

Box 5.1**Decomposition of the year-on-year declines in labour force in the recent quarters⁽¹⁾**

The size of the labour force is dependent on the size of the working-age population⁽²⁾ and the share of this working-age population that choose to work, i.e. the overall labour force participation rate (LFPR).

Amid the economic downturn, the labour force declined by 0.2% over a year earlier in the third quarter of 2019, and the decline widened successively to 2.2% in the first quarter of 2020, the largest on record. This article decomposes the fall in the labour force in the recent quarters into the change in the size of the working-age population and that in overall LFPR. As LFPR is age dependent (generally speaking older people have lower LFPR), the change in overall LFPR was also broken down into two components, namely the change in age structure of the working-age population and the changes in LFPRs of different age groups, in order to have a better understanding of the dynamics currently at play in the labour market.

Using the first quarter of 2020 as an illustration, the labour force fell by 2.2% over a year earlier, and the working-age population declined marginally by 0.2%, suggesting that 2.1 percentage points of the decline in labour force was due to the drop in overall LFPR, which fell by 1.25 percentage points from its year-ago level of 60.71% to 59.46%. A decomposition of the fall in overall LFPR using standard shift-share analysis⁽³⁾ suggests that about 36% of the drop (0.45 percentage point) in overall LFPR was attributed to the change in age structure of the working-age population, whereas the remaining 64% (0.80 percentage point) was due to the changes in LFPRs of individual age groups. Hence, these two factors contributed 0.7 and 1.3 percentage points respectively to the 2.1 percentage-point decline in the labour force. Using the same method, the year-on-year rates of change in labour force in the past quarters since the first quarter of 2018 are decomposed, with results shown in *Chart 1*.

(1) All figures are compiled from the General Household Survey conducted by the Census and Statistics Department and include foreign domestic helpers. Individual figures may not add up to total due to rounding.

(2) Refers to land-based non-institutional population aged 15 and above.

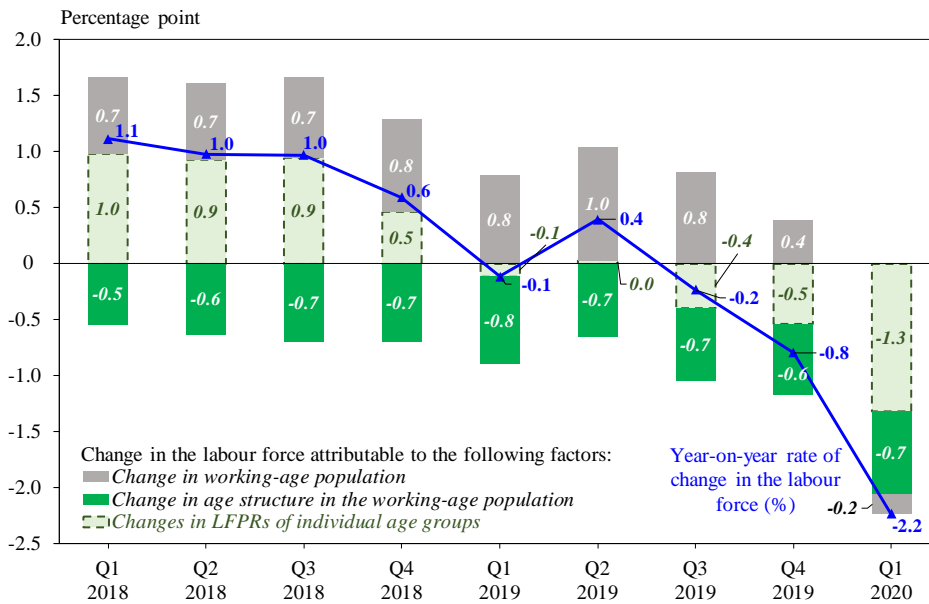
(3) Using the formula below, the year-on-year change in overall LFPR is decomposed into (1) the change in age structure of the working-age population while holding LFPRs of individual age groups constant (i.e. the first term on the right hand side of the formula) and (2) the changes in LFPRs of individual age groups while holding shares of respective age groups constant (i.e. the second term on the right hand side of the formula).

$$LFPR_{t+k} - LFPR_t = \sum_i LFPR_{i,t} \times (share_{i,t+k} - share_{i,t}) + \sum_i share_{i,t+k} \times (LFPR_{i,t+k} - LFPR_{i,t})$$

where $LFPR_t$ denotes the overall LFPR in period t , $LFPR_{i,t}$ denotes the LFPR of age group i in period t , and $share_{i,t}$ denotes the share of age group i in the working-age population in period t .

Box 5.1 (Cont'd)

Chart 1: Decomposition of the year-on-year rates of change in labour force



As seen in **Chart 1**, the change in age structure in the working-age population amid population ageing, through its effect on lowering the overall LFPR, has persistently been a drag on the labour force, contributing a drag of 0.5 to 0.8 percentage point to the year-on-year rate of change in the labour force in the past quarters. On the other hand, the widening in the year-on-year decline in the labour force from the third quarter of 2019 to the first quarter of 2020 was largely due to two factors. *First*, the working-age population switched from a 0.8% growth in the third quarter of 2019 to a 0.2% decline in the first quarter of 2020. *Second*, the drag arising from changes in LFPRs of individual age groups enlarged from 0.4 percentage point to 1.3 percentage points over the period. A closer look showed that the LFPRs of most age groups recorded year-on-year declines in the first quarter of 2020. Specifically, the LFPRs of those aged 15-24, 30-39 and 60 and above declined more sharply by 2.3, 1.2 and 1.0 percentage points respectively, whereas the LFPRs of those aged 40-49 and 50-59 declined by 0.4 and 0.7 percentage point respectively.

A concurrent decrease in LFPR across most age groups may in part reflect that, in response to the sharp deterioration in economic and labour market conditions, a number of workers have chosen to leave the labour force for the time being when losing their jobs⁽⁴⁾. It is also likely that when economic conditions return to normal, many of these people may choose to re-enter the labour force.

(4) It refers to workers who have chosen to leave the labour force in order to engage in household duties and to take rest, among other reasons, but excludes discouraged workers who have not sought work because they believe that work is not available to them. The latter is included in the labour force and classified as unemployed.