

# Report on : Social value of homeownership and residential stability- Implications for Long Term Land Use Planning

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to the Planning and Development Division, HKIS.

March 2013.

Social value of homeownership and residential stability- Implications for Long Term Land Use Planning

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Executive Summary

1. Homeownership as a tool in social policy is not an uncommon approach for government to achieve various ends. While purchasing a home is usually a personal, financial or familial decision, the ramifications of homeownership policy in any society go far beyond simply a decision on location or housing tenure type.
2. In the recent years, housing prices have gone up substantially so that more and more demand from the society has mounted to the government for assistance to homeownership.
3. This report wants to show that for a good planning and development land policy to be established, the role of the government in assisting the general public to become homeowners should not hinge on whether the housing prices are high or affordable only.
4. For a long term and effective land policy to be established, the society should understand the social value of homeownership as well as residential stability (defined as the length of residence) for the average families in Hong Kong.
5. Studies around the world have shown that homeownership will affect parenting behaviour, affects community attachment; residents' civic participation, or may even affect voting behaviour.
6. It has been shown that parents' conscious choice to be homeowners has a positive effect on their children's academic performance.
7. This report concentrates on this issue of impact on children as children spend much more time in the home environment than other members of the family, and thus the social value of homeownership and residential mobility is felt more conspicuously on this group of citizens.

8. This report finds that, based on a sample size of 2078 respondents, homeownership, whether in the private or public sector, is a positive element in helping academic development for young children
9. Students living in public rental housing are negatively affected by this factor in their academic performance at school. However, living in the private rental housing is not shown to be significant. This may be due to the fact that private rental housing sector varies substantially from the very high end luxurious class to minimal housing condition, while public housing sector is usually associated with lower-income households.
10. Students whose parents choose to live in the same housing environment during their children's childhood tend to perform better at school than their counterparts who move a lot. In any case, high stability of the childhood environment seems to be a common and significant factor affecting school performance irrespective of the schoolchild's parents' educational background and personal caliber of the child.
11. As a supplementary examination of the issue, we also interviewed about 180 senior citizens on how the housing environment affects their level of happiness.
12. We find that citizens in our sample residing in private rental single-block building are relatively less happy. This shows that senior citizens who are renters and living in single-block buildings are being disadvantaged. The reasons could be manifold, including the lack of facilities and poor management in these single-block buildings, and the actual reasons need to be explored further. This also implies that more comprehensive housing development is preferable for the benefits of senior citizens.
13. It is also found that senior citizens who are property owners are not found to be significantly happier. In other words, the possession of home ownership does not provide an extra contentment to the elderly people.
14. In addition, senior citizens living in public housing estates and HOS communities are not significantly happier or less happy than those living in private accommodation.
15. However, we find that redevelopment potential of the neighbourhood brings positive impact on the happiness level of senior citizens living in that neighbourhood. This may be attributed to the relatively satisfactory compensation and rehousing arrangement package for the affected residents in Hong Kong in urban renewal situations.

16. Homeownership can only be promoted if housing units are affordable in the city. Housing units are affordable if housing supply is not kept on a leash. This in turn is dependent on land policy for supplying housing land. In small and compact cities, this may mean either a long term land supply mechanism, or to increase the current development intensity by allowing up-zoning in the residential districts.
17. In addition, as a policy consideration, if homeownership has a direct and positive social value to children's development, should long term housing policy put families as the main target in promoting homeownership, while rental housing could be used to provide a safety net for single persons ? This issue is for further research agenda.



## **Introduction : Homeownership and Housing Market Structure in Hong Kong**

Although there are about half of the population living in the public sector housing, about 18% of this group of citizens are actually homeowners. The following table illustrates the distribution of the population in our city according to their housing environment.

Table 1 The Distribution of Population by Type of Housing in Hong Kong 2010 (1<sup>st</sup> quarter)<sup>1</sup>

<b>1<sup>st</sup> Quarter of 2010</b>	<b>Percentage (%)</b>
Public Permanent Housing (Rental Flats)	<b>29.7</b>
Public Permanent Housing (Subsidized Ownership Flats)	<b>17.8</b>
Private Permanent Housing	<b>51.6</b>
Private Temporary Housing	<b>0.9</b>

An interesting question arising from this picture is, why and when do people intend to become homeowners, and what the authority should do in terms of public policy ? For this question, we turn to the following chart. Figure One shows that most people in Hong Kong in the past decade made a house-purchase decision basically on the basis of general property price trend. When prices are on the rising trend, desire to become homeowner increases, and vice versa.

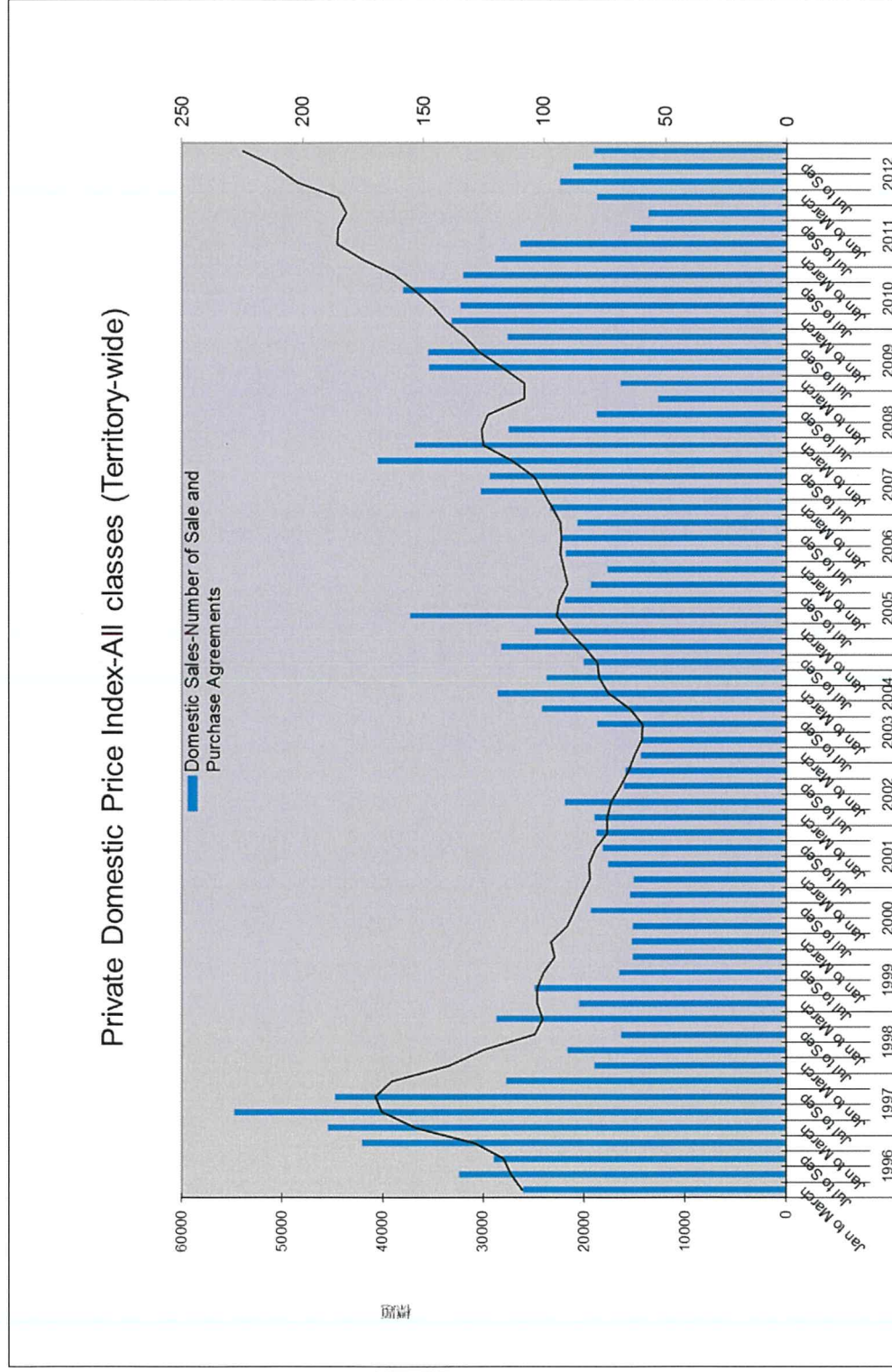
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<sup>1</sup>Census and Statistics Department, HKSAR. Housing in Figures 2010  
<http://www.housingauthority.gov.hk/hdw/content/document/b5/aboutus/resources/statistics/HIF2010.pdf>; in English:  
[www.housingauthority.gov.hk/hdw/content/document/en/aboutus/resources/statistics/HIF2010.pdf](http://www.housingauthority.gov.hk/hdw/content/document/en/aboutus/resources/statistics/HIF2010.pdf)

What transpires from this picture is that if the government overall land and planning policies also follow this mentality, the government needs to be very accurate in assessing the cyclical movements of the market and the overall economy. The problem is, governments are not usually good at this in addition to the fact that this tends to be a short-term and passive policy action. What becomes important is for the government to have a solid ground to stand on when promoting long term homeownership for the society, instead of struggling to match the market cycles due to political pressures. If government is solely reacting to market price changes, it falls into the predicament the government should only promote and facilitate homeownership when the housing price level is high. Then, should the government discourage homeownership when housing price is on a decreasing trend and housing market is sluggish ?

In this respect, this report tries to provide a socially acceptable rationale for the government to formulate a long term housing policy supported with the relevant measures in the overall urban planning and land policies. In the other words, we want to understand better why the government should devote land resources and to structure long term planning and land development policies that would facilitate and promote homeownership, apart from the fact that people cannot afford to buy a housing unit when the market price level is high. If homeownership has a different level of social value, this long term housing strategy should factor this element into the formulation process. Eventually, our overall planning and development strategy for Hong Kong's land resources will become a much more sustainable and comprehensive one.

Figure One : Correlation Between Transaction Volume and Price Movements in HK





## **Social Value of Homeownership and Long Term Housing and Land Policy**

Homeownership as a tool in social policy is not an uncommon approach for government to achieve various ends. While purchasing a home is usually a personal, financial or familial decision, the ramifications of homeownership policy in any society go far beyond simply a decision on location or housing tenure type. Homeownership has been shown to be important not only to such conventional real estate issues as financial analysis or asset allocation (Cauley et al. 2007), it is equally important to the examination of other social issues such as racial divide (Freeman and Hamilton, 2002 ; Freeman, 2005; and Hirschl and Rank, 2010) or racial and gender inequality (Beverlyln, 2002; McConnell and Marcelli, 2007; and Leloup et al. 2011).

Examination of the impact of homeownership does not paint a complete picture if the issue of residential stability is not considered. Homeownership and residential stability are different but related concepts. One does not need to be a homeowner in order to enjoy residential stability, or for the impact to be observed. Public or subsidized rental housing, for example, has been shown to be instrumental in improving physical and mental health of the homeless people (Hwang, et al. 2011). Nevertheless, it is a general perception that homeownership and residential stability do go hand-in-hand, such that even if people have been living in a community for long time where few people own their homes may not be able to enjoy the various positive attributes of residential stability including positive parenting behaviour (Pinderhughes, et al. 2001). Residential stability is a significant element in the understanding of the impact of homeownership as residential mobility does have a significant and positive impact on community attachment (Oishi, et al. 2007). This is because residents' inclination to gain identification with the community tends to be positively related to the length of their residence in that neighbourhood. Such positive correlation also leads to higher degree of residents' civic participation (Kang and Kwak, 2003), or may even affect voting behaviour (Stein, et al. 2003).

In the personal level, childhood residential stability is of paramount importance to future development in midlife, as impact of the residential neighbourhood on child development during the early stage lingers into the future and contributes to such issues as lifetime depression (Gilman, et al. 2003), or physical health when the children become adults (Bures, 2003). In the more serious situation, residential instability in childhood stage might even shorten life expectancy for adults with certain personality traits such as introvert (Oishi and Schimmack, 2010). Because of the importance of homeownership

and residential stability observed in these studies, this paper intends to investigate the impact homeownership and residential stability on child development. Since child development encompasses a wide spectrum of indicators, this paper only concentrates on one particular trait, which is academic performance at school. Among other reasons, academic performance is relatively measurable by objective indication at school. This allows a better quantitative analysis to be employed in this analysis. However, it needs to be emphasized here that it is not the intention of this report to use academic performance as a proxy for a complete diagnosis of the correlation between the built environment attributes and the overall child development.

Overall, with a rich literature in this issue, empirical results drawn from similar studies can extend beyond the realm of child psychology and development. Bramley and Kareley (2007) for example noted that the positive correlation between school children from homeownership families and their relatively better performance may have important implications for the changing tenure mix in the process of housing regeneration. In this report, our intention is to examine the impact of homeownership and degree of residential stability from a housing policy point of view through an empirical analysis in Hong Kong. In doing so, we hope to highlight a certain housing issues that are worth re-consideration when taking into account the impacts of homeownership and residential stability on children.

The examination of the impact of homeownership on child development will eventually help us understand better the social value of homeownership as most parents make a housing decision, at least for the home they intend to stay in, with a strong inclination to the benefits of their children. Understanding this social value of homeownership may help the government forge a better, more effective long term land and housing policy that goes beyond just a reaction to the social pressure due to high housing price and short term market fluctuations.

In addition, to help validate the analysis of this report, we also intend to carry out a second layer of supplementary examination which focuses on the impact of homeownership on the level of “happiness” of senior citizens.



## The Analytical Framework

### Analysis 1 : Impact on Children

In this report, we will first of all examine the correlation between homeownership and residential stability and their impact on one strait of child development, namely academic performance at school, in addition to some other housing environmental and familial factors. We will apply a multiple linear regression model in our examination of the correlation among variables. Our dependent variable is academic ranking position in the form (academic year), which is continuous quantitative rather than dichotomous. As a result, our model will look like this :

Academic performance of the children =

$f(\text{Homeownership, Residential Stability, Living Conditions, Family Background})$

$$\begin{aligned} \text{Ranking Position} = & a + b_1 \text{PRI\_RENT} + b_2 \text{PRI\_BUY} + b_3 \text{PUB\_RENT} + b_4 \text{HOS} + \\ & c_1 \text{SIZE} + c_2 \text{CROWDING\_EFFECT} + c_3 \text{NO\_OF\_PEOPLE} + c_4 \text{MOVE\_NEVER} + c_5 \\ & \text{MOVE\_ONCE} + c_6 \text{MOVE\_TWICE} + c_7 \text{MOVE\_MORE THAN TWICE} + c_8 \text{FLOOR-} \\ & \text{ZONE} + d_1 \text{FATHER\_EDU} + d_2 \text{MOTHER\_EDU} + d_3 \text{FATHER\_JOB} + \\ & d_5 \text{MOTHER\_JOB} + d_6 \text{LIVE\_WITH\_PARENTS} + \\ & d_7 \text{LIVE\_WITH\_GRANDPARENTS} + \epsilon \end{aligned}$$

### **Sample Size**

The targets in this study are the secondary school students in the age group of 15-17. The reason for choosing this group is that they are the students in their senior years under the current secondary school system in Hong Kong. Their academic grades are therefore much more representative of their educational knowledge, compared to junior year students. There were a total of 2250 questionnaires collected, out of which 2078 were valid and useful. According to the data from the Hong Kong Census and Statistics

Department, there is no record of population in this particular age group. The total population in youngsters in the age group of 15-19 by the end of 2010 was about 431,200 in which about 221,400 were boys and 209,800 were girls<sup>2</sup>. In order not to include a biased sample base, a territory-wide questionnaire survey was conducted. In our sample, students were selected from schools that locate in 25 local districts (see Appendix) within the four main geographical regions in Hong Kong, namely, Kowloon, Hong Kong Island, the New Territories and Outlying Islands. It is noticed from the table that the distribution of students from these four main regions represent fairly closely to the relative size of each region. This minimizes bias of data towards certain socioeconomic status groups. In terms of gender distribution, about 60% of the respondents were female students.

Table 2 Gender Distribution of Respondents in the Sample

<b>Gender</b>	<b>No.</b>	<b>Proportion (Correct to 1 decimal place)</b>
Male	857	41.2%
Female	1,221	58.8%

Analytical framework :

We will examine briefly the dependent and the various independent variables.

Dependent Variable :

Since a new high school diploma system has been in place from September 2012 onwards, we believe the internal academic ranking is also objective enough to distinguish the academic attainments of individual students. As a result, we use this as a proxy for children's academic performance in this study. In the questionnaire, students were asked to give their final academic ranking in their own academic year in the previous year.

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<sup>2</sup> [http://www.censtatd.gov.hk/hong\\_kong\\_statistics/statistical\\_tables/index.jsp?subjectID=1&tableID=002](http://www.censtatd.gov.hk/hong_kong_statistics/statistical_tables/index.jsp?subjectID=1&tableID=002)

Usually, in the high school system in Hong Kong, there are about four to five classes in one academic year, such that for example in grade 10, there will be four to five classes of 40 students each. Academic year-end results for high school students show both class ranking and grade/year ranking, and we think grade/year ranking is a better reflection. In addition, because this is a ranking system, the numerical value given by the students in their questionnaire is actually negatively correlated to their performance. This means the best student will give a value of “1”, whereas a less outstanding student will give a value of, say 40. Consequently, in the regression outcome, those variables that will contribute to the student’s academic performance will be negatively significant and vice versa.

#### Independent Variables

##### Homeownership

Homeownership is defined as whether the present accommodation is rented or purchased.

Dummy variables are created to identify the types of housing tenure form :

Table 3 Variables for Different Housing Tenure Forms

<b>Independent Variables</b>	<b>Description</b>	<b>Utilization of Variables</b>
PRI_RENT	Private Housing (rental)	Dummy Variable of 1 is used to indicate the type of housing in which children are living, 0 otherwise
PRI_BUY	Private Housing (purchased)	
PUB_RENT	Public Housing (rental)	
HOS	Housing Under Home Ownership Scheme (purchased)	

### Degree of Over-crowdedness

Degree of over-crowdedness is based on two aspects in this report. First of all, the size of their own housing flat is recorded. We also measure the per capita floor space occupied by each member of the family from the questionnaire survey. This is believed to be a better measurement than using just the gross floor area of the housing unit.

### Floor-Zone

Hong Kong is a very compact and crowded city where most people live in high-rise apartment buildings in a densely-developed pattern. Hence, housing units on the higher-floor zone will usually command a higher property value because of the relative better view in terms of unobstructed view and degree of privacy. This also indicates, to a certain extent, the relative socio-economic status of the respondent's family. However, we notice that building height does vary a lot in the urban development of Hong Kong in the past 30 years so that a respondent living on the tenth floor of a 12-storey building is already living on the higher-floor zone, whereas another respondent living on the tenth floor of a 50-storey building is actually a lower-floor zone resident in that community. Consequently, we could compute the relative floor zone for each respondent, namely their floor level divided by the total number of floors in their building.

### Residential Stability

As noted in many studies, frequent moving may have negative impact on children (Brathwaite, et al, 1995; Evans, 2004). In order to investigate this factor, we also include a number of "stability" variables indicating frequency, namely : MOVE\_NEVER, MOVE\_ONCE, MOVE\_TWICE and MOVE\_MORE THAN TWICE.

In addition to the housing /neighbourhood environment factors, we also include some personal and familial factors in the model.



Family/ Personal factors :

#### Live with Parents

In this variable, respondents are asked if they live with both parents. Hence, we would like to assess if single-parent families in Hong Kong pose as a detriment to children's academic performance at school.

#### Live With GrandParents

Traditional multi-generations living under one roof could be a blessing or problem. This variable will help us understand better this aspect.

#### Parents' education level

Parent's education level has been shown to be influential to children's development. In our analysis, education level of respondents' parents is classified into five major categories, including 1) no formal education or pre-school education; 2) primary school level; 3) secondary school level; 4) post-secondary school level; and 5) University or above.

#### Parents' occupation

Although this factor may be auto-correlated with parents' education, we still consider to include this factor as a dummy variable : FATHER\_JOB and MOTHER\_JOB. Similarly, we create six sub-categories for respondents to fill in. Basically, they are : 1) civil servants; 2) teachers; 3) semi-public/quasi-government corporation such as the railway company in Hong Kong, the MTRC<sup>3</sup> ; 4) Administrators or managerial level; 5) professionals; and 6) self-employed.

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<sup>3</sup> For details of the nature of MTRC, please check :



Results :

After cleansing the data for outliers and unreasonable responses, there are 2,078 sample points for our further analysis.

The following Table 4 shows the descriptive statistics of the model :

Table 4 : Descriptive Statistics of All Models

	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>SD</b>
Live-With Parents	2078	0	1	.86	.346
Live With Grandparents	2078	0	1	.17	.378
FatherEducation	2078	0	5	3.09	.967
MotherEducation	2078	1	5	2.99	.886
Either Parents Edu-Above 4	2078	0	1	.29	.453
FatherOccupation_ CivilServant	2078	0	1	.08	.277
FatherOccupation_ Teacher	2078	0	1	.02	.147
FatherOccupation_ SemiPublic	2078	0	1	.05	.216
FatherOccupation_ Admin_Manarial	2078	0	1	.15	.358
FatherOccupation_ Professional	2078	0	1	.20	.397
FatherOccupation_ Service	2078	0	1	.42	.494
FatherOccupation_ None	2078	0	1	.07	.251
MotherOccupation_ CivilServant	2078	0	1	.04	.192
MotherOccupation_ Teacher	2077	0	1	.02	.147
MotherOccupation_ SemiPublic	2077	0	1	.03	.161

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[http://www.mtr.com.hk/eng/overview/profile\\_index.html](http://www.mtr.com.hk/eng/overview/profile_index.html)

MotherOccupation_ Admin_Manage	2078	0	1	.11	.316
MotherOccupation_ Professional	2078	0	1	.09	.281
MotherOccupation_ Service	2078		1	.32	.467
MotherOccupation_ Housewife	2078	0	1	.39	.489
Private_Rent	2078	0	1	.10	.300
Private_Buy	2078	0	1	.43	.495
Public_Rent	2078	0	1	.32	.466
HOS_Buy	2078	0	1	.10	.299
HomeArea	2078	24	3500	651.65	323.50 5
Floor Zone	2076	.02222 2223	38.000 00000 0	.5778632 5962	.91607 62317 07
No_Of_Moving_ Never	2078	0	1	.68	.465
No_Of_Moving_ Once	2078	0	1	.21	.406
No_Of_Moving_ Twice	2078	0	1	.07	.249
No_Of_Moving_ MoreThan01Twice	2078	0	1	.04	.194
NewHome_ Bigger	2077	0	1	.15	.360
NewHome_ Smaller	2078	0	1	.08	.264
NewHome_ Same	2078	0	1	.08	.264
No_Of_People	2078	1	10	4.09	1.146
Area/person	2078	8.0000 00	1150.0 00000	170.5054 7088	101.84 51139 16
Ranking	2078	1	300	66.25	37.268
Valid N (listwise)	2073				

In addition, Tables 5-9 show the regression outcomes of the six models.

Table 5 : Regression Result of the Model

	Unstd Coeff Beta	Std Coeff Beta	t-stat	Tolerance	VIF
(Constant)	93.065	22.260			
Private Buy	-23.393	-.310	-11.109	.455	2.196
No. of Moving – Never	-19.904	-.248	-12.889	.958	1.043
HOS Buy	-17.967	-.144	-6.248	.670	1.492
Mother Education	-3.802	-.090	-4.597	.922	1.084
No. of People	3.111	.628	4.953	.956	1.046
Public Rent	7.812	2.188	3.570	.475	2.104
Live With Parents*	-6.086	2.098	-2.901	.935	1.069

*\*Significant at 5%*

Model Fit : N = 2078

Adj r-sq 0.263

S E Est32

D-W stat. 1.638

F ratio 106.862

## Discussion of Results

In general, all the models are reasonably robust. The VIFs recorded in the analyses confirm that the model shows no sign of multicollinearity. Multicollinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated, in which case, it may affect the calculations of the individual predictors. In addition, the D-W statistics also confirm that there is no indication of autocorrelation problem in the model.

### Homeownership

In the model, it shows that homeownership, whether in the private or public sector, is a positive element in helping academic development for young children<sup>4</sup>. Conversely, students living in public rental housing are negatively affected by this factor in their academic performance at school. It should be noted that the factor of living in the private rental housing is not shown to be significant. This may be due to the fact that private rental housing sector varies substantially from the very high end luxurious class to minimal housing condition, while public housing sector is usually associated with lower-income households.

### Residential Stability

In the model examined in this report, the “No. of Moving – Never” variable has shown to exert a positive impact on children’s performance at school. This means that, other things being equal, students whose families have never moved homes during their children’s childhood tend to perform better at school than children whose families tend to move a lot for whatever reasons. In any case, high stability of the childhood environment seems to be a common and significant factor affecting school performance irrespective of the schoolchild’s parents’ educational background and personal caliber of the child. Minimal disturbance in the physical environment during childhood is therefore instrumental to children’s academic performance. Hence,

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<sup>4</sup> Reiterating the discussion above, since the dependent variable is ranking in the academic year which has a smaller numerical value for a better rank. An independent variable has a positive impact on ranking / academic performance if the coefficient is negative, and vice versa.

frequent moving is disruptive to children's academic performance, whatever extra wealth gathered by the families through frequent trading for their housing flats therefore cannot compensate for such disruption. It therefore leaves an important decision for the family on deciding between wealth accumulation and the child's development. Between the end of 2009 and 2010, residential prices had gone up substantially in Hong Kong, in some case by 20%. Some families would be inundated by enquiries from real estate agents urging them to sell their flats. In some cases, it has been reported that it was not unusual for families who just moved less than a year to sell their new flat because of the speculative gain they were offered. Given what we discovered here in this report, parents will have to weigh the impact of this frequent moving against the financial gains which they may or may not desperately need.

#### Familial Factors

The Model indicates that living with both parents is advantageous to academic performance at school. A child who, other things being equal, lives with both parents tends to perform better than his counterpart from a single-family. Apart from emotional damage, single-family children may also suffer from economic disadvantages.

The model also shows the negative impact of over-crowdedness on ranking. This shows that in a compact and high-density city such as Hong Kong, spacious housing environment is a distinct family advantage that could contribute positively to child development.

#### Analysis 2 : Impact on Senior Citizens



As mentioned above, though the main focus in this report is the examination of the impact of homeownership on children, we also intend to provide a second layer of analysis to validate / reinforce the results. We will do this by looking at the correlation between the value of homeownership and happiness level among senior citizens in Hong Kong. However, given that this is a supplementary examination and the problem of interviewing senior citizens, the sample size of this examination is relatively small.

We collected 250 questionnaires, in which 184 samples are deemed to be valid for analysis. With respect to the geographic location of the respondents, 41.3% of the respondents live in Kowloon. Table 6 details the geographical distribution of the respondents. Comparing with the statistics provided by 2006 Population By-census, the data set used in this study is representative of the distribution of population of age 65 or above in Hong Kong.

<b>Location</b>	<b>Frequency</b>	<b>%</b>	<b>% By 2006 Population By-census</b>
<b>Kowloon</b>	76	41.3	39.3
<b>New Territories</b>	70	38.0	39.4
<b>Hong Kong Island</b>	38	20.7	21.3
<b>Total</b>	184	100.0	100.0

Table 6. Distribution of Geographic Location of Respondents

For the gender, the distribution is quite even. 87(47.3%) are male and 97(52.7%) are female.

## Gender

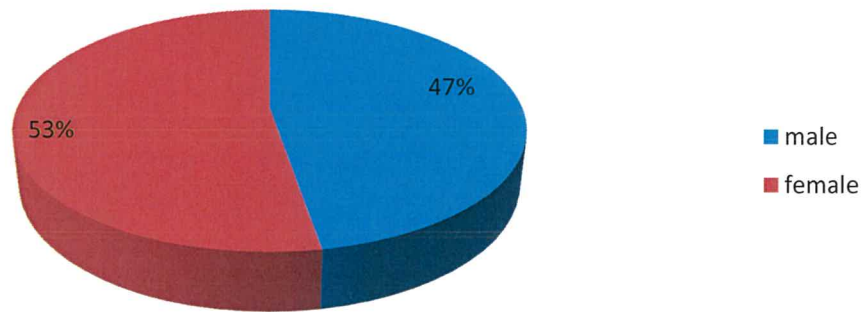


Figure 1. Frequency Distribution of Gender

Regarding the age distribution, the mean age is 73.6 and the standard deviation is 6.8. The maximum age is 92 while the minimum is 65. 62 (34%) respondents are between the ages of 65 and 69.

## Age

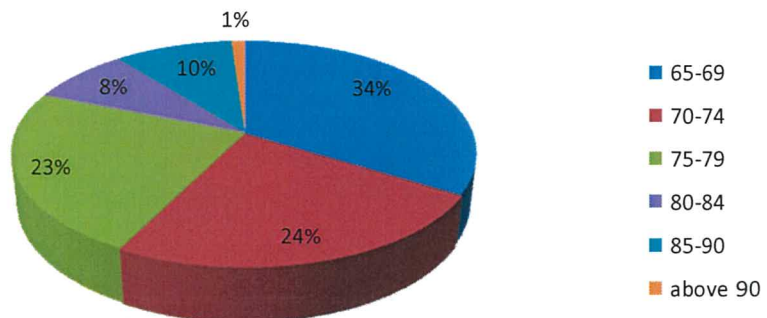


Figure 2. Frequency Distribution of Age

Among the 184 respondents, 89 (48.4%) are religious while 95 (51.6%) are not.

## Religious Status

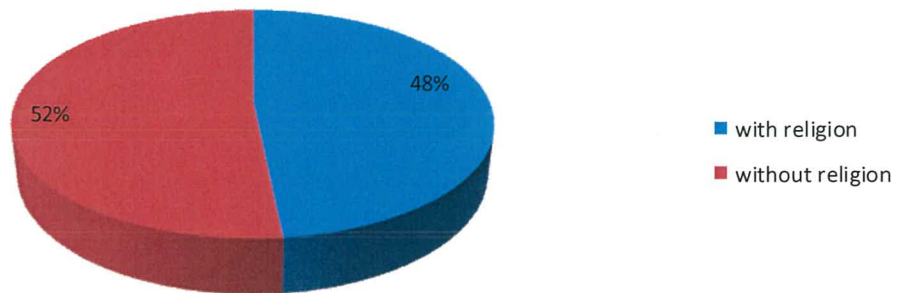


Figure 3. Frequency Distribution of Religious Status

With regard to the educational attainment, 64 (35%) of the respondents have attained secondary or sixth-form level. 57 (31%) and 47 (26%) are illiterate and possess primary level respectively. Less than 10% (16) of them have attained post-secondary education.

## Educational Attainment

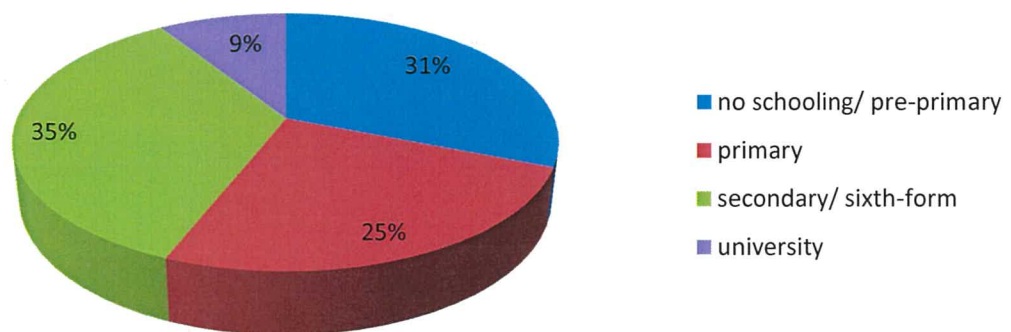


Figure 4. Frequency Distribution of Educational Attainment

As to the employment status, a majority (87%) of the respondents are retired while the remaining is not.

## Employment Status

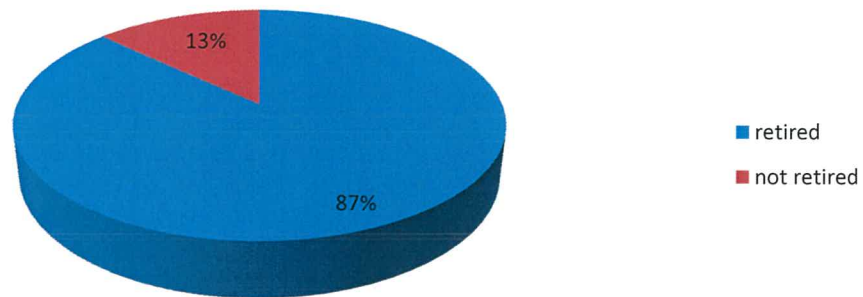


Figure 5. Frequency Distribution of Employment Status

In terms of the financial situation, 38% (70) of the respondents have a monthly income less than HK\$2,000. Another 33% (60) possess an income between HK\$2,000 and HK\$3,999 per month.

## Monthly Income

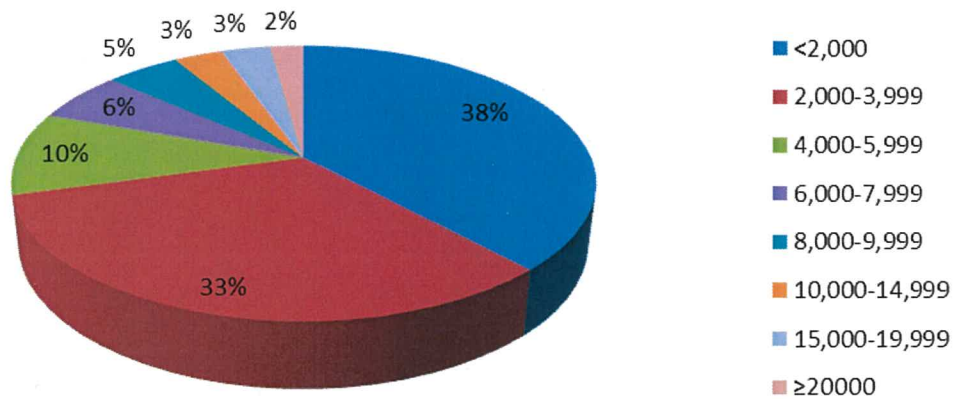


Figure6. Frequency Distribution of Monthly Income

Concerning the type of accommodation, 38% of respondents live in owned single-block building. Another 27% live in public housing estate. Besides, 10% live in housing under HOS. Only 2% of them live in the comprehensive type of rental private housing. Meanwhile, none of them live in rental private house (Table 13). With

reference to the General Household Survey (C&SD, 2008), among the elderly people who are not institutionalized, 37% and 18% of them live in public housing estate and subsidized sale flats respectively. The remaining 45% reside in various types of private permanent housing. Therefore, the distribution of type of accommodation in this data set is comparable to that in the senior citizens in Hong Kong.

### Type of Accommodation

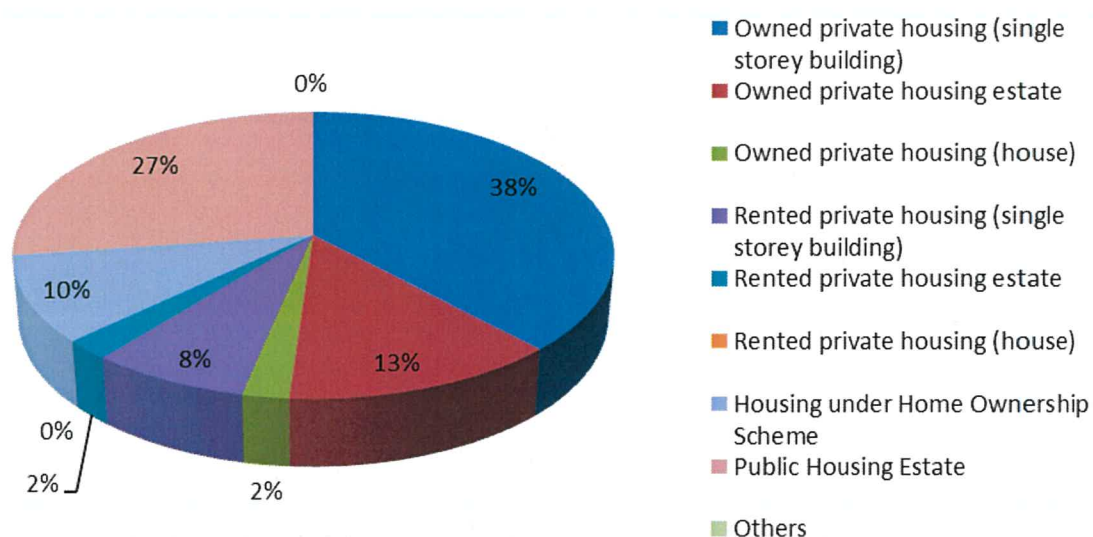


Figure 7. Frequency Distribution of Type of Accommodation

For the living arrangement, the majority of the respondents (79%) live with their relatives, such as their spouse and children. Besides, 14% of them live alone. In the data set, only 7% of the elderly people live with people other than their relatives.



## Living Arrangement

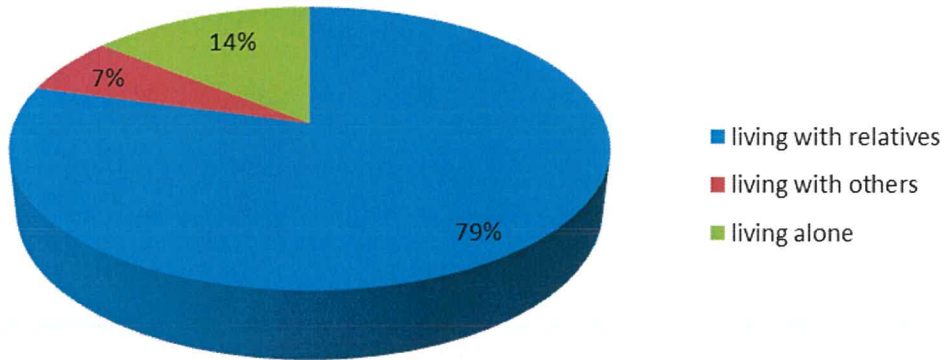


Figure 8. Frequency Distribution of Living Arrangement

The Analysis :

Based on the happiness measurement model adopted by Mroczek & Kolarz (1998) known as the Affect Balance Scale, we are able to compute how the homeownership factor as well as the environment affects our senior citizens.

$$HI = a + b_1RP\_S + c_1DMTR + c_2USPORT + d_1RENO + d_2REDEV + e_1OPTI + e_2ASSIST + e_3SOCIAL + e_4FAMILY + e_5EDU + f$$

where

HI is the happiness index computed by Mroczek & Kolarz (1998) Affect Balance Scale;

a is the constant term;

$b_1$  is the partial coefficient the variables in the type of accommodation;

$c_1$  and  $c_2$  are the partial coefficients of their respective variables in the built environment of neighborhood;

$d_1$  and  $d_2$  are the partial coefficients of their respective variables in the physical environment of accommodation;

$e_1, e_2, e_3, e_4$  and  $e_5$  are the partial coefficients of their respective variables in the non-environmental factors;

RP\_S is the dummy variable representing rental private housing (single block );

DMTR is the travelling time from the accommodation to the nearest MTR station;

USPORT is the usage of sports facilities;

RENO is the dummy variable representing the requirement of renovation for the building;

REDEV is the dummy variable representing the existence of redevelopment plan within the coming 3 years;

OPTI is the level of optimism;

ASSIST is the dummy variable representing the requirement for assistance in daily life;

SOCIAL is the social relationship;

FAMILY is the family relationship;

EDU is the educational attainment;

f is the stochastic error term

The Results :

We find that senior citizens in our sample residing in private rental single-block building are relatively less happy. As a result, it is conceivable that living in rental single-block building poses a negative effect on the psychological well-being of the elderly.

Meanwhile, it is found that senior citizens who are property owners are not found to be significantly happier. In other words, the possession of home ownership does not provide an extra contentment to the elderly people. This is in direct contradiction to the popular belief that homeownership has a positive impact on the happiness of people as it provides a representative of status and a sense of superiority (Gurney and Means, 1993).

In addition, senior citizens living in public housing estates and HOS are not significantly happier or less happy in our model. In other words, elderly people are indifferent among residing in public housing estate and in private housing. One possible explanation is that clear boundaries for different types of housing are usually absent in the compact city of Hong Kong. In other words, the residents living in different types of housing actually share a common built environment of neighborhoods in which they enjoy the same community facilities, transportation, air quality, to name but a few. Consequently, the characteristic effect of type of housing is relatively low in Hong Kong.

Among the 13 independent variables in the built environment of neighborhood, only distance to the MTR station is found to be influential.

Apparently, being near to a MTR station contributes positively to the level of happiness among senior citizens in Hong Kong and vice versa. This result reaffirms the idea of Wireman and Sebastain (1986) that public transportation is one of the major factors that have to be considered when planning for elderly residential communities as it influences the social interaction, and in turn the psychological well-being of the older people.

We also find that elderly people living in a building in which renovation is imminent are less happy. This reveals that poor physical conditions and maintenance status of the building have negative impact on the psychological well-being of the elderly, and noise, and possible financial implications of having to contribute to the costs.

This result is in line with the expectation that building safety is imperative to the elderly group who likely possess a lower mobility and various kinds of impairments. It is therefore natural to deduct that they can enjoy a more joyful life in a well-maintained building in which they are able to live independently with security and dignity.

Interestingly, it is also found in this study that the existence of redevelopment potential or an actual plan in the foreseeable future is found to exert a positive impact on the happiness of the elderly. This result contradicts with popular belief that elderly people will probably be reluctant to move away from their original accommodations because of the community identity and the familiar environment (Sidnell, 1995). Besides, it also contradicts with the idea of ageing-in-place which advocates allowing the elderly people to stay in the locality that they are familiar and that they prefer. This warrants a more comprehensive analysis with a larger sample size. In the absence of these conditions, we can only speculate that elderly people may wish to move to a place that is more manageable, accessible and suitable for them than in a run-down neighbourhood (Heywood, Oldman and Means, 2001; Kichen and Roche, 1987).

Another cause of this phenomenon may be that the compensation available for the affected homeowners in the redevelopment area is relatively generous in Hong Kong compared to other cities. In addition, there are also rehousing schemes for the elderly affected by the Comprehensive Redevelopment Program (CRP) of public rental housing and the projects of Urban Renewal Authority (URA). Under these schemes, elderly households who are affected by CRP can also receive rent assistance upon rehousing to new or re-furnished flats if the eligibility criteria are met. Whereas, the elderly tenants affected by the projects of URA are provided with allocation of public rental housing if certain requirements are complied with. Therefore, the residents living in the dilapidated and obsolete building may be glad to accept the compensation or reallocation arrangement and move to a new accommodation in which the conditions are better.



## **Conclusion and Implications :**

This report aims at examining how the social value of homeownership with a particular focus on impact on children's academic ranking at school, supplemented by a second layer of analysis of impact on senior citizens. The analyses above show that to various degrees of extent, homeownership does possess such value.

Without a doubt, familial factors play a very important role in child development, which can be further supported if the housing environment can also be complimentary. But these familial and personal factors need further research that goes beyond the scope of this report. It seems that the statistical results from the above illustrate a number of issues that are worth further exploring for long term land and housing policies in Hong Kong to be forged when our new administration that came into power in July 2012 seems to be so concerned with. First of all, there is statistical evidence showing that homeownership (in both the private and public sectors) impacts positively on children's academic performance, compared to families who are renters, in Hong Kong. As a government, it seems a core duty in the long term housing policy is to promote homeownership in either the private sector (such as providing financial assistance or loans) or public sector. To achieve this end, a number of factors can be taken into consideration.

First of all, homeownership can only be promoted if housing units are affordable in the city. Housing units are affordable if housing supply is not kept on a leash. This in turn is dependent on land policy for supplying housing land. In small and compact cities, this may mean either a long term land supply mechanism, or to increase the current development intensity by allowing up-zoning in the residential districts. Alternatively, recycling sites that belong to obsolete land use types such as industrial may also release more land supply for land use types that are in constant demand such as residential. However, it becomes a more delicate situation when it comes to redeveloping old residential buildings into new residential buildings. As the results of this report shows, residential stability is a significant factor contributing to children's academic performance. Compulsory purchase actions initiated by the government may lead to involuntary residential instability. Of course, one needs to examine this issue in the context of whether the current living environment is so dilapidated that it



warrants immediate improvement action, and whether the rehousing policy in urban regeneration programmes does allow families to move back to the original district before renewal.

Secondly, public housing policy (both rental and homeownership) targeting lower-income groups needs to be reviewed. Among other things, if homeownership (private or public) seems to be important to children's academic development while public rental housing can be detrimental, could public housing policy be revised so that it can be divided into different sub-programmes targeting household types that they can contribute more than just a shelter ? For example, can public rental housing be targeted at single-person or couple-without-children households, while ownership-type or housing subsidies be applied to households with children ?

Further, senior citizens seem not to be significantly affected whether they own or rent a property when it comes to the degree of general happiness. However, there is a major exception in this, which is single-block residential building where senior citizens who are renters tend to be less content. The reasons for this could be manifold, and among them are the lack of services and facilities in these building, as well as poor building management. Other things being equal, this implies that piecemeal urban development is not desirable.

To conclude, this report identifies the positive social value of homeownership (both private and public sector) on both children and senior citizens. This finding is in line with what has been elaborated above in the literature review section. The findings of this report contribute to further discussion that the benefits of well-thought housing policy transcend beyond just a passive response from social and political pressures that housing prices have become unaffordable for people to become homeowners.

## Appendix

Table 10 District Distribution of Respondents in the Children Survey

<b>Districts</b>	<b>No.</b>	<b>Proportion (%)</b>	<b>Regions<sup>5</sup></b>
Central & Western	79	3.801%	HKI
Eastern	358	17.228%	HKI
Wan Chai	23	1.107%	HKI
Southern	69	3.321%	HKI
Sub-total : Hong Kong Island = 25.5%			
MongKok	20	0.962%	KL
Ho Man Tin	13	0.626%	KL
Yau Ma Tei	12	0.577%	KL
Old Tai KokTsui	12	0.577%	KL
Tau Kok Tsui (Near Olympic Station)	16	0.77%	KL
Prince Edward	17	0.818%	KL
Jordan	8	0.385%	KL
TsimShaTsui	17	0.818%	KL
Wong Tai Sin	80	3.85%	KL
Sham Shui Po	235	11.309%	KL
Kwun Tong	91	4.379%	KL
Kowloon City	47	2.26%	KL
Sub-total : Kowloon District = 27.3%			
Kwai Tsing	89	4.283%	NT
Tsuen Wan	126	6.064%	NT
Tuen Mun	238	11.453%	NT
Yuen Long	189	9.1%	NT
Northern	26	1.251%	NT
Tai Po	55	2.646%	NT
Sha Tin	95	4.572%	NT
Sai Kung	127	6.111%	NT
Sub-total : New Territories = 45.48%			
Outlying Islands	36	1.73%	OI

<sup>5</sup> The four major geographical regions are : Kowloon (KL), Hong Kong Island (HKI), the New Territories (NT), and Outlying Islands (OI)

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