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**Upward Earnings Mobility on the Decline in Hong Kong?
A Study Based on Census Data**

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Abstract

This paper offers a new intuitive approach using census data to cast light on earnings mobility. We find that in Hong Kong upward mobility opportunities indeed fell for those born in the mid 70s and later, but that there has been a remarkable improvement for degree holders in recent years. Contrary to common belief, even though starting salaries had fallen, degree holders more or less maintained their relative advantage by age 31-35. Moreover, among degree holders, beginning in 2011 upward mobility showed an improvement for all cohorts at the higher income end though less so at the lower end. The mobility ratios of degree holders born after 1980 are higher than almost all of the earlier cohorts. The evidence suggests that this improvement is likely to be related to the retirement of the babyboomers, and is expected to continue for some time.

1. Introduction

Earnings mobility describes the movement of a household or an individual from one income group to another within one's lifetime. This is determined in part by the person's effort and in part by circumstances. A high degree of upward earnings mobility is generally considered conducive to a vibrant and harmonious society. Generally, however, availability of longitudinal data is necessary to gauge the degree of upward earnings mobility. For example, Chen (2009) drew upon the longitudinal data in Canada, U.S., Great Britain and Germany from the Cross-National Equivalent Files (CNEF) and made a cross-nation comparison in mobility between different income brackets during the 1990s and early 2000s; Burkhauser, Holtz-Eakin and Rhody (1997) utilized the Panel Study of Income Dynamics (PSID) in the U.S. and the Germany Socio-Economic Panel (GSEP) in Germany to compare earnings mobility for the two countries during the 1980s. One common approach of measuring earnings mobility is to construct transition matrices portraying the movement of people from an income group to another group over time (Dickens and McKnight, 2008; Eriksson, 1998). Contini, Filippi and Villosio (1998) estimated logit models to analyze how individual and firm characteristics may affect the probability of moving up or down the economic ladder.

A big problem often encountered when scholars try to assess the degree of upward mobility in a society is that longitudinal data covering a sufficiently long period may not be available. Even though a sense of the presence or absence of upward mobility among people may be prevalent, hard evidence is lacking. During the time of "hyper growth" from the 1960s and the 1970s, Hong Kong was generally considered a place

with plenty opportunities. Upward mobility was believed to be within reach for people who would make the effort. More recently, however, there have been numerous references to reduced upward mobility in the public debate¹. A recent survey by the Chinese University of Hong Kong found that “more than 60 per cent of Hongkongers believe upgrading their standard of living is harder now than 10 years ago”², but statistics on perception is no substitute for hard evidence. This paper attempts to overcome this problem by using Census data collected across several decades. Census data, admittedly, cannot really substitute longitudinal data. But as we will show, it is nevertheless possible to uncover interesting patterns and information about the degree of upward mobility³.

The rest of the paper is structured as follows. Section 2 will provide an overview of findings about earnings mobility in Hong Kong to date. Section 3 will introduce the data and research methodology adopted in our study. Section 4 will give a discussion of the results. Section 5 will summarize the main findings of the paper.

2. Review of Previous Studies on Earnings Mobility in Hong Kong

The absence of longitudinal data for Hong Kong has for a long time inhibited serious empirical studies on earnings mobility, even though scholars, particularly sociologists, have shown much interest on the subject. Common approaches like transition matrices

¹ For example, see the commentary by Fu King Wah and Yip Siu Fai in Hong Kong Economic Journal, April 16, 2010.

² See South China Morning Post, March 5, 2013, <http://www.scmp.com/news/hong-kong/article/1177243/social-mobility-hong-kong-getting-harder-poll-says>

³ Zhang and Wu (2011) is an earlier study using Census data to study the upward mobility of recent immigrants in Hong Kong, and Wu is currently heading a project to collect longitudinal data in Hong Kong.

and logistic regressions on estimating the probabilities of upward or downward mobility cannot be adopted without such data. Siu (2001) is amongst the very few studies which tried to investigate the issue based on cross-sectional data. General Household Survey (GHS) data with information of *recalled earnings* in 1991 and 1996 and actual earnings in 2000 were used⁴. Based on the results from the correlation of log earnings and transition matrices, it was found that there was significant overall earnings mobility in the 1990s. Younger and higher educated workers had a better chance of moving upwards, while those who were older and had lower educational attainment got higher risk of moving downwards and being trapped at the bottom. There was, however, no analysis about the different fortunes faced by different cohorts in different phases in their careers.

The Commission on Poverty (2006) provided a summary of a study conducted by Jim Vere in 2006 over the period from 1996 to 2005. The study comprised two parts with investigations on intragenerational and intergenerational mobility. The intragenerational study was based on the same approach as that used in Siu (2001), while the intergenerational study was based on the correlation of lifetime earnings between father and child. The target of study was restricted to workers with positive monthly earnings in 1996, 2001 and 2005⁵. Although mobility in terms of earnings was still evident during the period 1996 to 2005, both upward and downward mobility appeared to have decreased across all types of workers compared with the findings in Siu (2001) which covered the period from 1991 to 2000. Though upward mobility was adversely affected by the Asian Financial Crisis and the outbreak of SARS, downward mobility was also reduced. As to intergenerational mobility, it was found

⁴ As mentioned in Siu (2001), respondents were asked a set of supplementary questions such as their past earnings during the General Household Survey in the fourth quarter of 2000.

⁵ The earnings data in 1996 and 2001 were collected based on respondents' memory.

that the lifetime earnings of father and child were positively correlated and the correlation was statistically significant. Nevertheless, intergenerational poverty was not a serious problem in Hong Kong. Some 87 per cent of children with fathers in the bottom earning quintile group was found to have moved upwards.

The most updated and detailed study on earnings mobility in Hong Kong was conducted by Vere (2010). That study was an update of Siu (2001) and Vere (2006) and again utilized information of recalled earnings in 1998 and 2003 and actual earnings in 2008. Compared to the findings of the 2006 study, mobility has declined, with the largest decrease being for workers in the higher income brackets. Downward mobility increased more frequently for higher income brackets, while upward mobility increased more frequently for the lower income brackets. “Intergenerational mobility”, which focuses on the relationships between parents’ and children’s lifetime earnings, was within the standard range for developed countries, being somewhere between the United Kingdom and western European countries despite the slight decline since the study in 2006.

Notwithstanding the apparent statistical significance, the three studies have certain drawbacks. First, there may be a self-selection problem as a sample that includes workers reporting positive monthly earnings in all the reference years would produce a skew towards workers with higher abilities. Those workers may have a better chance to remain in the labour market consistently. Second, all recalled information may be subject to errors, as acknowledged by Vere (2010) and Siu (2001) themselves. Third, the analysis based on three reference years only can be affected by transitory fluctuations in earnings.

3. Data and Research Methodology

Though there is no panel data of workers available in Hong Kong, we can follow cohorts of workers through their randomly selected representatives in each census or by-census year. In this case, there is no sample attrition problem as that faced in using longitudinal data. To be valid, the approach requires the assumption that the composition of the population in each cohort not be significantly changed through the years, i.e., exit and entry through death, migration both inward and outward, as well as changes in labour force participation, do not much affect the population composition over the years covered in our analysis. According to Census data, the percentage of Hong Kong's population with residence at or over 10 years has ranged from 80 per cent to 83 per cent in 2001, 2006, and 2011 while the percentage of Cantonese speaking population has remained within the range of 89.2 per cent to 90.8 per cent. It appears that even though immigration and emigration continue to occur through the years, the main characteristics of the population have not significantly changed over the years. This allows us to infer, from the *percentage* of the working population of an age group enjoying a certain income level, the *probability* of a worker in that age group enjoying that income level.

The datasets include: the 1986 by-census (1% sample), the 1991 census (5% sample), the 1996 by-census (5% sample), the 2001 census (1% sample), the 2006 by-census (1% sample) and the 2011 census (5% sample). The Hong Kong Population Census is carried out by the Hong Kong Census and Statistics Department (HKCSD) every ten years and includes everybody physically in Hong Kong on the Census day, while the

By-census is carried out in between every two censuses and is based on a large random sample. All data are collected by the HKCSD and are considered highly reliable. The sizes of the datasets are sufficiently large and representative for us to define cohorts for meaningful analysis. Data are selected for analysis based on three criteria. First, we only count those people who are in the labour market with monthly income greater than zero⁶. Second, only Hong Kong natives and Chinese immigrants are included. Third, all subjects without occupation information are dropped.

Table A1 in the Appendix shows the respective age and sample size within each cohort in each census and by-census year. The number of workers sampled for each cohort that can be identified varies from 2978 to 23729 depending on whether it is a 1% sample or a 5% sample and whether it is a census year or a by-census year. Since we are interested to compare upward mobility between degree holders and non-degree holders, **Table A2** shows the number of degree holders in various age brackets for the different cohorts in each census and by-census year. It is interesting to note that the percentage of degree holders for workers in the 21-25 age group rose more than tenfold from less than 3 per cent to 32 per cent between 1986 and 2011.

We identified a total of six cohorts each of which consists of those born within a five-year period, with the earliest cohort born in 1961-1965 and the latest cohort born in 1985-1986. The cohorts are traced starting from age 21 to 25 through 5-year intervals. For each survey year, the workers in each cohort are sorted into three income groups, namely those at or below half of the median wage (“impoverished”),

⁶ Because we do not exclusively include workers who consistently have gainful employment in all the surveys, our approach is not subject to the same sample selection bias as in Vere (2010) and Siu (2001).

those above twice the median wage (“accomplished”), and those in between⁷.

We use the concepts of “Accomplished Rate”, “Impoverished Rate”, and “Mobility Ratio”, and “Immobility Ratio” to capture a general impression of the economic fortunes of each cohort as they go through the life cycle, as well as to gauge the speed of upward mobility. These are not ideal terms, and are used for convenience only. Here are the definitions:

The “**Accomplished Rate**” (AR) is defined as the percentage of workers within a given cohort who achieve at least twice the median wage. The AR may be interpreted as the probability of a worker randomly picked from the cohort who makes at least 2 times median earnings.

“The **Impoverished Rate**” (IR) is the percentage of workers within a given cohort whose incomes are below half of the median wage. The IR can be interpreted as the probability of a worker picked randomly from a cohort who belongs to the income group below half the median wage, which is often taken to be the poverty line.

The “**Mobility Ratio**” (MR) is obtained by dividing the Accomplished Rate at the end of the period under study by that at the beginning of the examination period. It shows the *speed of improvement* over the period. An MR of 3 means that at the end of the period under study the likelihood of being “accomplished” (in the sense of achieving twice the median wage or more) is three times as likely as that at the beginning of the period.

⁷ The wage data are individuals’ real monthly income from main employment with 2012 as the base year.

The “**Immobility Ratio**” is obtained by dividing the Impoverished Rate at the end of the period under study by that at the beginning of the period. A figure of 1 means that the likelihood of being impoverished is the same at the end of a period as at the beginning, implying absolute immobility. A figure of 0.50 means that the likelihood of being impoverished at the end of the period is half of that at the beginning, suggesting mobility. A figure greater than 1 is possible. That would suggest increased chances of falling into the impoverished group (downward mobility).

Table 1 shows the median wage over the years and the respective thresholds for the impoverished and the accomplished rates.

Table 1: Threshold Incomes based on the Median Wage in Each Census and By-census year (for all age groups)

	Median Wage* (in 2012 prices)	Lower Threshold (half of the median wage)	Upper Threshold (twice the median wage)
1986	\$6,927	\$3,464	\$13,854
1991	\$9,508.621	\$4,754	\$19,017
1996	\$11,501.56	\$5,751	\$23,003
2001	\$12,785.04	\$6,393	\$25,570
2006	\$11,989.13	\$5,995	\$23,978
2011	\$12,486.79	\$6,243	\$24,974

*Calculation of median wage excludes foreign domestic helpers.

4. Results: Impoverished Rates and Accomplished Rates

Table 2: The Percentage of Workers in Different Income Brackets, First Cohort, born 1961-1965

Thresholds in Respective Years	(1)	(2)	(3)	(4)	(5)	(6)	5-Yr Ratio =((2)/(1)) (1986-1991)	10-Yr Ratio =((3)/(1)) (1986-1996)
	Age 21-25 in 1986	Age 26-30 in 1991	Age 31-35 in 1996	Age 36-40 in 2001	Age 41-45 in 2006	Age 46-50 in 2011		
<Lower Threshold ("Impoverished Rate")	7.20%	4.74%	7.81%	9.42%	10.01%	11.09%	0.658 (Immobility Ratio)	1.085 (Immobility Ratio)
Lower Threshold -Upper Threshold	89.46%	83.26%	75.41%	66.07%	64.01%	63.01%	0.931	0.843
≥Upper Threshold ("Accomplished Rate")	3.35%	12.00%	16.77%	24.51%	25.98%	25.90%	3.582 (Mobility Ratio)	5.006 (Mobility Ratio)
<i>N</i>	4,572	21,883	23,709	4,619	4,776	23,729		

As shown in **Table 2**, the **Accomplished Rate** for the cohort born 1961-1965 (called the first cohort) rose from 3.35 per cent to 12.00 per cent in five years and then to 16.77 per cent in ten years. By age 41-45 the "Accomplished Rate" appears to settle down to just below 26 per cent without further improvement. The 5-year upward mobility ratio was 3.6. This means that a person is 3.6 times as likely to be in the "accomplished" category at the end of the 5-year period as at the beginning. The 10-year upward mobility ratio was 5.0, suggesting rapid improvement⁸. The rise in the low income mobility ratio, called the **Immobility Ratio**, from 0.658 for the first five years to 1.085 for the first ten years suggests mobility at the low end is non-existent or reverse. The figures suggest that over the life cycle there is a tendency for the income distribution to shrink in the centre and swell at the two ends,

⁸ The 15- and 20-year upward mobility ratios can also be computed, and they show further substantial improvement within another five or ten years.

though not to the extent of forming an M-shaped distribution. It is possible, however, that the increase of the impoverished rate at the older age range may be related to immigration from the mainland for family reunion rather than downward mobility.

If we look at degree holders alone, given among the first cohort workers, university graduates were less than 3 per cent, it is not surprising that the accomplished rate for degree holders aged 21-25 was as high as 34.7 per cent (**Table 3**). Interestingly though, the impoverished rate for university graduates was also high, even slightly higher than that for non-degree holders⁹. But the impoverished rate for degree holders dropped to 0.7 per cent in five years and, although it climbed up somewhat later on, it also remained much lower than that for the entire cohort, suggesting strong upward mobility at the bottom. Upward mobility at the top end is quite rapid. By 41-45 77 per cent of the cohort became accomplished.

Table 3: The Percentage of Degree Holders in Different Income Brackets, First Cohort, born 1961-1965

Thresholds in Respective Years	(1)	(2)	(3)	(4)	(5)	(6)	5-Yr Ratio =((2)/(1)) (1986-1991)	10-Yr Ratio =((3)/(1)) (1986-1996)
	Age 21-25 in 1986	Age 26-30 in 1991	Age 31-35 in 1996	Age 36-40 in 2001	Age 41-45 in 2006	Age 46-50 in 2011		
<Lower Threshold ("Impoverished Rate")	7.26%	0.70%	1.06%	1.89%	1.86%	1.83%	0.096 (Immobility Ratio)	0.146 (Immobility Ratio)
Lower Threshold -Upper Threshold	58.06%	45.01%	41.52%	26.28%	27.35%	20.97%	0.775	0.715
≥Upper Threshold ("Accomplished Rate")	34.68%	54.28%	57.42%	71.83%	70.79%	77.20%	1.565 (Mobility Ratio)	1.656 (Mobility Ratio)
<i>N</i>	124	1,704	3,314	742	808	3,881		

⁹ This may be due to the fact that some of the claimed degree holders are actually still in the process of getting their degrees and are engaged in part-time work. Some degree holders may also be aspiring professionals undergoing training.

The second cohort started better off than the first cohort. But again mobility at the low end was non-existent for non-degree holders. For degree holders, again the impoverished rate started slightly higher than that for the entire cohort (6.61 per cent cf 5.14 per cent for the cohort as a whole), but again it fell very quickly to less than one tenth of the starting rate in five years, and remained at a relatively low figure at age 41-45—at 1.56 per cent, which is much lower than the 9.39 per cent for the entire cohort. Mobility at the top end was again quite fast, especially for degree holders. By 41-45, almost 75 per cent of degree holders were accomplished, much higher than the 28 per cent for the entire cohort. The impoverished rate was 1.56 per cent for degree holders, much lower than the 9.39 per cent for the entire cohort.

Table 4: The Percentage of Workers in Different Income Brackets, Second Cohort, *born 66-70*

Thresholds in Respective Years	(1)	(2)	(3)	(4)	(5)	5-Yr Ratio =((2)/(1)) (1991-1996)	10-Yr Ratio =((3)/(1)) (1991-2001)
	Age 21-25 in 1991	Age 26-30 in 1996	Age 31-35 in 2001	Age 36-40 in 2006	Age 41-45 in 2011		
<Lower Threshold ("Impoverished Rate")	5.14%	6.41%	6.67%	9.09%	9.39%	1.247 (Immobility Ratio)	1.298 (Immobility Ratio)
Lower Threshold -Upper Threshold	91.53%	83.28%	70.82%	64.85%	62.53%	0.910	0.774
≥Upper Threshold ("Accomplished Rate")	3.32%	10.31%	22.51%	26.06%	28.07%	3.105 (Mobility Ratio)	6.780 (Mobility Ratio)
<i>N</i>	16,911	20,472	4,122	3,971	20,245		

Table 5: The Percentage of Degree Holders in Different Income Brackets for the Second Cohort, Born 1966-1970

Thresholds in Respective Years	(1)	(2)	(3)	(4)	(5)	5-Yr Ratio =((2)/(1)) (1991-1996)	10-Yr Ratio =((3)/(1)) (1991-2001)
	Age 21-25 in 1991	Age 26-30 in 1996	Age 31-35 in 2001	Age 36-40 in 2006	Age 41-45 in 2011		
<Lower Threshold (“Impoverished Rate”)	6.61%	0.65%	1.34%	2.72%	1.56%	0.098 (Immobility Ratio)	0.203 (Immobility Ratio)
Lower Threshold -Upper Threshold	72.04%	63.95%	35.86%	32.97%	23.82%	0.888	0.498
≥Upper Threshold (“Accomplished Rate”)	21.35%	35.40%	62.81%	64.31%	74.62%	1.658 (Mobility Ratio)	2.942 (Mobility Ratio)
<i>N</i>	862	3,517	898	919	4,617		

Table 4 shows that the second cohort, which was born within 1966-1970, has a somewhat lower 5-Yr Mobility Ratio (3.105 cf 3.582). This cohort began with a similar percentage of accomplished workers (3.32 per cent cf. 3.35 per cent) among the early career workers, but the Accomplished Rate *kept rising as the cohort grows older* and reaching 28 per cent by the time the cohort reaches 41-45. At the low end, only 6.7 per cent remain poor after ten years. However, the Impoverished Rate also kept rising, from 5.14 per cent rising to 9.39 per cent by the time they reach 41-45. This happened notwithstanding continued upward mobility at the high end. Degree holders benefit the most from upward mobility opportunities, with the impoverished rate dropping to 0.65 per cent after five years and hovering between 1 and 2 per cent throughout the rest of their lives, while the Accomplished Rate kept rising and reaching 75% by age 41-45 (**Table 5**).

Now we can look at the impoverished rate figures for all the cohorts at different age brackets (**Table 6**).

It is remarkable that degree holders in the 21-25 age bracket became worse off at the low end starting with the fourth cohort from cohort to cohort. For the 26-30 age bracket, the impoverished rate started to turn up starting from the third cohort (born 1971-75).

In terms of the accomplished rate, and for the 21-25 age group, there was a dramatic decline beginning from the second cohort, a result clearly related to the rapid expansion in the number of university graduates starting in the early 1970s. However, by age 31-35 the accomplished rates for all cohorts exceeded 50%, suggesting that university graduates still fare quite well in general, contrary to popular perception. Moreover, there was a notable improvement in 2011, and especially for the older workers (36-45), which is likely to be related to the retirement of high income earning postwar babyboomers.

For non-degree holders, fortunes started getting worse for the 21-25 age group from cohort to cohort starting with the third cohort. Moreover, the likelihood of being impoverished at age 31-35 is about 8 times as high as degree holders for all the cohorts. (**Tables 6 and 7**)

Table 8 shows that at 31-35, 52.64% of degree holders for the fourth cohort at this age bracket were accomplished, much higher than the cohort percentage of 6.64% for non-degree holders, and slightly ahead of the 52.47% of the previous cohort at this stage of their careers. **Table 9** shows a rather shocking picture. Non-degree

holders of later cohorts are consistently getting worse off in accomplished rate than earlier cohorts. Even in 2011 there is no improvement for ALL cohorts.

Table 6: Impoverished Rates for Different Cohorts of Degree Holders at Different Ages

Age	Born in 1961-1965 “1st cohort”	Born in 1966-1970 “2nd cohort”	Born in 1971-1975 “3rd cohort”	Born in 1976-1980 “4th cohort”	Born in 1981-1985 “5th cohort”	Born in 1986-1990 “6th cohort”
21-25	7.26% (1986)	6.61% (1991)	4.25% (1996)	5.51% (2001)	8.08% (2006)	11.11% (2011)
26-30	0.70% (1991)	0.65% (1996)	1.08% (2001)	1.74% (2006)	1.73% (2011)	N.A.
31-35	1.06% (1996)	1.34% (2001)	1.87% (2006)	1.03% (2011)	N.A.	N.A.
36-40	1.89% (2001)	2.72% (2006)	1.58% (2011)	N.A.	N.A.	N.A.
41-45	1.86% (2006)	1.56% (2011)	N.A.	N.A.	N.A.	N.A.
46-50	1.83% (2011)	N.A.	N.A.	N.A.	N.A.	N.A.

N.A. = Not Available. Blue figures show an improvement over the previous cohort; red figures show a decline in fortunes over the previous cohort.

Note: Degree holders generally fared better off in 2011, except for “starters”.

Table 7: Impoverished Rates for Different Cohorts of Non-degree Holders at Different Ages

Age	Born in 1961-1965 “1st cohort”	Born in 1966-1970 “2nd cohort”	Born in 1971-1975 “3rd cohort”	Born in 1976-1980 “4th cohort”	Born in 1981-1985 “5th cohort”	Born in 1986-1990 “6th cohort”
21-25	7.19% (1986)	5.07% (1991)	8.74% (1996)	9.81% (2001)	13.93% (2006)	16.28% (2011)
26-30	5.08% (1991)	7.60% (1996)	6.20% (2001)	8.00% (2006)	8.19% (2011)	N.A.
31-35	8.91% (1996)	8.16% (2001)	8.50% (2006)	8.41% (2011)	N.A.	N.A.
36-40	10.86% (2001)	11.01% (2006)	10.29% (2011)	N.A.	N.A.	N.A.
41-45	11.67% (2006)	11.71% (2011)	N.A.	N.A.	N.A.	N.A.
46-50	12.90% (2011)	N.A.	N.A.	N.A.	N.A.	N.A.

N.A. = Not Available. Blue figures show an improvement over the previous cohort; red figures show a decline in fortunes over the previous cohort.

Note: Non-degree holders mostly fared worse than the previous cohort in 2011; those aged 31 to 40 fared better.

Table 8: Accomplished Rates for Different Cohorts of Degree Holders at Different Ages

Age	Born in 1961-1965 "1st cohort"	Born in 1966-1970 "2nd cohort"	Born in 1971-1975 "3rd cohort"	Born in 1976-1980 "4th cohort"	Born in 1981-1985 "5th cohort"	Born in 1986-1990 "6th cohort"
21-25	34.68% (1986)	21.35% (1991)	6.97% (1996)	7.09% (2001)	3.26% (2006)	6.00% (2011)
26-30	54.28% (1991)	35.40% (1996)	34.48% (2001)	24.50% (2006)	27.83% (2011)	N.A.
31-35	57.42% (1996)	62.81% (2001)	52.47% (2006)	52.64% (2011)	N.A.	N.A.
36-40	71.83% (2001)	64.31% (2006)	67.58% (2011)	N.A.	N.A.	N.A.
41-45	70.79% (2006)	74.62% (2011)	N.A.	N.A.	N.A.	N.A.
46-50	77.20% (2011)	N.A.	N.A.	N.A.	N.A.	N.A.

N.A. = Not available

For degree holders, 2011 brought improvement in fortunes for all cohorts relative to the previous one. 2nd Cohort had the best fortunes.

Table 9: Accomplished Rates for Different Cohorts of Non-degree Holders at Different Ages

Age	Born in 1961-1965 "1st cohort"	Born in 1966-1970 "2nd cohort"	Born in 1971-1975 "3rd cohort"	Born in 1976-1980 "4th cohort"	Born in 1981-1985 "5th cohort"	Born in 1986-1990 "6th cohort"
21-25	2.47% (1986)	2.36% (1991)	1.54% (1996)	1.32% (2001)	0.90% (2006)	0.54% (2011)
26-30	8.42% (1991)	5.11% (1996)	5.40% (2001)	4.22% (2006)	2.99% (2011)	N.A.
31-35	10.17% (1996)	11.29% (2001)	9.75% (2006)	6.64% (2011)	N.A.	N.A.
36-40	15.45% (2001)	14.55% (2006)	11.67% (2011)	N.A.	N.A.	N.A.
41-45	16.86% (2006)	14.32% (2011)	N.A.	N.A.	N.A.	N.A.
46-50	15.87% (2011)	N.A.	N.A.	N.A.	N.A.	N.A.

N.A. = Not available

Note: Among non-degree holders, all cohorts got successively worse off for all age groups.

Tables 10 and 11 present the mobility and immobility ratios for the different cohorts, for degree holders and non-degree holders respectively. In terms of the immobility ratio, upward mobility at the low end for degree holders had been worsening steadily up

till the 3rd cohort. In terms of the mobility ratio, upward mobility at the higher end had been improving steadily up to the 3rd cohort. For non-degree holders, the third cohort appeared to enjoy higher upward mobility than the 2nd cohort, both at the high and at the low end. In terms of both the Mobility and the Immobility Ratios, upward mobility for the fourth cohort generally appeared to have slowed down compared to the third cohort.

Table 10: Mobility and Immobility Ratios for Different Cohorts of Degree Holders

	Born in 1961-1965 “1st cohort”	Born in 1966-1970 “2 nd cohort”	Born in 1971-1975 “3 rd cohort”	Born in 1976-1980 “4 th cohort”	Born in 1981-1985 “5th cohort”	Born in 1986-1990 “6th cohort”
5-Yr Immobility Ratio	0.096	0.098	0.254	0.316	0.214	N.A.
10-Yr Immobility Ratio	0.146	0.203	0.44	0.187	N.A.	N.A.
5-Yr Mobility Ratio	1.565	1.658	4.95	3.456	8.537*	N.A.
10-Yr Mobility Ratio	1.656	2.942	7.53	7.425	N.A.	N.A.

*Types in blue show improvement; types in red show decline in mobility over the previous cohort. 5-Year Mobility Ratio of 5th cohort at 8.537 is the highest among ALL cohorts.

Table 11: Mobility and Immobility Ratios for Different Cohorts of Non-degree Holders

	Born in 1961-1965 “1st cohort”	Born in 1966-1970 “2 nd cohort”	Born in 1971-1975 “3 rd cohort”	Born in 1976-1980 “4 th cohort”	Born in 1981-1985 “5th cohort”	Born in 1986-1990 “6th cohort”
5-Yr Immobility Ratio	0.707	1.499	0.709	0.815	0.588	N.A.
10-Yr Immobility Ratio	1.239	1.609	0.973	0.857	N.A.	N.A.
5-Yr Mobility Ratio	3.409	2.165	3.506	3.197	3.322	N.A.

10-Yr Mobility Ratio	4.117	4.784	6.331	5.030	N.A.	N.A.
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*Types in blue show improvement; types in red show decline in mobility.

The speed of upward mobility appeared to have picked up considerably from 2011, especially for degree holders at the upper end. The five-year mobility ratio jumped from 3.46 times to 8.54 times. Although at the low end the improvement is less pronounced, the immobility ratio fell from 0.815 for the 4th cohort to 0.588 for the 5th cohort for non-degree holders. For degree holders, the immobility ratio fell from 0.32 to 0.21.

We do not have immobility and mobility ratios for the sixth cohort, but this latest cohort is enjoying a higher accomplished ratio as they enter the job market, even though the impoverished ratio is also the highest in history.

5. Conclusions

To conclude, we may note that fortunes are quite different for skilled versus unskilled workers. Upward mobility has clearly picked up recently, despite the fact that young people entering the labour force are more likely to have to accept a low wage. The latest pick-up in upward mobility is one of the most notable results from the 2011 Census, and may well reflect a wave of retirement among babyboomers that has triggered off a new round of promotions and opportunities for upward mobility which mainly benefits the highly skilled, promotion-ready workers.

Table 6 shows that for degree holders, the impoverished rate for all cohorts beyond age 21-25 almost without exception ranges from below 1% to no more than 2%. For cohort 1 and cohort 2, the impoverished rates for degree holders are even higher than

those for non degree holders during this early phase of career, probably reflecting a period of training. The “early career” impoverished rates have been rising from cohort to cohort for both degree holders and non-degree holders, but as **Table 13** shows, degree holders maintain a considerable advantage over non-degree holders in that their impoverished rates remain a fraction of that of non-degree holders.

Table 13: Impoverished Rate Multiple for Different Cohorts at Different Ages:

Degree holder vs Non Degree Holders

Age	Born in 1961-1965	Born in 1966-1970	Born in 1971-1975	Born in 1976-1980	Born in 1981-1985	Born in 1986-1990
	“1st cohort”	“2nd cohort”	“3rd cohort”	“4th cohort”	“5th cohort”	“6th cohort”
21-25	101.0%	130.4%	48.6%	56.2%	58.0%	58.0%
26-30	13.8%	8.6%	17.4%	21.8%	21.1%	N.A.
31-35	11.9%	16.4%	22.0%	12.2%	N.A.	N.A.
36-40	17.4%	24.7%	15.4%	N.A.	N.A.	N.A.
41-45	15.9%	13.3%	N.A.	N.A.	N.A.	N.A.
46-50	14.2%	N.A.	N.A.	N.A.	N.A.	N.A.

Note: Blue indicates relative improvement for degree holders over the previous cohort.

N.A: Not available.

The advantage of degree holders over non-degree holders is again demonstrated in **Table 14**, which shows the accomplished rate of degree holders as a percentage of that of non-degree holders. First, a remarkable thing is that in 2011 the 6th cohort enjoyed a quantum jump from 3.6 times to over 11 times in the early career accomplished rate. 2011 also brought about a big leap in the accomplished rate multiple for degree holders over non degree holders for all cohorts.

Table 14: Accomplished Rate Multiple for Different Cohorts at Different Ages:

Degree holder vs Non Degree Holders

Age	Born in 1961-1965	Born in 1966-1970	Born in 1971-1975	Born in 1976-1980	Born in 1981-1985	Born in 1986-1990
	“1st cohort”	“2nd cohort”	“3rd cohort”	“4th cohort”	“5th cohort”	“6th cohort”
21-25	1404.0%	904.7%	452.6%	537.1%	362.2%	1111.1%
26-30	644.7%	692.8%	638.5%	580.6%	930.8%	N.A.
31-35	564.6%	556.3%	538.2%	792.8%	N.A.	N.A.
36-40	464.9%	442.0%	579.1%	N.A.	N.A.	N.A.
41-45	419.9%	521.1%	N.A.	N.A.	N.A.	N.A.
46-50	486.5%	N.A.	N.A.	N.A.	N.A.	N.A.

Note: Blue indicates relative improvement over previous cohort for degree holders.

n.a.: not available.

The above discussion well demonstrates the usefulness of the proposed approach. This new methodology is simple and intuitive, and does not depend on the availability of longitudinal data. Yet it allows us to compare the fortunes of different cohorts over several decades. We have shown how Hong Kong people’s economic fortunes had improved and then declined over the years from cohort to cohort, but degree holders’ fortunes appear to be much better than is commonly thought, notwithstanding the huge increases in university places over the last two decades. Another, perhaps less surprising result is that the retirement of postwar babyboomers appeared to benefit greatly the highly skilled in terms of upward mobility, but largely left the unskilled, low income earners untouched.

Appendix

Table A1: Age and Sample Sizes of Cohorts in Each Census and By-census Year

	Born in 1961-1965	Born in 1966-1970	Born in 1971-1975	Born in 1976-1980	Born in 1981-1985	Born in 1986-1990
1986	21-25 (4572)	N.A.	N.A.	N.A.	N.A.	N.A.
1991	26-30 (21883)	21-25 (16911)	N.A.	N.A.	N.A.	N.A.
1996	31-35 (23709)	26-30 (20472)	21-25 (16585)	N.A.	N.A.	N.A.
2001	36-40 (4619)	31-35 (4122)	26-30 (3791)	21-25 (3052)	N.A.	N.A.
2006	41-45 (4776)	36-40 (3971)	31-35 (3869)	26-30 (3642)	21-25 (2978)	N.A.
2011	46-45 (23729)	41-45 (20245)	36-40 (19703)	31-35 (19002)	26-30 (19493)	21-25 (13657)

N.A. = Not Available.

Table A2: Sample Sizes of Cohorts by Age (Degree Holders) in Each Census and By-census Year (% of sample for age group in Brackets)

	Born in 1961-1965	Born in 1966-1970	Born in 1971-1975	Born in 1976-1980	Born in 1981-1985	Born in 1986-1990
1986	21-25 124 (2.71)	N.A.	N.A.	N.A.	N.A.	N.A.
1991	26-30 1,704 (7.79)	21-25 862 (5.10)	N.A.	N.A.	N.A.	N.A.
1996	31-35 3,314 (13.98)	26-30 3,517 (17.18)	21-25 2,280 (13.75)	N.A.	N.A.	N.A.
2001	36-40 742 (16.6)	31-35 898 (21.79)	26-30 1,015 (26.77)	21-25 635 (20.81)	N.A.	N.A.
2006	41-45 808 (16.92)	36-40 919 (23.14)	31-35 1,233 (31.87)	26-30 1,204 (33.06)	21-25 767 (25.76)	N.A.
2011	46-45 3,881 (16.36)	41-45 4,617 (22.81)	36-40 6,092 (30.92)	31-35 7,166 (37.71)	26-30 8,217 (42.15)	21-25 4,366 (31.97)

N.A. = Not Available.

Appendix Diagram to Illustrate the Methodology

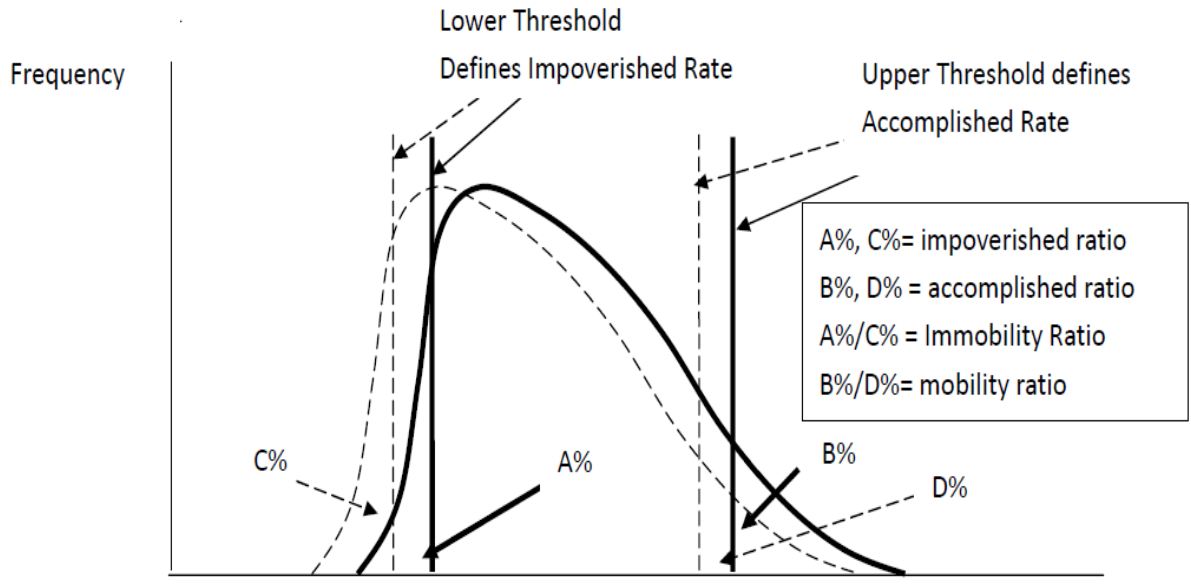


Figure A: Distributions are for the same cohort N Years apart; % is % of the sample size for the cohort, Thick Line at Year Q + N

Monthly Income for Cohort X, in year Q, and Year Q+N

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