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SELECTED ISSUES PAPER

Diagnosis of Decreasing Labor Force Participation in Hong Kong SAR

Ceara Hui, Narayanan Raman, Hamid Reza Tabarraei, Stella Tam, Zhang Wu, Yizhi Xu, and Ruihua Yang

SIP/2026/046

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ABSTRACT: Hong Kong SAR is facing a sustained decline in labor force participation rate (LFPR), which accelerated in recent years, driven mainly by population aging and further exacerbated by a drop in participation among youth. While the decline in youth LFPR was partly attributable to the mechanical effect of rising share of non-local students in Hong Kong SAR, it also points to postponed labor market entry among the youth which largely reflects continued education. The underlying motivations may suggest shifting job market landscape and labor skill requirements amid structural sectoral shifts, the emergence of artificial intelligence, and more intense labor market competition with increasing labor force educational attainment.

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SELECTED ISSUES PAPERS

Diagnosis of Decreasing Labor Force Participation in Hong Kong SAR

Hong Kong SAR

Prepared by Ceara Hui, Narayanan Raman, Hamid Reza Tabarraei, Stella Tam, Zhang Wu, Yizhi Xu, and Ruihua Yang[1]

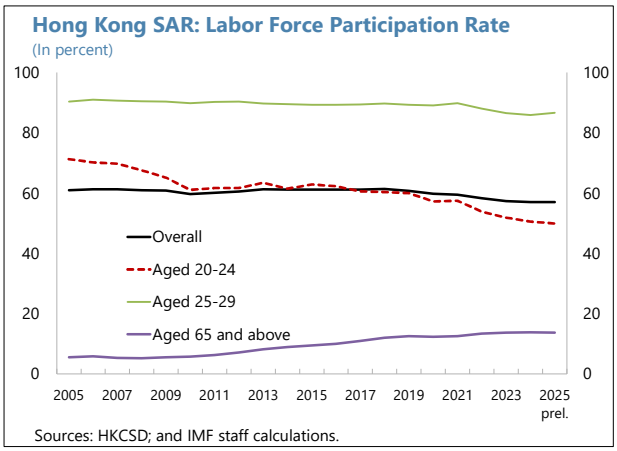
[1] The authors would like to thank Michael Cheng, Thomas Helbling, Ivo Krznar, Haibin Zhu, and participants at the IMF-HKMA brownbag seminar for helpful comments.

DIAGNOSIS OF DECREASING LABOR FORCE PARTICIPATION IN HONG KONG SAR[1]

Hong Kong SAR is facing a sustained decline in labor force participation rate (LFPR), which accelerated in recent years, driven mainly by population aging and further exacerbated by a drop in participation among youth. While the decline in youth LFPR was partly attributable to the mechanical effect of rising share of non-local students in Hong Kong SAR, it also points to postponed labor market entry among the youth which largely reflects continued education. The underlying motivations may suggest shifting job market landscape and labor skill requirements amid structural sectoral shifts, the emergence of artificial intelligence, and more intense labor market competition with increasing labor force educational attainment.

A. Introduction

1. Hong Kong SAR is facing a sustained decline in its labor force participation rate (LFPR), a trend that has accelerated in recent years. The territory's LFPR[2] fell from 61.1 percent in 2015 to approximately 56.9 percent in 2025, representing a contraction in labor market supply relative to the working-age population. The decline has been most pronounced among youth aged 20-24, particularly since 2021 (text chart), in sharp contrast to the rising LFPR observed across several other older age groups.



2. The secular decline in Hong Kong SAR's LFPR reflects two key factors: population aging and falling youth labor force participation. As highlighted in the 2024 Hong Kong SAR Article IV Consultation, population aging continues to exert downward pressure on labor force participation, mainly through the extensive margin. For instance, the population share of older cohort (aged 65 and above), who typically exhibit the lowest LFPR, has risen steadily from 15.6 percent in 2015 to 24.2 percent in end-2025. Meanwhile, the LFPR of the 65 and above age group rose from 9.4 percent in 2015 to 13.5 percent in 2025 (text chart), in part due to healthy aging and longer working lives. However, it remains well below the levels of the younger cohorts, resulting in negative contribution to the overall LFPR. In addition, an increasing share of the youth cohort has

[1] Prepared by Narayanan Raman, Hamid Reza Tabarraei, Yizhi Xu, and Ruihua Yang (all from the IMF) and Ceara Hui, Zhang Wu, and Stella Tam (all from the HKMA).

[2] Refers to the LFPR for all workers in Hong Kong SAR, including foreign domestic workers. The more expansive definition was used to facilitate cross-economy comparisons later in this chapter. That said, using the LFPR for the workforce excluding foreign domestic workers leaves the subsequent analysis largely unchanged.

opted to remain outside the labor force in recent years, weighing on the aggregate LFPR through the intensive margin. The trend of declining youth participation raises important questions about the underlying drivers as well as implications for future labor market policies-- the focus of this note.

3. This Selected Issues Paper addresses the following three sets of key questions with a focus on youth labor force participation, while recognizing population aging as the main driver of the decline in LFPR:

- **What are the stylized facts about Hong Kong SAR's labor market?** What are structural trends and cyclical patterns in labor force, employment and LFPR (Section B)?
- **What are the main compositional drivers of Hong Kong SAR's declining LFPR?** Specifically, how much of the decline can be attributed to population aging versus falling youth labor force participation (Section C)? How does Hong Kong SAR's decomposition of LFPR changes compare to peer economies?
- **What factors explain the recent decline in youth participation (Section D)?** What are the structural drivers—such as economic structure transformation, higher labor market educational attainment, and technological change—that contribute to the decline of youth LFPR? Does rising re-education among youth reflect adaptation to evolving skill demands amid the emergence of artificial intelligence and other technological disruptions?

4. The paper highlights the role of demographic trends, youth education choices, and structural labor market shifts in shaping labor force participation outcomes in Hong Kong SAR.[3] The shift-share analysis of the compositional changes in LFPR shows that population aging remains the primary driver of the decline in aggregate LFPR, while the recent fall in youth LFPR also made a contribution to the decline in aggregate LFPR, distinguishing Hong Kong SAR from some peer economies. In addition, household surveys and labor market data show that continued education is the main driver of the decline in youth LFPR, shedding light on the underlying motivations for extended training including sectoral structural shifts and evolving labor skill requirements, emergence of AI, and possibly rising labor market competitiveness arising from higher educational attainment. The paper concludes with policy implications.

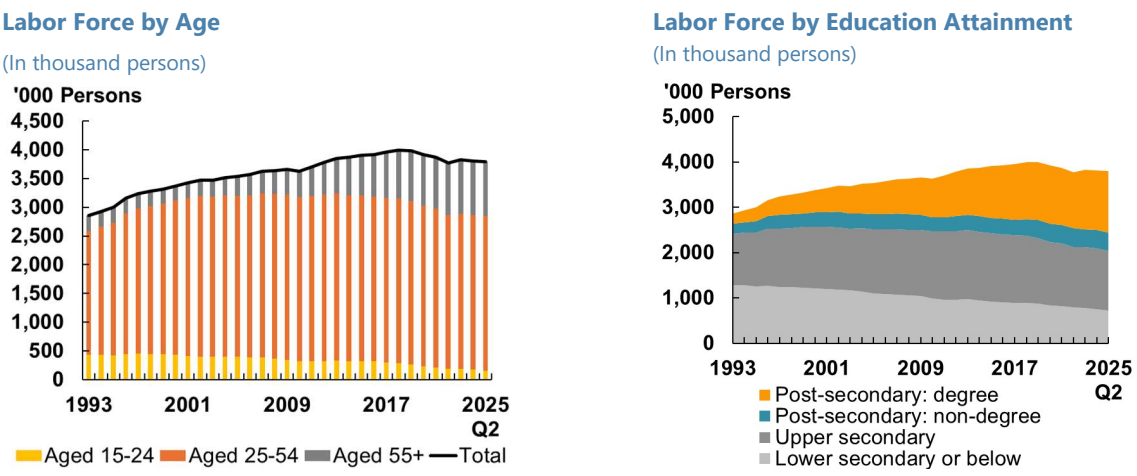
[3] The decline in labor force participation is widely viewed in literature as structural, driven primarily by population aging and shifts in cohort-specific behavior. Evidence for advanced economies suggests that aging and longer-term forces, such as technological change, health and disability, and changing attachment patterns, explain most of the post-2000 decline in total LFPR, with cyclical factors playing a more limited role (Grigoli et al., 2021; Pérez Arce and Prados, 2021). However, recent studies highlight prolonged cyclical responses among younger workers in the U.S. following major shocks (Cajner et al., 2021).

B. Stylized Facts of Hong Kong SAR's Labor Market

Structural and Cyclical Trends in the Labor Market

5. Over the past three decades, Hong Kong SAR's labor force has undergone significant structural transformation. The share of older workers (aged 55 and above) has almost doubled, rising from 13 percent in 2010 to 25 percent in 2025Q2, while the proportions of youth (aged 15–24) and prime-aged workers (aged 25–54) have declined (Text Figure 1, panel 1). Meanwhile, the workforce has become increasingly well-educated. The share of individuals with post-secondary education attainment (degree or above) increased markedly from 24 percent in 2010 to 36 percent in 2025Q2 (Text Figure 1, panel 2). This upward trend is particularly pronounced among youth (aged 15–24), for whom the proportion with post-secondary education doubled, from 25 percent in 2010 to 52 percent in 2025Q2, reflecting a strong shift toward higher educational attainment.

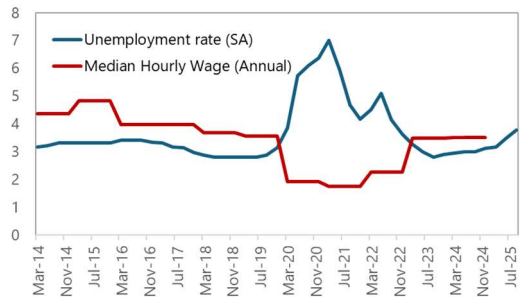
Text Figure 1. Hong Kong SAR: Structural Trends of Labor Force



Sources: C&SD; and IMF and HKMA staff calculations.
Note: Labor force includes foreign domestic helpers.

6. Cyclical indicators point to a recovery in labor market conditions from the pandemic trough, although the rebound has been uneven across population groups. The unemployment rate declined to below 4 percent following the COVID reopening, down from a peak of 7 percent in 2021Q1. Hourly wage growth has also strengthened, rising to above 3 percent year-on-year compared from a trough of 0.9 percent during the pandemic peak. Despite these improvements, pressures persist for specific segments of the labor force. Notably, the unemployment rate among individuals with high

Hong Kong SAR: Cyclical Labor Market Indicators
(Percent)

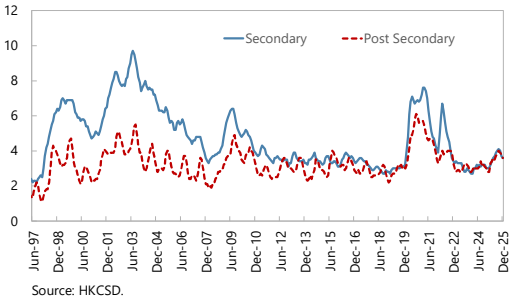


Sources; C&SD; and IMF staff calculations.

educational attainment (i.e., those with post-secondary qualifications) has trended upward over time, recently converging with that of workers with lower educational attainment (Text Figure 2, panel 1). This may indicate increased competition and some potential mismatch between worker skills and job demands in the labor market. Moreover, the youth unemployment rate has diverged markedly from other age groups over the past decade, with the gap widening further in recent years (Text Figure 2, panel 2).

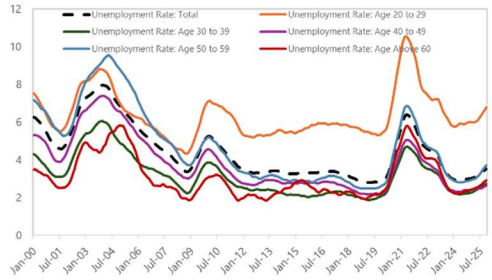
Text Figure 2. Hong Kong SAR: Breakdowns of Unemployment

Unemployment Rate by Educational Attainment
(In percent, 3-month moving average)



Source: HKCSD.

Unemployment Rate by Age Groups
(Percent; 12-month moving average)



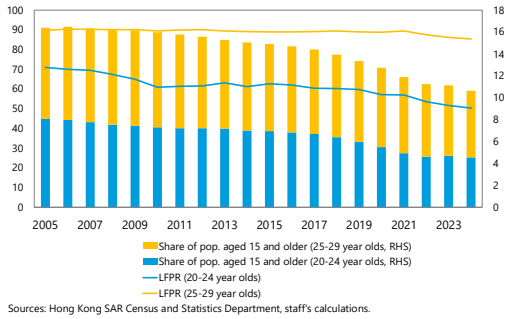
Sources: CEIC; C&SD; and IMF staff calculations.

Compositional Shifts in the Labor Force Participation Rate

7. The shifting demographic structure has played a significant role in shaping Hong Kong SAR's LFPR. The youth cohort has seen its population share and participation rate decline steadily over the past two decades (Text Figure 3, panel 1). In particular, the LFPR for those aged 20–24 fell from above 70 percent in 2005 to slightly below 50 percent in recent years, while their share in the total population also contracted, amplifying the downward pressure on aggregate LFPR. In contrast, the share of older individuals (aged 65 and above) has more than doubled since 2005, rising from around 14 percent of the population aged 15 and above to over 26 percent of this population (Text Figure 3, panel 2). Although the participation rate among seniors has increased gradually, it remains low relative to other age groups, suggesting that demographic aging will continue to weigh on overall LFPR.

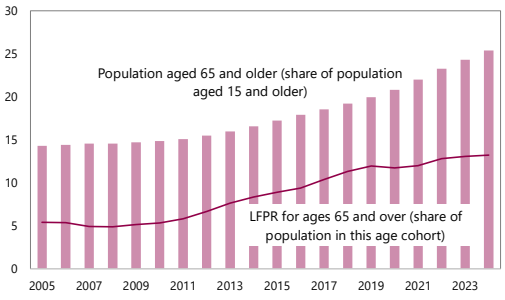
Text Figure 3. Hong Kong SAR: Labor Force Participation Rate by Age

Youth LFPR and Population Share
(Percent)



Sources: Hong Kong SAR Census and Statistics Department, staff's calculations.

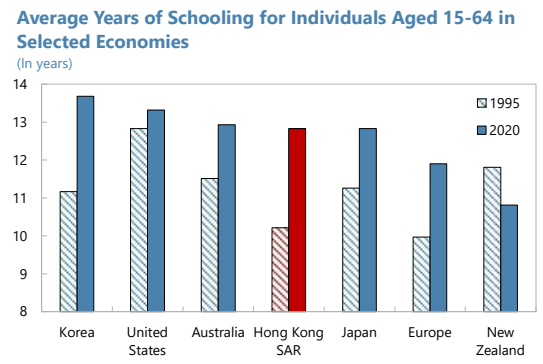
Senior LFPR and Population Share
(Percent)



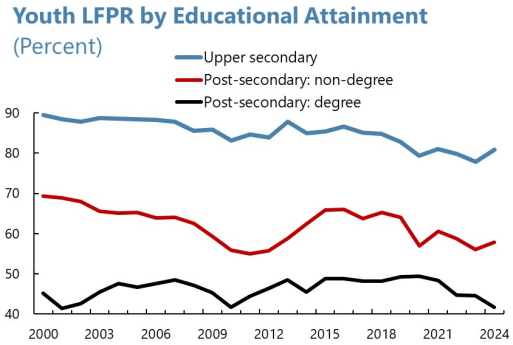
Sources: Hong Kong SAR Census and Statistics Department, staff's calculations.

8. Longer schooling to achieve higher educational attainment and adapt to evolving skill demands appears to be a key factor behind the decline in youth labor force participation in Hong Kong SAR. As a result of extended years of free education provision (from 9 years to 12 years) and increased opportunity for post-secondary education, average years of schooling increased significantly since the 1990s, with the magnitude of the rise exceeding that in most peer advanced economies (Text Figure 4, panel 1). Participation rates have fallen across all education groups among the youth over the past decades, with the decline particularly pronounced among those with secondary or non-degree post-secondary educational attainment during 2000-20, whose LFPR fell by almost 10 percentage points (Text Figure 4, panel 2). More recently, youth LFPR for those with post-secondary educational attainment started to decline. These shifting patterns reflect an increasing share of youth enrolled in post-secondary education and may have the incentives toward further postgraduate degree education in order to adapt to evolving labor market skill demand. This could lead to delays in their labor market entry.

Text Figure 4. Hong Kong SAR: Education and LFPR



Sources: Barro and Lee (2015); Lee and Lee (2016); and Our World in Data.

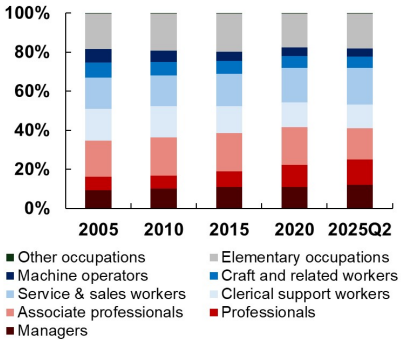


Sources: C&SD; IMF and HKMA staff calculations.

9. Consistent with this interpretation, the share of high-skill professional occupations has increased over the past decade, suggesting a rising demand for labor with higher educational attainment and more comprehensive skill requirement. The share of employed workers in manager, professional and associate professional roles has risen since 2005, while employment in elementary occupations and clerical support roles has declined (text chart). This structural shift implies that job seekers, particularly the youth, may increasingly perceive additional education as necessary to remain competitive in a labor market that is moving toward higher-skill, higher-qualification jobs.

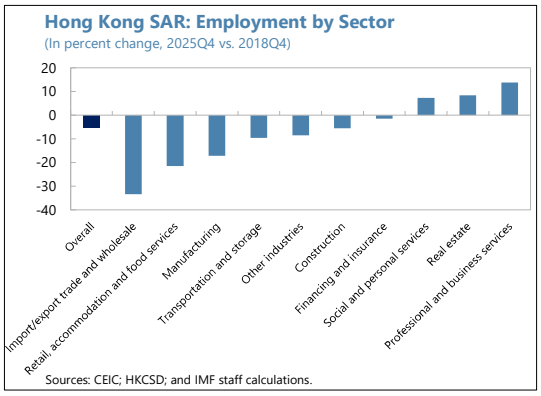
Hong Kong SAR: Total Employment by Occupation

(Percent)



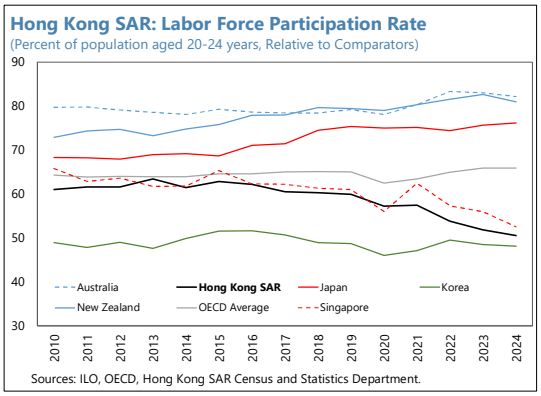
Sources: C&SD; HKMA and IMF staff calculations.
Note: Data on employment by occupation across years were compiled based on slightly different classification schemes. Specifically, data for 1993–2010 follow ISCO-88, data for 2011–2015 follow the old ISCO-08 framework, and data from 2016 onwards follow the new ISCO-08.

10. Recent sectoral shifts in employment highlight Hong Kong SAR's continued transition toward a services-oriented economy centered on financial and business services. Employment has expanded in professional services and real estate (text chart). In contrast, traditional sectors, including manufacturing, trade and wholesale, retails, and accommodation and food services, have recorded substantial declines in employment since 2018. These sectoral shifts are also reflected in youth employment patterns, as discussed in Section D, with finance and other professional service sectors accounting for a growing share of youth employment. This structural reallocation underscores Hong Kong SAR's role as a regional hub for financial and business services and reflects the ongoing economic transition in the context of the Greater Bay Area integration.



Cross-Economy Comparison

11. Hong Kong SAR is not unique in facing low and decreasing youth labor force participation. While Hong Kong SAR differs from OECD average in both the level and trend of LFPR, similar pressures are found in two regional peers—Korea and Singapore. In Korea, while relatively stable, youth LFPR has remained significantly below that of other advanced economies, as a large share of youth postpones their careers in order to land jobs in large firms or professional jobs (see 2024 Korea Article IV Consultation). A downward trend has been observed in Singapore, where education-related delays in labor market entry have contributed to falling youth LFPR (MAS, 2024). Against this backdrop, a cross-economy comparison provides useful context and helps identify potential policy lessons for Hong Kong SAR.



C. Shift-Share Analysis

12. To assess the relative importance of declining youth labor force participation versus population aging, changes in the LFPR are decomposed into contributions from demographic shifts and within-group changes in participation rates. As shown above, factors such as age cohort composition and within-cohort LFPR trends can exert offsetting effects on the aggregate LFPR. For instance, although elder age LFPR has increased from a low base, it remains below the overall LFPR. Consequently, a rising elderly share tends to weigh on the aggregate LFPR. Similarly, with high albeit falling youth LFPR, the declining youth share could result in lower aggregate LFPR. A shift-share analysis (SSA) helps disentangle these potentially offsetting forces and clarify their respective contributions to observed change in the LFPR. This approach has been widely applied not

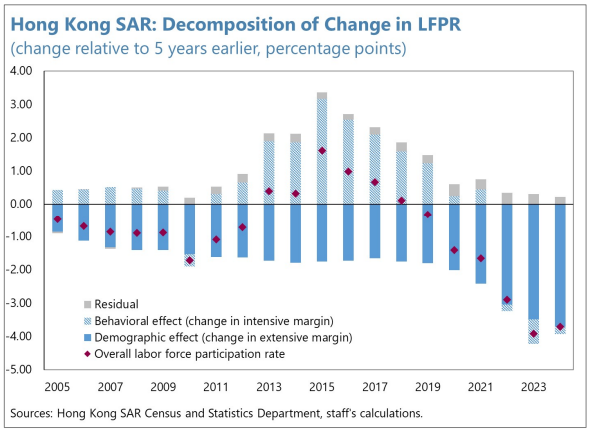
only in labor market analyses (e.g., Cheung, 2024; Grigoli, Koczan, and Topalova, 2018) but also in studies of shifts in trade patterns and productivity growth (IMF, 2024; Novta, Xu, and Zymek, 2024).

13. Specifically, the SSA quantifies the impact of demographics by holding cohort level LFPRs constant (the extensive margin) and impact of behavioral changes by holding demographic factors constant (the intensive margin). Formally, the change in the LFPR is expressed as the following:

$$\Delta \mathrm{LFPR}_{\mathrm{overall,t}} = \sum_{\mathrm{i}} \mathrm{S}_{\mathrm{i,t-b}} \times \Delta \mathrm{LFPR}_{\mathrm{i,t}} + \sum_{\mathrm{i}} \Delta \mathrm{S}_{\mathrm{i,t}} \times \mathrm{LFPR}_{\mathrm{i,t-b}} + Residual_t$$

where $S_{i,t}$ is the population share of the ith age group in the population at time t such that $\sum_i S_i = 1$ and b is the base period relative to which the changes are being examined. The groups are mutually exclusive and exhaustive, which allows us to further break down the extensive and intensive margin contributions by each age cohort. The analysis examined the population aged 15 and above, breaking them down into 10 five-year cohorts from ages 15-19 through 60-64, with a final cohort for those aged 65 and above. Further, as year-on-year changes in LFPR data may be impacted by short-term cyclical fluctuations, the analysis focuses on changes over the medium term, proxied by the change in each year relative to 5 years earlier (i.e., b = 5). Data are taken from the mid-year population statistics and LFPR data published by the Hong Kong SAR Census and Statistics Department (C&SD).

14. The SSA confirms that both demographic and behavioral shifts have contributed to the decline in the LFPR, with demographic shifts accounting for the bulk of the adjustment. The largest contribution comes from demographic changes, both a decline in the number of younger workers (aged 15 to 59 years) and an increase in the population aged 60 and above, reflecting the aging population. The behavioral component of the decline has played a more limited but negative role: of the 3.7 percentage point decline in the LFPR in 2024 relative to 2020, about 0.22 pp was due to behavioral changes.



15. The modest behavioral contribution reflects offsetting LFPR trends across age groups, with the recent decline in youth participation slightly outweighing gains among older cohorts. Behavioral changes impacting the aggregate LFPR primarily reflect changing willingness of both younger and older adults to remain engaged in the labor force. To simplify the presentation, age cohorts are aggregated into 5 groups: 20-24 year olds; 25-29 year olds; 60-64 year olds; 65 and above; and all other age groups covering the 15-19 and 30-59 age cohorts. This more granular decomposition analysis suggests two key findings:

- The single most significant factor impacting the decline in the aggregate LFPR is the demographic impact of falling share of younger cohorts, particularly adults in their 20s. As

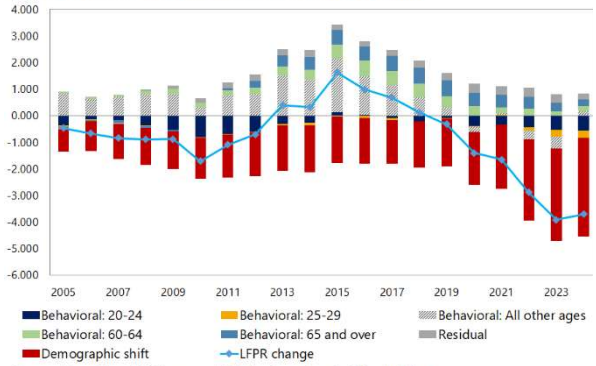
younger cohorts tend to have higher levels of LFPR, the shrinking population share of these age groups exerts downward pressure on overall LFPR.

- Cohort-level participation behavior has diverged markedly across age groups: older workers have become more willing to remain in the labor force. However, participation among younger cohorts has declined. In particular, there has been a significant decline in the LFPR in the 20-24 age cohort, which was the most significant behavioral contributor to the lower overall LFPR, accounting for 0.56 pp of the overall 3.71 pp decline over 2020-2024. In contrast, the significant increase in the LFPR of older workers exerted an opposite impact on the overall LFPR, mitigating the impact of lower LFPR among younger workers and the demographic shift. Indeed, the higher LFPR for workers in the 65 and over offset nearly half the contribution from the behavioral shift among workers aged 20-24.

Figure 1. Shift-Share Analysis in Selected Economies

Hong Kong SAR: Contribution to Change in LFPR

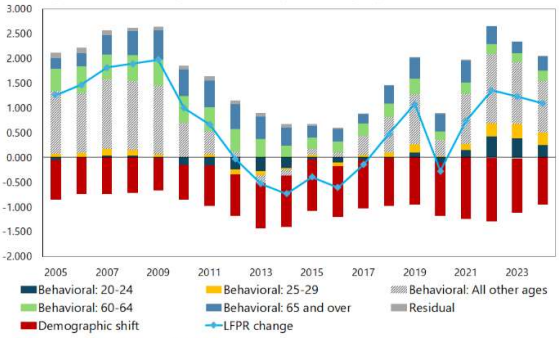
(change relative to 5 years earlier, percentage points)



Sources: Hong Kong SAR Census and Statistics Department, staff calculations.

Australia: Contribution to Change in LFPR

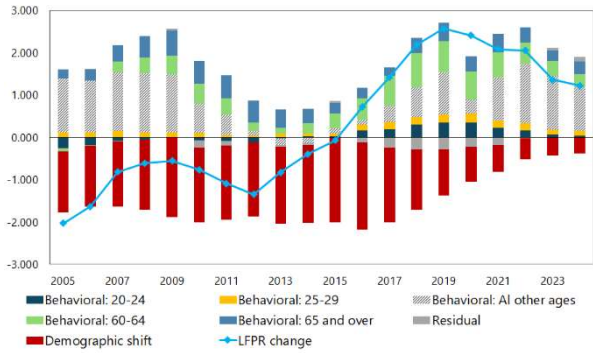
(change relative to 5 years earlier, percentage points)



Sources: OECD, IMF staff calculations.

Japan: Contribution to Change in LFPR

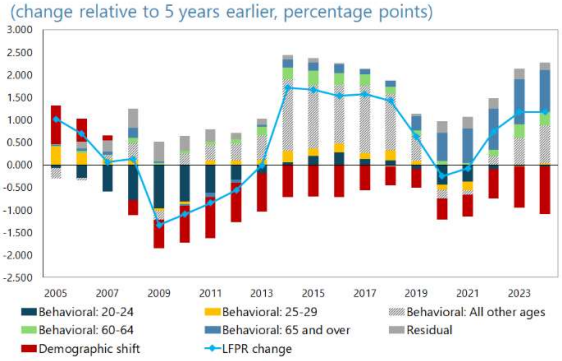
(change relative to 5 years earlier, percentage points)



Sources: OECD, IMF staff calculations.

Korea: Contribution to Change in LFPR

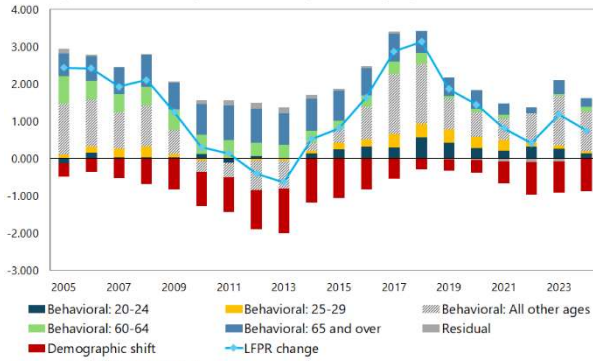
(change relative to 5 years earlier, percentage points)



Sources: OECD, IMF staff calculations.

New Zealand: Contribution to Change in LFPR

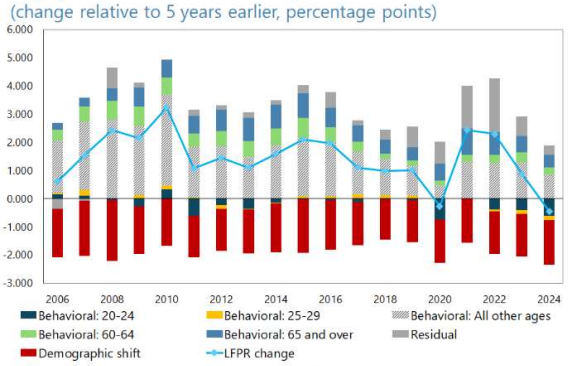
(change relative to 5 years earlier, percentage points)



Sources: OECD, IMF staff calculations.

Singapore: Contribution to Change in LFPR

(change relative to 5 years earlier, percentage points)



Sources: ILO, Singapore Dept. of Statistics, IMF staff calculations.

16. Hong Kong SAR's experience differs from that of most regional peers, particularly with respect to labor force participation among younger adults. Replicating the SSA for other advanced economies in the Asia-Pacific region (Australia, Japan, Korea, New Zealand and Singapore) shows that Hong Kong SAR's experience stands out relative to most of this group, with the exception of Singapore,[4] and to a lesser extent Korea. For all economies, the demographic impact of aging reduces overall LFPR. However, in many economies, this is offset by increases in the LFPR for both younger and older workers. For instance, in Australia, Japan and New Zealand, the increase in the LFPR for workers aged 20-24 accounted for between one-twentieth to nearly a quarter of the increase in the overall LFPR in 2024. In Korea, while youth participation declined, its contribution on the overall LFPR was marginal, and the overall LFPR nonetheless rose by 1.2 pp in 2024. In contrast, Singapore stood out as the only jurisdiction, along with Hong Kong SAR, where the overall LFPR declined in 2024. In 2024, the overall LFPR for Singapore declined by 0.46 pp relative to 2020, while the negative contribution from declining participation among young adults exceeded this decline, at 0.61 percentage points. This pattern likely reflects a decline in the LFPR of younger workers following the unwinding of a temporary pandemic-era boost to youth labor force participation, in particular women, who had delayed returning to education during the pandemic lockdown. However, with the normalization of conditions, younger workers fell below their pre-pandemic LFPR (MAS, 2024).

D. Drivers of Declining Youth Labor Force Participation

17. The declining youth participation in labor force appears to be largely driven by delayed entry into the labor force associated with continued education. According to the General Household Survey conducted by the C&SD, 90 percent of economically inactive labor force aged 20–24 cited "attending an educational institution" as the main reason for not participating in the labor market in 2024 (Figure 2, panel 1).[5] This share is notably higher than in 2020 (85.7 percent) and exceeds the pre-pandemic average of 86.9 percent over 2000-2019 (Figure 2, panel 2). This upward trend has been mostly driven by economically inactive females (Figure 2, panel 3) and is consistent with the growing share of youth enrolled in full-time education (Figure 2, panel 4), suggesting that education-related decisions are playing an increasingly important role in aggregate youth labor supply, particularly among the female group.

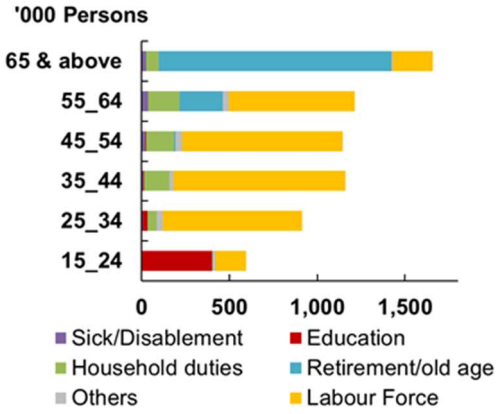
[4] Note that the data for Singapore is drawn from the national authorities and International Labor Organization, whereas for the other economies, data was sourced from the Organization for Economic Development. This may potentially drive the relatively large residuals observed in the SSA for Singapore relative to the other economies.

[5] According to the C&SD, economically inactive population are the ones who are part of the working-age population but are not participating in the labor force.

Figure 2. Hong Kong SAR: Distribution of Working-Age Population

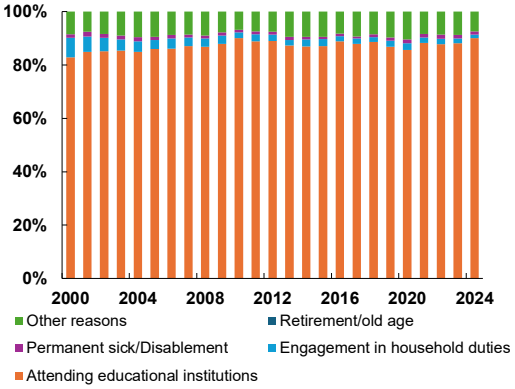
Distribution of Working-Age Population by Age

(Thousand; 2024)



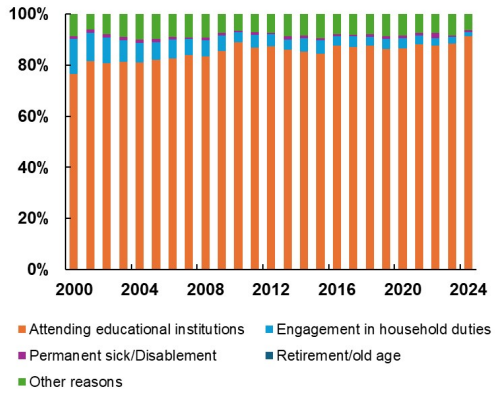
Economically Inactive Persons by Reason

(Percent of total inactive persons; aged 20-24)



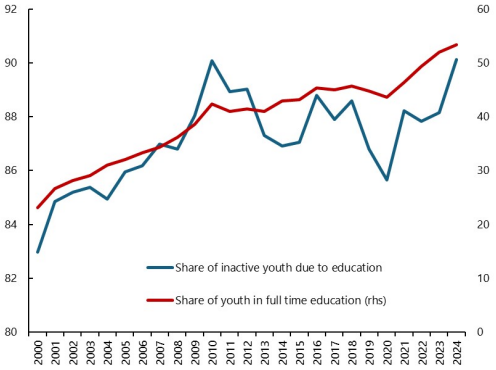
Economically Inactive Female by Reason

(Percent of total inactive persons; aged 20-24; female)



Share of Youth Aged 20-24 Receiving Education

(LHS: percent of inactive youth; RHS: percent of youth population)

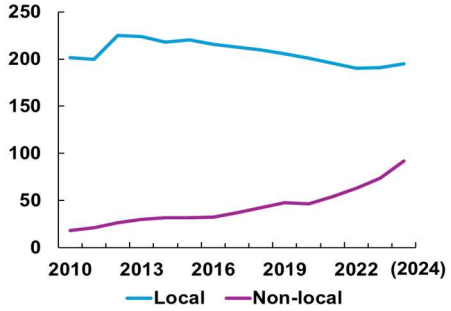


Sources: Census and Statistics Department (C&SD) General Household Survey, IMF and HKMA staff calculations.

18. Besides the incentive for further education, the rising share of non-local students in Hong Kong SAR has also mechanically lowered the LFPR among youth. The rapid increase in the share of non-local student enrollments in Hong Kong SAR's post-secondary programs (text chart), driven by the authorities' efforts to position Hong Kong SAR as an international education hub and attract global talents since early 2010s, has expanded the working-age population with individuals who typically do not participate in the labor market, thereby mechanically lowering the LFPR.

Hong Kong SAR: Total Post-Secondary Program Enrollments

(In thousand)



Sources: Hong Kong Education Bureau; and IMF and HKMA staff calculations.

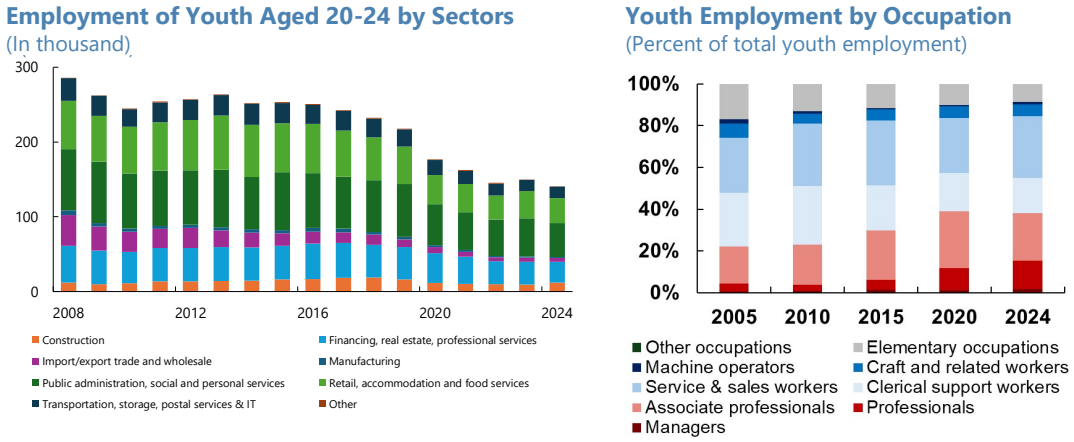
19. The rest of the section unpacks and discusses several potential factors that may influence youths' decisions to pursue further education and postpone entry into the labor force. These factors include sectoral structural shifts, rising educational attainment in the labor market, changing labor skill requirement, and the emergence of AI.

Sectoral Structural Shifts and Evolving Labor Skill Requirement

20. The ongoing structural shifts in Hong Kong SAR's economy have altered labor demand and the skill composition of employment, further encouraging youth to pursue additional education and training. As part of the efforts to deepen the integration with the Greater Bay Area (GBA), some traditional sectors, particularly retail and consumer services, have increasingly expanded and relocated activity to neighboring cities such as Shenzhen, contributing to changes in the territory's sectoral composition. At the same time, employment share has been rising in high-value sectors, including financial and professional services. These developments are reshaping the skill requirements of the labor market and reinforcing incentives for youth to upgrade qualifications in order to remain competitive.

21. Consistent with these structural trends youth employment in Hong Kong SAR has contracted markedly over the past decade, with the decline concentrated mostly on traditional sectors and low skill occupations. As shown in Text Figure 5 panel 1, total youth employment has fallen steadily since the late 2000s and accelerated since the pandemic, possibly reflecting both weaker youth labor supply and softer demand. The contraction is most pronounced in retail, accommodation, and food services sectors, which have historically been the largest employer of youth, amid the pandemic outbreak during 2020 to 2023, ongoing structural transformation, rising regional competition, and changing consumption patterns. Meanwhile, youth employment in finance and professional-related sectors has remained relatively stable although the employment is small in scale. In addition, the occupational distribution of youth employment has shifted away from lower-skill jobs (Text Figure 5, panel 2). The share of craft and related workers, services and sales workers, and clerical support workers, have shrunk over the past decade. The broad-based deterioration in labor market prospects for low-skill youth in traditional sectors underscores the increasing importance of skills upgrading and continued education as pathways to labor market entry in an economy transitioning toward higher-value activities.

Text Figure 5. Hong Kong SAR: Compositions of Youth Employment

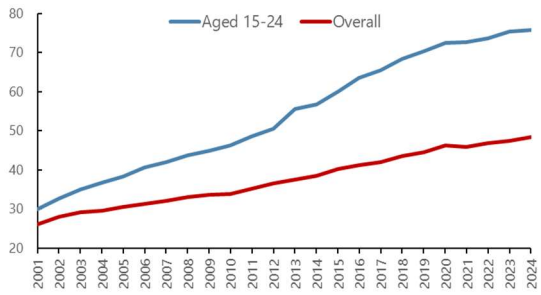


Sources: CEIC; C&SD; and IMF and HKMA staff calculations.

Increasing Labor Market Competition and Educational Attainment

22. Higher educational attainment especially among the youth, could be an important factor behind delayed entry into the labor force. The General Household Survey shows that continued education is the main reason for the delayed labor force entry. Meanwhile, educational attainment of employed workers has been rising, particularly within the youth cohort (text chart), indicating increasing job market competition and shifting job market landscape that youth may face amid the transformation of economic structure. Against this backdrop, the central hypothesis examined is that a more educated workforce encourages youth to invest further in education to meet the evolving skill requirement while the economic structure shifts and thereby delay entry into the labor force.

Hong Kong SAR: Share of Employed Workers with Post-Secondary Educational Attainment
(Percent)



Sources: C&SD; IMF and HKMA staff calculations.

23. A cohort-based regression is estimated to gauge the extent to which competition in the labor market has contributed to the recent decline in youth LFPR. The exercise distinguishes age fixed effects (i.e., labor market attachment over the life cycle), cohort fixed effects (i.e., systematic differences across birth cohorts), as well as cyclical and structural indicators. Following the approach of Balleer et al. (2009), the model is expressed as follows:

$$log\frac{LFPR_{g,t}}{1-LFPR_{g,t}} = \alpha_g + \sum_{b=1976}^{2004} C_{g,b,t}\beta_b + \lambda_g X_t + \varepsilon_{g,t}$$

where g indexes five-year age groups ranging from 15–19 to 45-49,[1] t denotes year, and b is birth year. The dummy indicator $c_{g,b,t}$ is equal to 1 when cohort b is observed as age group g in year t. The vector X_t includes controls capturing the business cycle (output gap, contemporaneous and two lags), fertility (total fertility rate)[2]. Importantly, educational attainment—measured as the share of employed persons aged 25 and above who have ever attained a post-secondary degree—is included in the model[3] to assess if a more educated labor force tends to create an incentive for younger individuals to invest in further education, enhancing their competitiveness in the labor market.[4] For each gender, a system of seemingly unrelated regressions for seven age groups with the constraint of identical cohort effects across equations is estimated simultaneously. Data on output gap is estimated by the Hong Kong Monetary Authority (HKMA)[5], while other data are sourced from the General Household Survey and the Demographics Statistics Section of the C&SD.[6]

24. Regression results indicate that higher educational attainment among the youth labor force is negatively associated with the likelihood of youth entering the labor force. A one-percentage-point increase in the share of workers aged 25 and above that have ever attained a post-secondary degree is associated with the decline in the relative likelihood of entering the labor force for the 20-25 age group by about 5 basis points for both males and females. This is consistent with the narrative that suggests that the education level of the labor market may have affected youth population's education and participation decisions (Text Figure 6, panel 1). The impact of the labor force's education level differs between gender in the 25-30 age group, possibly reflecting differences in household duties and fertility-related considerations among women. Counterfactual exercises further underscore the role of education. Holding educational attainment at its 2010–2021 average from 2022 onward implies that LFPR among the 20-24 age group during 2022–2024 would have been, on average, 5.7 percentage points higher for both males and females (Text Figure 6, panel 2). These results confirm that rising educational attainment has been an important driver for the recent decline in youth labor force participation.

[1] Given the constraint on degrees of freedom and the focus on younger generations, the model covers only cohorts born between 1976 and 2004, corresponding to seven 5-year age groups covering individuals aged 15 to 49.

[2] The total fertility rate is included only as a control variable in the model for females aged 20 to 39, the ages during which fertility is most likely to occur.

[3] Educational attainment is included only in the equations for three most junior age groups (i.e. 15-19, 20-24 and 25-29), as these age groups are more likely to face a choice between full-time education and labor force participation.

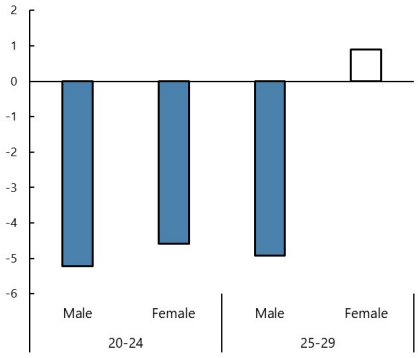
[4] That said, it is also acknowledged that the higher educational attainment ratio may be driven not only by an individual's incentive to increase his/her competitiveness in the market, but also by factors such as structural changes in industry sectors, rising educational requirements for desirable positions, and easier access to post-secondary degree program.

[5] The output gap is estimated by the HKMA based on four methods, namely (1) the production function approach; (2) the Hodrick-Prescott filter; (3) the Kalman filter; and (4) the IMF multivariate filter. For details, refer to Cheng, M., L. Chung and I. Yu (2011), "On the Estimation of the Output Gap of Hong Kong", HKMA Occasional Paper 03/2011.

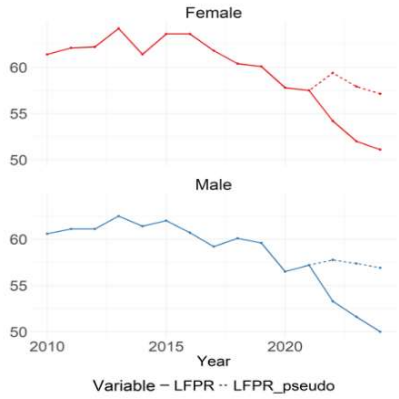
[6] While the LFPRs including foreign domestic helpers are used in the cohort-based analysis, the results are little changed if foreign domestic helpers are excluded from the LFPR calculation.

Text Figure 6. Hong Kong SAR: Role of Labor Market Competition on Youth LFPR

Estimated Educational Attainment Effect on Likelihood of Youth Joining the Labor Force
(with a 1 percentage point increase in labor force post-secondary degree share)



Estimated Counterfactual Analysis on Youth LFPR
(Percent; aged 20-24)



Sources: C&SD; HKMA and IMF staff calculations.
Note: Blue bars denote coefficients significant at the 5% level; white bars denote coefficients that are insignificant at that level.

Emergence of AI

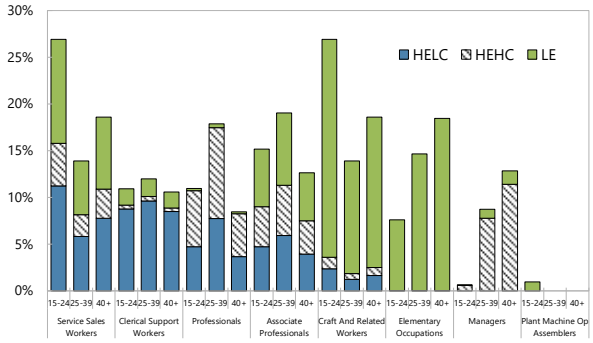
25. The emergence of AI may increase the displacement risks for the more vulnerable groups in the labor market, particularly youth and women. Exposure to AI varies markedly across occupations and demographic groups in Hong Kong SAR, with important implications for labor market adjustment. Employment decomposition indicates that younger workers are slightly more concentrated in high-exposure, low-complementarity (HELC)[7] occupations, particularly in routine service roles (Text Figure 7, panel 1 and 2). These jobs rely heavily on routine tasks that are more easily automated, implying elevated displacement risks as AI adoption progresses. In contrast, older workers are more likely to be employed in occupations with higher task complementarity, reflecting experience-driven task complexity and greater reliance on non-routine cognitive and interpersonal skills. While aggregate patterns are broadly similar across genders, women show a slightly higher concentration in HELC occupations, suggesting that AI-related adjustment costs may be somewhat unevenly distributed across gender groups (Text Figure 7, panel 3). From a cross-

[7] Occupations are classified by AI exposure and task complementarity following a two-step mapping approach. Measures of AI exposure are taken from Felten, Raj, and Seamans (2021) and capture the extent to which occupational tasks overlap with AI capabilities. Task complementarity indices are based on Pizzinelli et al. (2023) and reflect the degree to which AI is likely to augment rather than substitute human labor within an occupation. Employment by occupation is mapped to ISCO one-digit categories and decomposed into three groups: high exposure–high complementarity (HEHC), high exposure–low complementarity (HELC), and low exposure (LE), using exposure-complementarity ratios applied to sectoral employment shares. Due to lack of granular occupation-level data, these exposure and complementarity scores are derived from U.S.-based occupational task data and mapped to Hong Kong labor market outcomes using broad one-digit ISCO categories, implying an assumption of cross-economy similarity in task content within occupational groups and limited granularity in capturing within-group variation. While this assumption may introduce some measurement bias, reflecting differences in occupational structures within one-digit categories between the United States and Hong Kong SAR, it represents the most feasible approximation to the best of our knowledge. Aggregate results are constructed by age and gender using labor force survey microdata.

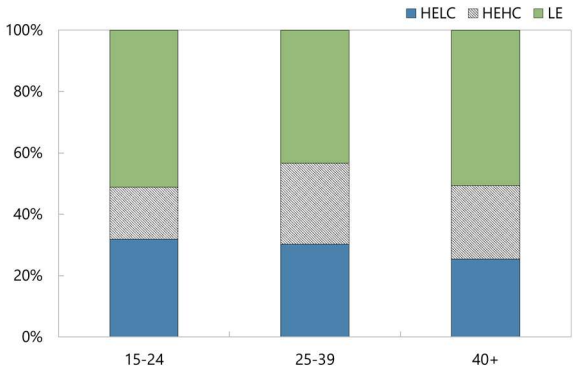
economy perspective, the territory's employment share in high-exposure, high complementarity (HEHC) occupations, those most likely to benefit from the AI developments, is broadly comparable to some regional peers, though it remains behind that of AI frontier economies such as Singapore (Text Figure 7, panel 4).

Text Figure 7. Hong Kong SAR: AI Exposure and Complementarity Across Economies

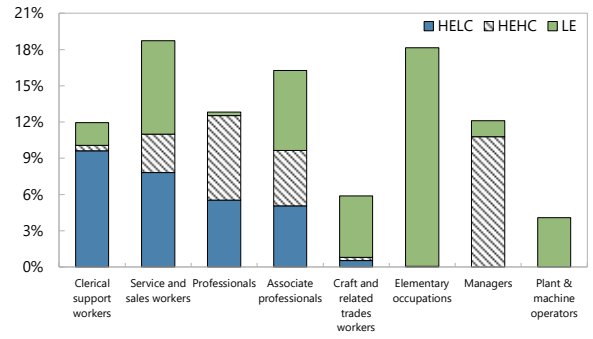
Employment Shares by Occupation, Age Group, and AI Exposure-Complementarity Group
(In percentage share of employment within age group stacks)



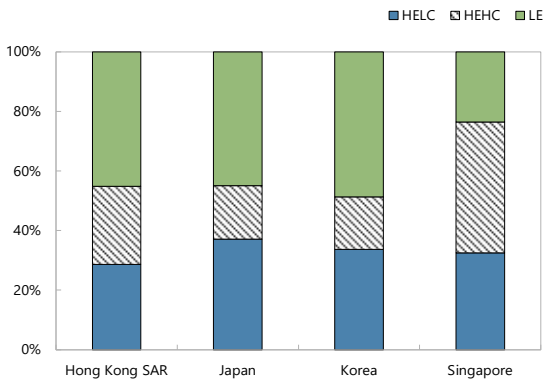
Aggregate Employment Composition by Age Group
(In percentage share of employment within age group)



Employment Shares by Occupation and AI Exposure-Complementarity Group
(In percentage share of total employment)



AI Expsosure and Compementarity Across Economies
(In percentage of total employment, stacks)



Sources: CEIC, Felten et al (2021), Pizzinelli et al (2023); IMF staff calculations.

26. These patterns imply that AI adoption may intensify downside risks to youth employment prospects in the absence of policy intervention, potentially contributing to delayed labor market entry as young workers seek to better prepare for changing skill demands. These risks could materialize through several channels, including lower vacancy creation for routine entry-level occupations, heightened job competition for remaining positions, downward pressure on starting salaries, and increased reliance on short-hour or temporary contracts in HELC occupations (Jaumotte et al., 2026). In addition, the observed segmentation across AI exposure and complementarity categories also suggests there are frictions to occupational mobility, as transitions from HELC to high-complementarity roles require substantial changes in task content and skill

requirements (see Korea's case in Chang et al., 2025, where data suggests limited mobility between low- and high-complementarity jobs throughout the life cycle).

E. Conclusion and Policy Recommendations

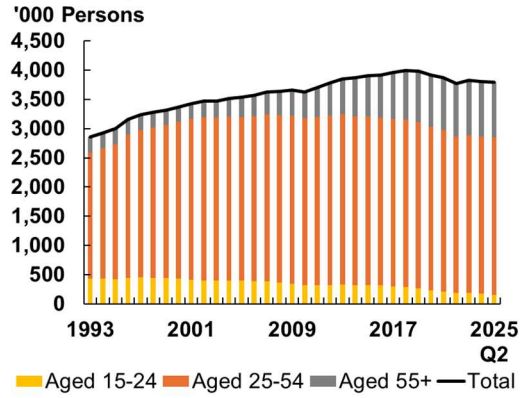
27. This paper documents a sustained decline in Hong Kong SAR's LFPR and identifies its main underlying drivers. Cohort-based shift-share decompositions indicate that both the decline in youth LFPR and population aging— the rising weight of older cohorts with structurally low LFPR— have materially contributed to the decline in aggregate labor force participation. Household survey indicates that education is the predominant reason for delayed labor-force entry among youth. This finding is consistent with shifts in sectoral composition toward higher-skill activities, the emergence of AI, and intensifying labor-market competition, which together raise the perceived returns to additional qualifications and skills upgrading. Although the continued pursuit of further education has lowered youth labor supply, it can enhance human capital formation, strengthening long-term productivity and potential growth.

28. Addressing these overlapping demographic and structural pressures requires a coordinated policy response:

- **Population aging and female labor force participation:** Policies should promote longer and healthier working lives through incentives to raise effective retirement ages, flexible and phased retirement options, targeted mid-career reskilling, and expansion of the capacity of overall elderly care services and childcare infrastructure as appropriate to help relieve the stress of their family carers, thus easing participation constraints. The development of the Northern Metropolis provides an opportunity to attract younger skilled workers, both locally and across the border, by integrating housing, employment, and innovation ecosystems. Although female labor force participation has improved at older ages, it diverges from that of men during prime working years, reflecting childcare and family care responsibilities. Expanding access to affordable childcare and more flexible work arrangements would support sustained labor market attachment.

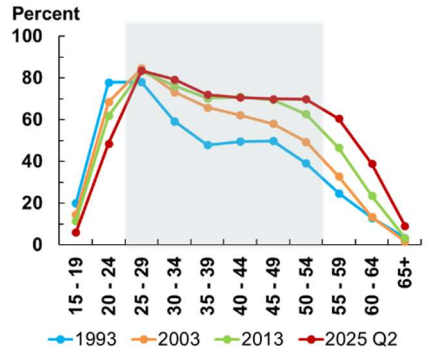
Hong Kong SAR: Labor Force by Age

(In thousand persons)



Hong Kong SAR: Female Labor Force Participation Rate

(Percent)



Sources: C&SD; and HKMA and IMF staff calculations.

- **Skill mismatch:** As demand shifts toward digital, green, professional, and advanced services skills, education and training systems should place greater emphasis on market-relevant competencies. Targeted support for vulnerable youth, particularly low-income and low-skilled groups, would help mitigate scarring effects and ease school-to-work transitions.
- **AI risk:** Policy priorities should focus on accelerating acquisitions of AI-complementary skills, strengthening occupational mobility, and reinforcing social protection systems to support workers during transition periods. Enhanced unemployment insurance and active labor market policies would improve resilience while enabling more efficient labor reallocation.

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