

## **Income Distribution of Hong Kong and the Gini Coefficient**

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Income disparity in recent years has aroused increasing public concern and discussions, and many comments/commentators are using the Gini Coefficient to illustrate the growing income disparity in Hong Kong. Upon deeper analysis, we will however find that income distribution varies under different definitions of income and the reasons for such variations are complex. The Economic Analysis Division has provided the Legislative Council, the Commission on Poverty and the Commission on Strategic Development with some analyses<sup>(1)</sup> on the various aspects of this topic. The aim of this article is to give a simple but comprehensive analysis of the growing income disparity in Hong Kong and the causes for that disparity.

### **The functions and limitations of the Gini Coefficient**

The Gini Coefficient is a figure indicating the general distribution of income, calculated from household income data. If income of all households is at the same level, the Gini Coefficient will be zero whereas it will be one if all the income of all of society goes solely to one household. Empirically, the Gini Coefficient would always lie between 0 and 1.

Income distribution is a very broad and complicated subject in economics. The Gini Coefficient is widely used because of its simplicity. Nevertheless, simple data naturally has its limitations for not being able to take into account all circumstances and hence easily leads to misunderstandings.

One of the most fundamental and common misunderstandings is that if all household income is at the same level, then the distribution of income will be absolutely equal. However, even ignoring the fact that absolute equal income may have an adverse effect on promoting

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<sup>(1)</sup> For a more recent analysis, please refer to the “*Recent situation of household income*”, an annex of the information paper (Ref. CB(1)458/06-07(03), <http://www.legco.gov.hk/yr06-07/english/panels/fa/papers/fa1214cb1-458-3-e.pdf>) for the meeting of LegCo Panel on Financial Affairs on 14 December 2006 and the information paper for the meeting of the Committee on Economic Development and Economic Cooperation with the Mainland of the Commission on Strategic Development on 29 January 2007, titled “the Hong Kong economy: developments since 2003, and a review of the structural and cyclical issues impacting on the economy and the labour market”. (Ref CSD/EDC/1/2007, [http://www.cpu.gov.hk/english/documents/csd/csd\\_edc\\_1\\_2007.pdf](http://www.cpu.gov.hk/english/documents/csd/csd_edc_1_2007.pdf)) .

competition, such a phenomenon is very unfair judging from common sense. The reason is quite simple because household income is mainly made up by income from work and the household size, the number of members working, the age distribution of members, their health conditions and education attainments, vary among households.

In fact, changes in household income distribution in the territory and the Gini Coefficient are largely a result of the ongoing change of the family structure. Analyzing the structural changes will help us in understanding the causes of the widening in income disparity and in our discussions on social policies.

### **Structural factor : (1) Impact of the change in household size on income disparity**

Big families with three generations living together were common in the 1960s and 1970s in Hong Kong. But nowadays, there are increasing numbers of small households, elderly households and elderly living alone. These social changes have caused substantial changes in household income distribution. As the average household size has been reducing, the growth in average household income has slowed statistically. Furthermore, the upsurge of elderly households has led to the rapid rise in the number of low-income families. Many old people are living separately from their children. Many of them are supported by their savings and their children, with social security allowance as subsidy. It is believed that many elderly residents in old public housing estates belong to this group. If these elderly people are still living with their children or grandchildren, they will not statistically be counted as low-income families. Thus, the change in family structure has a direct impact on the Gini Coefficient.

If per capita household income (as derived from household income together with household size) is taken to measure the income disparity in Hong Kong, the disparity will be narrowed as compared to the current level reflected by household income alone, and the increase in the Gini Coefficient will be smaller. Moreover, the change in per capita income of the low-income families would be better, as compared to just taking household income into account.

### **Structural factor: (2) Impact of higher education and professional level on income disparity**

Hong Kong is an open cosmopolitan economy, and is faced the challenges and opportunities brought by globalisation and rapid economic development in the Mainland. It has to continuously restructure towards higher value-added activities to maintain its economic vitality and competitiveness. Many high-income jobs are being created in the process and the quality of our workforce has also been enhanced. For instance, over the past ten years, the proportion of people with tertiary education has increased from 21% to 31% of the total

workforce, registering a 10 percentage points increase. The proportion of supervisory workers, professionals and associate professionals has also increased to 38% of the total workforce, as compared to 30% ten years ago.

As the number of people with tertiary education and workers at supervisory and professional level grows, income distribution in Hong Kong is affected:

- (1) The income disparity between high-income and low-income jobs is widening. Though globalisation has increased the demand for talent, market liberalisations in many developing countries have intensified the competition among middle- and lower-skilled workers.
- (2) The proportion of high-income workers increases due to the economic restructuring of Hong Kong and this lead to an increase in the value of the Gini Coefficient. In the past, income disparity among farmers or labourers in agrarian or lower-skilled industrial community was generally not significant as big landlords or capitalists were few in number. However, in a post-industrial, service-oriented community, increasing high-income jobs will lead to a higher Gini Coefficient. Moreover, even among tertiary-educated workers at senior management or professional level, the income disparity may also be very great.
- (3) On average, the income of workers with lower skills and lower education level will gradually decrease when they reach middle age, but the income of middle-aged workers with tertiary education will continue to increase progressively. As a result, the income disparity will keep on widening with the ageing of the population in Hong Kong. Moreover, with the ageing of the population the number of people aged 40 or above will continue to increase. Statistics show that income disparity widens further among professionals or supervisory workers of this age group.

### **Cyclical factor : Impact of the prolonged economic downturn before 2003 on income disparity**

The economic downturn in Hong Kong during 1998 to 2003 is a major factor contributing to the relative income decline among low-income earners in recent years. Unemployment, underemployment and pay cut were more common in this group than in the higher income earners during Hong Kong's economic downturn, hence widening the income distribution gaps during 1998 to 2003. Nevertheless, there has been improvement in the earnings among many low-income earners following the economic rebound since the second half of 2003. Statistics on labour earnings in the past few years reveal that, the increasing employment

opportunities for the lower-skilled boosted by the economic growth is the primary factor behind the income growth among low-income earners.

### **The role of the government in income redistribution and the Gini Coefficient**

The “social safety net” of Hong Kong has been established for many years. It provides various services in education, medical care, housing and CSSA and these services redistribute income. Income tax and property tax are mainly derived from the high-income group whereas the low-income group generally does not need to pay such taxes. These types of taxes also serve the function of income redistribution.

Comments that make comparisons between Hong Kong’s Gini Coefficient and overseas data often forget the definition of data varies in different places. For instance, due to historical reasons, figures of household income and Gini Coefficient published by Hong Kong in the past were based on income data that mixed the general household income with CSSA receipts without deducting income tax. The income data used by many other places, particularly some developed countries, is derived after deducting different types of taxes. Some other places also take into account the impact of the Government’s functions of income redistribution in arriving at the figure. In the circumstances, direct comparison between Hong Kong’s Gini Coefficient and those of overseas places without making corresponding adjustments will be meaningless and may even result in a wrong conclusion.

In fact, the Government has been conducting regular reviews on the difficulties encountered in analysing and comparing these statistics. Last year, an attempt was made to assess the impact of the government’s redistribution functions on various types of household incomes and the findings have been reported to the Commission on Poverty<sup>(2)</sup>. Due to data limitation, the analysis conducted in this assessment is not very comprehensive and precise, hence the findings can only be used as reference. Nevertheless, this rough assessment has brought about a rather unexpected finding which shows that after taking into account the redistributive effect of income tax, CSSA, housing, medical care and education, the household income of a large majority of families in Hong Kong, including many “middle class families”, would be higher.

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<sup>(2)</sup> For details, please refer to the information paper for the meeting of Commission on Poverty on 20 November 2006, titled “Study on the Effect of Taxation and Social Benefits on Household Income Distribution”(Ref. CoP22/2006) ([http://www.cop.gov.hk/eng/pdf/CoP%20Paper%2022-2006\(e\).pdf](http://www.cop.gov.hk/eng/pdf/CoP%20Paper%2022-2006(e).pdf))

## **Conclusion**

Analysis of the household income distribution of Hong Kong and the Gini Coefficient is a complex issue. In assessing the changes in these figures we must also take into account the social and family structure, ageing population, economic and other factors before practical conclusions can be drawn in assisting the Government to formulate more appropriate policies on various social and livelihood issues. For instance, if the increase in the number of low-income families is mainly caused by the increase in elderly families, then the Government will have to consider what would be a more effective means to improve the living standard of low-income families. Should it be the adoption of a wage policy or the provision of retirement protection and other services for the elderly?

The Census and Statistics Department is actively working on the 2006 Population By-census results. The Economic Analysis Division and the Census and Statistics Department understand that the community is very concerned about the changes in household income data. We will conduct an in-depth study on this data and other related statistics with a view to releasing more detailed analysis on this subject to facilitate the public, academics and other relevant experts to understand the social and economic phenomenon reflected by the changes in these data. However, given the complicity of the issues and the time needed to collate and analyse the data, we expect that findings will be available by the middle of this year for publication for public reference.