket and HKMA staff estimates.

Labour demand by sectors

As consumption and tourism-related industries were hit hard by social incidents and the COVID-19 outbreak[24], new job vacancies in the retail, hotel/catering and food and beverage services sectors have shrunk drastically since mid-2019 (Chart B3.2). Our job advertisement data reveal there were tentative signs of a pick-up in job vacancies in the retail and food and beverage services sectors when the local infection rate was contained in May and June. But the job postings declined again in August along with a rise in local infections starting from July. On the other hand, recruitment activities in the hotel/catering sector remained mute as there was no sign of a recovery in tourism and travel.

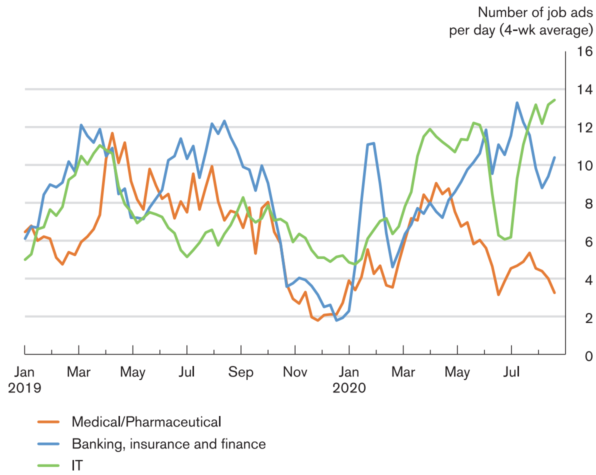
However, labour demand in some other sectors responded differently. Probably due to a temporary rise in demand for medical specialists in coping with the outbreak, new job openings in the medical/pharmaceutical industries increased in the first four months of 2020 (Chart B3.3), before declining in May and June. Work-from-home arrangements during the semi-lockdown period may also have stimulated the demand for IT personnel between March and May, as well as in mid-July. As local financial activities became more vibrant in the second quarter, recruitment activity in the financial sector gradually recovered to the mid-2019 level in June, before moderating again in July – August amid the rise in local COVID-19 cases.

Chart B3.2
Number of job advertisements in consumption and tourism-related sectors



Sources: JobMarket and HKMA staff estimates.

Chart B3.3
Number of job advertisements in selected sectors



Sources: JobMarket and HKMA staff estimates.

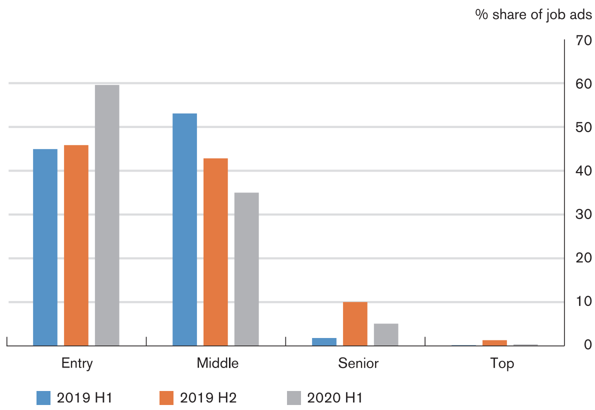
[24] In particular, the real GDP of wholesale and retail trades slumped by 57% year-on-year in the first quarter of 2020, and that of accommodation and food services fell by 48% year-on-year.

Labour demand by skill levels

In addition to sectoral patterns, online job advertisements can also reveal the type of skill sets demanded by companies. In JobMarket, a job can be classified into four levels: entry, middle, senior and top.[25] Chart B3.4 shows that most of the online job advertisements in JobMarket pertain to entry and middle levels, and the share of middle-level job openings has declined since mid-2019. Among the middle-level job openings previously, most only required secondary education qualifications, but the percentage of tertiary education requirements has increased following the COVID-19 outbreak (Chart B3.5). From another angle, more fresh graduate jobs[26] were available during the same period, particularly for graduates with a tertiary education (Chart B3.6). Taken together, there is evidence that companies are upskilling their workforce by hiring new graduates with higher education levels during the current economic downturn, which is similar to the phenomenon seen in the US after the Great Recession in 2008.[27]

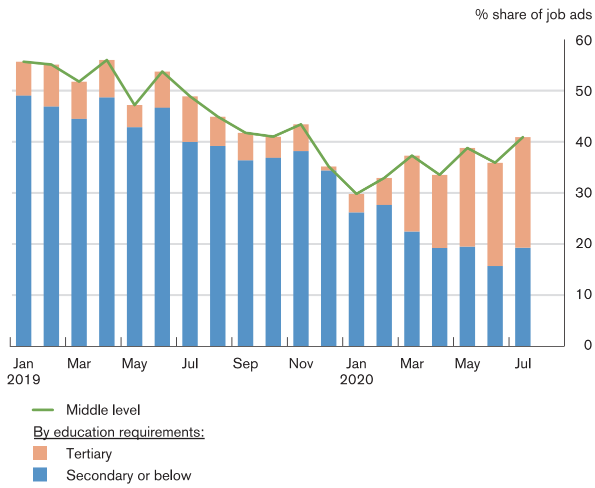
On the flip side, the upskilling implies that experienced (e.g. middle-level) workers with lower education levels will find it more difficult in searching for job during the current recession. Additionally, this recession-induced change in demand for skills may impact on future labour market recovery as it may lead to a higher skill mismatch, which merits close monitoring in the period ahead.

Chart B3.4
Share of job advertisements by job levels



Note: The job advertisements without specifying their job levels are excluded in calculating the percentage share.
Sources: JobMarket and HKMA staff estimates.

Chart B3.5
Share of middle-level job advertisements by education levels



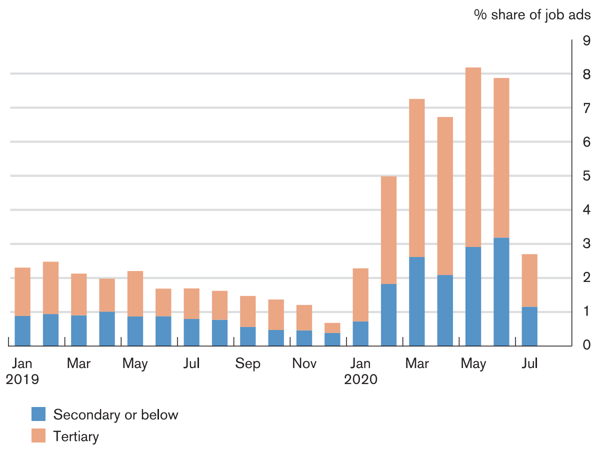
Note: The job advertisements without specifying their job levels are excluded in calculating the percentage share.
Sources: JobMarket and HKMA staff estimates.

25 Some job advertisements without specifying their job levels are considered as unclassified and excluded in this analysis.

26 In this study, a fresh graduate refers to a person who has finished their primary or secondary school, college, or university education without working experience. And those jobs for which a fresh graduate is suitable to apply are called fresh graduate jobs for simplicity.

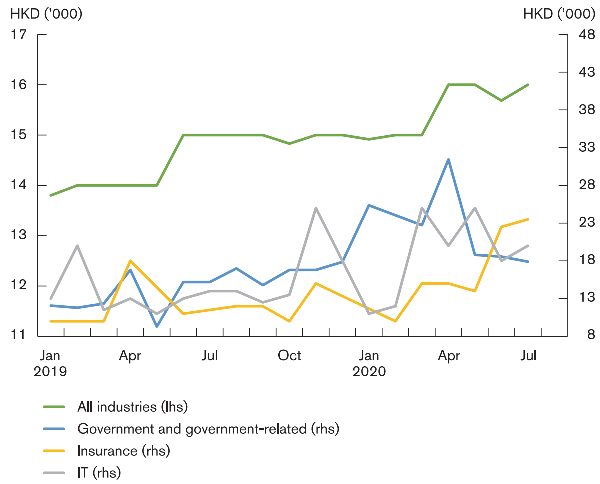
27 See Hershbein, B., and Kahn, L. B. (2018), "Do recessions accelerate routine-biased technological change? Evidence from vacancy postings", *American Economic Review*, 108(7), 1737–72.

Chart B3.6
Share of fresh graduate job advertisements by education levels



Note: A majority of job advertisements do not specify whether their job openings are suitable for fresh graduates. For completeness, these advertisements are included in calculating the percentage share.
Sources: JobMarket and HKMA staff estimates.

Chart B3.7
Median starting salary of full-time jobs



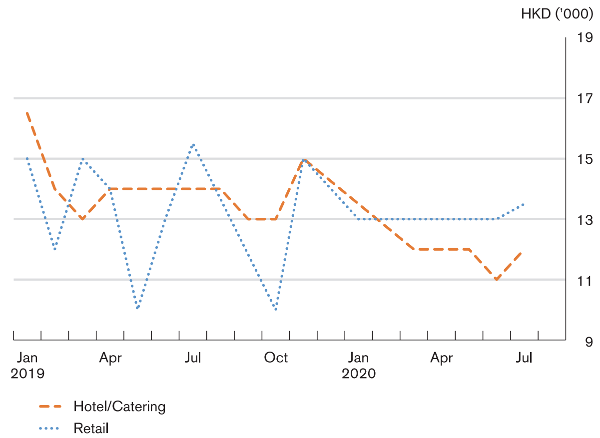
Note: Since not all companies provide salary offers in their job advertisements, some data are extrapolated using time trends.
Sources: JobMarket and HKMA staff estimates.

<u>Salary offers in online job advertisements</u>

Despite the worsening economic conditions in the first half of 2020, the overall job salary offer for full-time employees was on the rise (Chart B3.7). In fact, the median starting salary for all industries increased by around 7% in the first quarter of 2020 compared with a year ago.[28] Sectoral data reveal that increases in salary offers were found in the IT, insurance and some government-related sectors.

By contrast, when we look at the entry-level salary offers in the retail and hotel/catering sectors, which are usually perceived as the most vulnerable in the current economic climate, the starting salary decreased in the hotel/catering sector, while it remained roughly stable in the retail segment (Chart B3.8).

Chart B3.8
Median starting salary of full-time entry-level jobs in selected sectors



Note: Since not all companies provide salary offers in their job advertisements, some data are extrapolated using time trends.
Sources: JobMarket and HKMA staff estimates.

28 According to the C&SD, nominal wages and payrolls indices increased by 2.2% and 3.2% respectively in the first quarter of 2020 compared with a year ago. It should be noted that these indices measure the overall wage or salary changes for both new and existing staff members, while salary offers on job advertisements only pertain to new recruitment. As such, they are not strictly comparable.

Concluding remarks

Deterioration in the labour market is one of the key risks to the Hong Kong economy. Our study uses more timely big data on job advertisements posted on the JobMarket website to assess the latest developments in the demand for labour. We find that the total number of job advertisements can provide an early signal on market trends, and the current low level points to continued weakness in overall labour demand in the near term. In particular, recruitment in the consumption and tourism-related sectors remains quiet as the headwind from COVID-19 has not abated. There is also some evidence of upskilling (i.e. firms demanding higher-skilled workers) during this pandemic-induced economic downturn. This implies that middle-level workers with lower educational qualifications would face more difficulty in finding a job and there is a higher risk of skill mismatch hampering future labour market recovery.

However, there are some bright spots. For example, some industries, such as the medical and IT sectors, hastened their recruitment in response to the COVID-19 outbreak and the increased demand for digitalisation, and hiring in the financial sector recovered on the back of resilient financial market activities in the second quarter. Salary offers for full-time employees in some sectors such as IT, insurance and government-related sectors still saw some growth despite the economic downturn. Taken together, our study illustrates that big data on job advertisements could provide timely and nuanced information on firms' labour demand.

Finally, despite the usefulness of the job advertisement data, some caveats are worth attention. First, because not all job vacancies are posted online, the online job advertisements may not entirely reflect patterns in the whole population.[29] Second, job vacancies represent just one aspect of labour demand and they cannot fully capture the adjustment of labour inputs. For example, apart from reducing vacancies, companies may ask their employees to shorten working hours or take no-pay leave. Other technical issues such as incomplete information on job advertisements could also affect our analysis. As a result, the online job advertisement data should be considered as complementary, rather than a substitute, to the official vacancy data and other traditional labour statistics.

[29] That said, vacancies for available jobs have been increasingly advertised online instead of through traditional channels such as newspapers. A cursory look at the online job posting data and the official vacancy statistics also reveal that their aggregate vacancy trends are consistent with each other.