

## Box 5.2

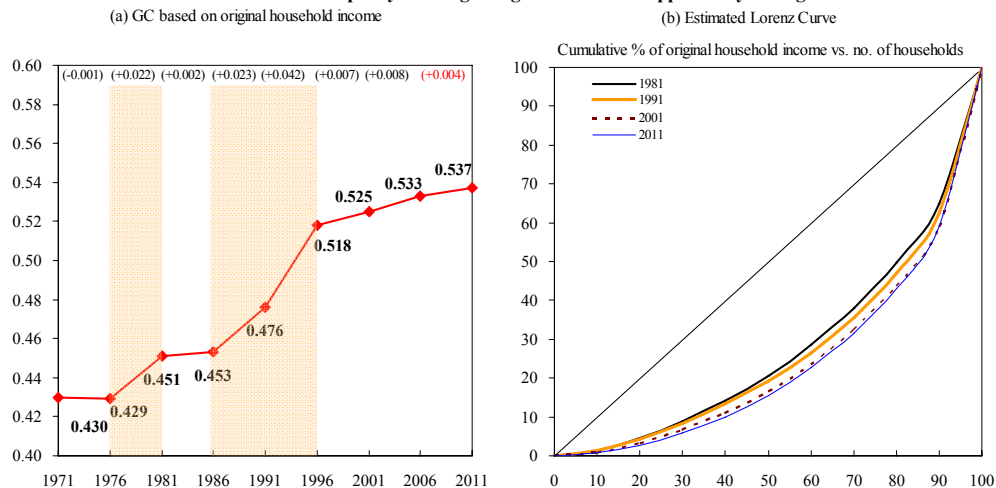
## The Gini coefficient of Hong Kong: trends and interpretations

The latest Gini Coefficient<sup>1</sup> (GC) of Hong Kong, a common measure of income disparity published by the Census and Statistics Department (C&SD) based on household income statistics of the 2011-Census, has drawn much public attention. To better understand the issue, this box article briefly analyses the GC in the past 40 years and offers some explanations behind its movement based on various socio-economic developments over the period.

## Past trend of GC (based on original household income)

The longest series of GC available (1971 – 2011) was compiled based on original household income, without taking into account the Government's various income redistributive measures. Nevertheless, it can still provide valuable information on how the situation has been evolving over the period. In the 1970s, the GC stood at around 0.430, and began to go up quite visibly since 1980s. Such rise further accelerated between 1986 and 1996, in which the GC increased from 0.453 to 0.518, sharply by 0.065. The increase of GC then showed considerable moderation, and its latest pick up in 2011 (up 0.004) was actually the smallest as compared to the previous 25 years. The movement of GC was also consistent with the outward shift of the Lorenz Curve (*Chart 1*).

Chart 1: Household income disparity of Hong Kong widened most appreciably during 1980s-90s



Note: Figures in brackets denote the absolute period-to-period change of GC. The Lorenz Curve is crudely estimated based on shares of household income to total by decile.  
Source: Census/By-Census 1971 - 2011, C&SD.

## Impacts of economic and demographic transformations on income disparity

Two points are noteworthy from the above descriptive statistics, (i) the rising income disparity should not be viewed as a short-term phenomenon, but a continuous development over time; and (ii) while GC is a condensed single measure of income disparity, the coefficient itself cannot delineate the causes of the issue which can be affected by many socio-economic and demographic factors. It would hence be more meaningful to supplement the statistic with a structural analysis of the economy and labour market, identifying the parameters accountable for the widening of income gap:

- (a) **Inflow of immigrants:** the huge inflow of immigrants from the Mainland of China before 1980s had brought about an abrupt and sharp increase in total population. While this group of new arrivals was a fresh source of manpower supporting the fast economic growth of Hong Kong, this also inevitably increased the number of low-

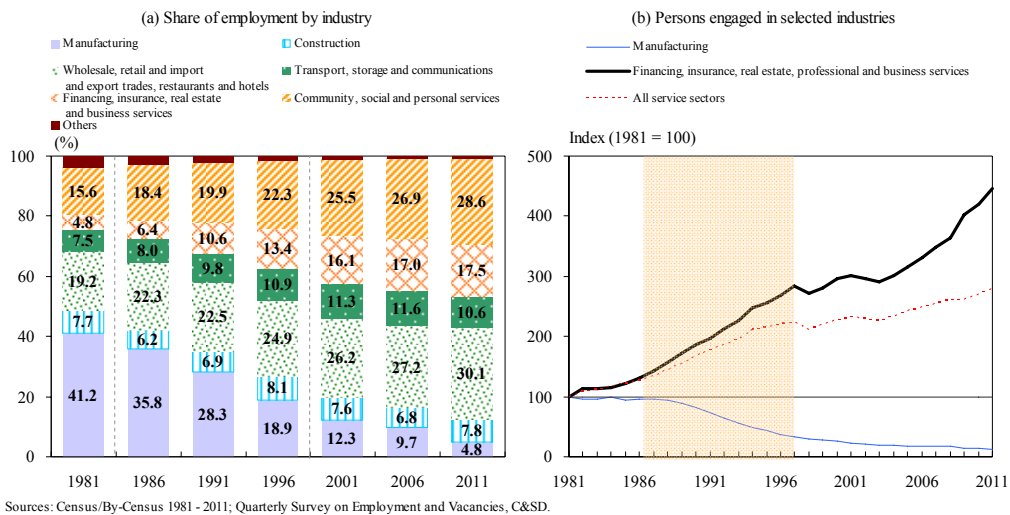
<sup>1</sup> GC is defined by referring to the Lorenz Curve (obtained by plotting the cumulative percentages of household income against the cumulative percentages of number of households). Its value ranges from 0 to 1, and is equal to (i) the areas between the Lorenz Curve and the line of equality divided by (ii) the total area under the line of equality. The higher the GC, the more the disparity it implies.

**Box 5.2 (Cont'd)**

income households, particularly at the lower tail of the income distribution, as most of them were often confined to low-paying jobs due to their relatively low educational attainment and skill levels. This plausibly explains the jump of GC between 1976 and 1981, as well as the accelerated increase during the 1980s and 1990s.

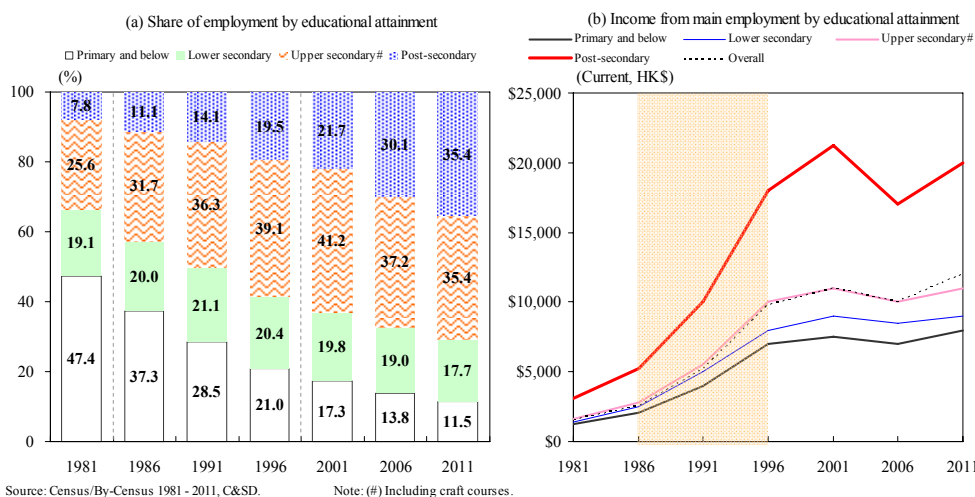
(b) **Economic restructuring:** to seize the opportunities offered by the Mainland's open door policy since 1978, and also prompted by rising local costs, the local economy underwent rapid restructuring as manufacturers progressively reallocated their production base to the Pearl River Delta region starting from the mid-1980s. This propelled Hong Kong's steady shift towards a high value-added, knowledge-based economy, with a visible reduction in job positions in manufacturing and other related production industries, compensated by an even more remarkable increase in service employment. The process was found to be most intense between the 1980s and 1990s as shown in **Chart 2**, of which the share of employment in manufacturing shrank significantly from 41.2% to 18.9% while financing, insurance, real estate and business services increased noticeably from 4.8% to 13.4%.

**Chart 2: Rapid economic restructuring led to a drastic shrinkage of the manufacturing sector during 1980s-90s**



Before the economic restructuring, most of the workers were relatively homogenous in nature with a simple pay/rank hierarchy. Nevertheless, as the economic transformation went into full swing, a large number of higher-skilled jobs were created amid rapid developments of financial and other professional services, leading to a more diversified labour market. The quality of the workforce also improved successively with better education opportunities. Together with a vibrant economic growth and an increasingly keen demand for workers with better knowledge and skills, it is inevitable to see larger income increases for workers at the upper segment of the occupational hierarchy than those at the lower segment (**Chart 3**).

**Chart 3: Increasing labour demand of talents with better educational attainment in tandem with economic restructuring and upgraded labour force further widened earnings disparity**

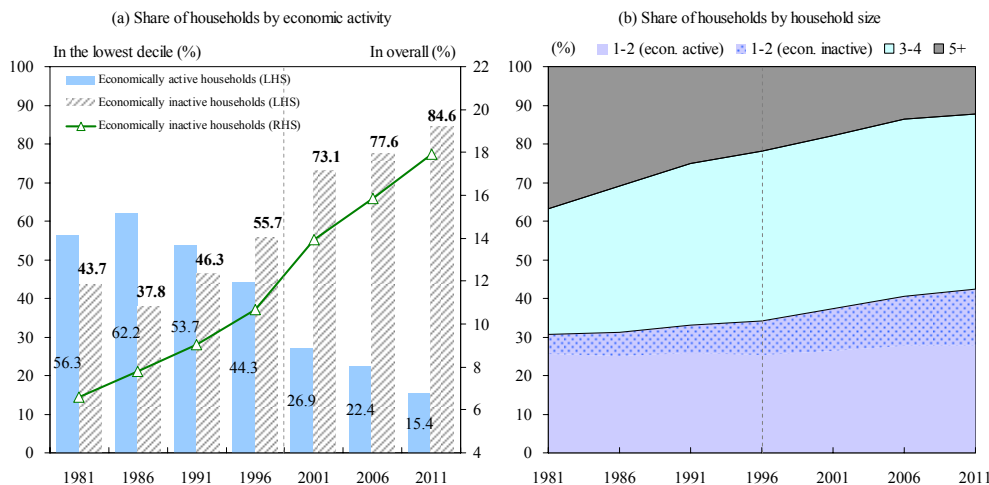


**Box 5.2 (Cont'd)**

Besides the continued widening in employment earnings disparity in tandem with structural transformations of the economy and the labour market, other emerging demographic factors, such as the accelerating growth of small and elderly households have also been increasingly affecting the household income disparity in the past 15 years (1996 – 2011):

- (c) **Population ageing:** Hong Kong is facing a serious ageing issue, resulting in a continuous growth of retiring elderly and economically inactive households with little or even no employment income, thereby widening the income disparity demographically. Analysed by decile, it is observed that 84.6% of the households in the lowest decile group were economically inactive in 2011, increased significantly from 55.7% in 1996. Nevertheless, 48.6% of them were found to be owner-occupiers without mortgages or loans, suggesting that these households might own various forms of assets (**Chart 4**).
- (d) **Smaller household size:** the ongoing change in family structure towards smaller and nuclear families has in turn led to a progressive decline in average household size, from 3.3 in 1996 to 2.9 in 2011. As household income depends partly on household size and in particular the number of working household members, a decline in average household size amid population ageing would tend to pose a drag on household income in general (**Chart 4**). Specifically, 56.2% of the households in the lowest decile were singleton households in 2011, significantly higher than 17.1% of the overall average.

**Chart 4: The recent upsurge of economically inactive / elderly households amid population ageing would further impact on the lower-end of the income distribution**



Source: Census/By-Census 1981 - 2011, C&SD.

**The importance of compiling other GCs in reflecting the underlying situation**

As the level and movement of the GC are heavily affected by a wide range of economic and socio-demographic factors as described above which to a certain extent would mask the underlying income disparity situation, C&SD also compiled different sets of GCs with a view to facilitating a more comprehensive analysis at different angles (**Table 1**):

**Table 1: Different sets of GC for understanding the underlying income disparity**

GC	1981	1986	1991	1996	2001	2006	2011
<b>All households</b>							
(1) Original household income	0.451	0.453	0.476	0.518	0.525	0.533	0.537
(2) Post-tax post-social transfer	-	-	-	0.466	0.470	0.475	0.475
<i>Difference (1-2)</i>	-	-	-	0.052	0.055	0.058	0.062
(3) Per capita				0.427	0.421	0.427	0.431
<b>Economically active households</b>							
(4) Original household income	-	-	-	-	0.488	0.490	0.489
(5) Post-tax post-social transfer	-	-	-	-	0.436	0.436	0.430
<i>Difference (4-5)</i>	-	-	-	-	0.052	0.054	0.059
(6) Per capita					0.412	0.412	0.413

Source: Census/By-Census 1981 – 2011, C&SD.

**Box 5.2 (Cont'd)**

The GC based on post-tax post-social transfer household income in 2011 was 0.475, same as that in 2006. Comparing this GC with the original one provides a measure of the magnitude or effectiveness of Government's policy in mitigating Hong Kong's income disparity. The magnitude of reduction in GC was 0.062 in 2011, reflecting that income redistribution through taxation and the provision of social benefits indeed helped narrow income disparity. Comparing with 2001 (0.055) and 2006 (0.058), the greater redistributive impact for 2011 is also in line with the Government's increasing expenditure on welfare, education and healthcare over time.

The post-tax post-social GC for the economically active households, in removing the effect of population ageing, was 0.430, improved from 0.436 in 2006. This tallied with the widespread improvements of employment / household incomes in real terms across nearly all deciles over the period, benefitting from the robust economic growth and the implementation of statutory minimum wage in May 2011. Also taking into account the change of household size, the corresponding per capita GC for economically active households was smaller at 0.413, largely stable as compared to 0.412 in 2006.

**Concluding remarks**

The rising GC over the past four decades was attributable to different economic and demographic factors coming into play. For example, the significant widening of household income disparity in the 1980s and 1990s was mainly due to the inflow of immigrants and the rapid transformation of our local economy which brought about a drastic change in our labour market and earnings structure; while in recent years an ageing population with a persistent decrease of household size affected the income distribution of the lower end more visibly. In view of the complexity of the issue, it is deemed necessary to compile different sets of GCs in order to reveal the underlying situation for a more thorough and meaningful comparison.