Dissociation of Subjective and Objective Health Status in the Chinese Population

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Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners. I understand that my thesis may be made electronically available to the public.

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Abstract

As the general Chinese population becomes more overweight, pressure mounts to explore the reasons behind this trend. Pooling four waves of the Chinese Health and Nutrition Survey (CHNS) into two groups—2004 with 2006 and 1997 with 2000—it was found that the higher socioeconomic status (SES) is positively correlated with *perceived* health status, but negatively correlated with *objective* health measures such as being overweight, diabetic, or hypertensive. Contrary to previous theories, in the Chinese population, higher SES is generally positively correlated with better health lifestyle knowledge, and less likelihood of daily use of alcohol and cigarettes. The negative correlation between higher SES and health may be due to increased opportunity cost of time. We find no evidence to support the idea that individuals with higher SES consume more sin goods such as alcohol and tobacco.

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Introduction

In developed nations, it has been shown that lower socioeconomic status (SES)—defined by education or household income (Adler & Ostrove, 2006)—is usually correlated with higher risk of hypertension (Treiber et al., 2006) and diabetes (Connolly et al., 2000). However, Sobal and Stunkard (1989) show in their review that this trend is inverted in the developing nations. There, individuals with higher SES are more likely to be obese. Now, it is interesting to focus this research on China, which is neither explicitly a developed nor developing nation.

Recently, the health of the general Chinese population seems to have been deteriorating (Liu et al., 1999), and the Chinese obese population now makes up one fifth of the global population of obese patients (Gu et al., 2005; H. Wang et al., 2007; Y. Wu, 2006; B. Zhang et al., 2008). This means that China's health care budget needs to brace for a severe impact, as the treatment of chronic conditions such as obesity, diabetes, or hypertension have been shown to take up a large part of the health care budget (Hoffman et al., 1996). It also suggests the urgency of discovering the etiology of obesity in China to prevent complications in adult life (Must et al., 1992; Pi-Sunyer, 1993; Visscher & Seidell, 2001).

Two main possible explanations exist for the emerging obesity problem in China. Firstly, Popkin *et al.* classify the current prevalence of unhealthy diets in China as the

fifth stage of nutrition transition. This transition stage is characterized by excessive energy intake and more unhealthy meals as an individual's economic wealth accumulates (Curtis & McCluskey, 2004; Popkin et al., 1993; Z. Wang et al., 2008). Secondly, Kim *et al*. found that the higher the SES is for a Chinese person, the more likely they are to adopt a more unhealthy lifestyle, measured by proxy variables including physical activity, smoking, diet, and alcohol consumption (Kim et al., 2004a; Kim et al., 2004b).

The Chinese Health and Nutrition Survey (CHNS) is a wealth of individual level data that has been widely used to study the health trends in China. However, to the best of our knowledge, there has been no research conducted on the 1997, 2000, 2004, and 2006 waves of the data examining the relationship between SES and health status (including the perceived health status and the objective measures of health: overweight, diabetes, and hypertension). The goal of this study is to look for recent trends in the relationship between the SES and health in the Chinese population.

Methods

CHNS data

The Chinese Health and Nutrition Survey (CHNS) is an international collaborative project between the University of North Carolina and the Chinese Center for Disease Control and Prevention. The data are openly accessible online at http://www.cpc.unc.edu/projects/china. The survey used a multi-stage, random cluster process to sample around 4,400 households and 26,000 individuals. Nine of the 22 provinces in China were surveyed. The provincial capital city was selected along with a lower income city when possible. Villages in the counties and urban/suburban neighbourhoods were randomly selected. Also, the provincial capital and a lower income city were selected when possible.

For the purposes of this study, we grouped four waves of the CHNS samples into two different datasets. The 1997 and 2000 data are grouped together into one and the 2004 and 2006 data are grouped together into another. This was done mainly because the 2004 and 2006 surveys introduced new questions that involved the respondents' knowledge of dietary impact on health. After dropping missing values, 8105 observations remained for the 2004/2006 dataset, and 6941 observations for the 1997/2000 dataset.

Empirical Strategy

The independent variables are the household's gross income level, the respondent's education level, the respondent's gender, the respondent's age, the year of the survey, the respondent's usage of insurance, and the location of the respondent's residence. The dependent variables are the respondent's subjective health status, objective health status, knowledge of dietary impact on health, and inclination to perform certain leisure or physical activities. The dependent variables were analyzed with linear and logit regressions.

Independent Variables

The various income levels were based on the household's gross income (HHINC). The income levels were divided into five different levels: first level (INC_1) is an income between 0 and 9,999 Renminbi (RMB); second level (INC_2) is between RMB 10,000 and 29,999; third level (INC_3) is between RMB 30,000 and 59,999; fourth level (INC_4) is between RMB 60,000 and 99,999; fifth level (INC_5) is any income over RMB 100,000.

The survey divided the education levels into seven groups based on the highest level of schooling completed: no education, primary school, lower middle school, upper middle school, technical school, university, and Master's. However, our dataset had only three individuals with Master's level education, so this category was

collapsed into the group that completed university. Those who did not confirm any education were assumed to have had no formal education.

We used household income and education in our model (see below) as a proxy for SES. However, the education data were not collected until 2004. The regression with the 1997/2000 datasets had only HHINC as the proxy for the household's SES.

Age is the value of the age of the respondents, and Age^2 is the square of the *Age* variable. *Insured* is a dummy variable that is 1 if the individual reported yes to being involved in any sort of health insurance system at all and 0 otherwise. *Married* is a dummy variable that is 1 if the individual reported yes to being currently married and 0 otherwise. In the 2004/2006 pooled data, the *Y2006* dummy variable is 1 if the observation was taken in 2006, and 0 if not. In the 1997/2000 pooled data, the *Y2000* dummy variable is 1 if the observation was taken in 2000, and 0 if not. *Male* dummy variable is 1 if the respondent was male, and *Urban* variable is 1 if the respondent was from a urban setting.

Dependent Variables

The *Health Status* dependent variable shows the respondent's self-reported perceived health status relative to others of the same age, and has a value of 1 if the respondent perceived his/her health to be excellent relative to others of the same age, a value of 2 for good health, a value of 3 for fair health, and a value of 4 for poor health relative to

age peers. The dummy variable *Good Health* is 1 if the self-reported health status is "good" or "excellent" and 0 if "poor" or "very poor". The *HBP* dummy variable is 1 if the respondent was diagnosed with high blood pressure (HBP) and 0 otherwise. *Overweight* is a dummy variable that is 1 if the respondent is overweight and 0 otherwise. The variable is constructed from a respondent's body mass index (BMI), which is calculated by dividing weight (kg) by the squared value of height (m). BMI values over 25 are considered overweight (Sen et al., 2010). The *SmokeDaily* and *DrinkDaily* dummy variables are 1 if the respondent smokes or drinks daily, respectively, and 0 otherwise.

The dependent variables from the section "Knowledge of Food and Activity" ask for a respondent's understanding of diet's effect on health. Sometimes the survey phrases questions counter-intuitively. For example, the survey asked the respondents if "a diet high in fat is good for one's health." The more knowledgeable the respondent, the more likely they are to answer 1 (strongly disagree) rather than 5 (strongly agree). In this case, if the independent variable shows a stronger understanding in health, it will have a more negative coefficient. To interpret the data consistently, the signs of the coefficients were reversed for some questions so positive values of the coefficient always represent more accurate health knowledge. A list of all of the knowledge-based variables and the corresponding questions is found in

Table 1.

In the section "Inclinations To Eat Certain Foods and Interests," the respondents are asked to describe how much they like certain foods and activities. The answers can range from 1 (dislike the food or activity very much) to 5 (like very much).

Econometric Equation

The general dependent variables were first analyzed using the following equation:

$$DEPENDENT_{kij} = \beta_0 + \beta_1 HHINCGROSS_{kij} + \beta_2 PRIMARY + \beta_3 LOWERMID + \beta_4 UPPERMID + \beta_5 TECH + \beta_6 UNI + \beta_7 MALE + \beta_8 AGE + \beta_9 AGE^2 + \beta_{10} Y2006 + \beta_{11} INSURED + u_{kij}$$

where k denotes the individual, j the province, t the year. u_{kjt} is the error term that is assumed to be independently and identically distributed. Each of the regressions is clustered on the provinces. This clustering by province is deliberate and is similar to the methodology of Du (Du, 2009). Fixed effects linear regression estimates were used to analyze all of the dependent variables. For the dependent dummy variables, fixed effects logit models were also used in addition to the linear regression. The model's household gross income term (HHINC) was the household's gross income, and it was later expanded to the following equation:

$$DEPENDENT_{kij} = \beta_0 + \beta_1 INC\_2_{kij} + \beta_2 INC\_3_{kij} + \beta_3 INC\_4_{kij} + \beta_4 INC\_5_{kij} + \beta_5 PRIMARY_{kij}$$

$$+\beta_6 LOWERMID_{kij} +\beta_7 UPPERMID_{kij} +\beta_8 TECH_{kij} + \beta_9 UNI_{kij} +\beta_{10} MALE_{kij}$$

$$+\beta_{11} AGE_{kij} +\beta_{12} AGE^2_{kij} +\beta_{13} Y2006_{kij} +\beta_{14} INSURED_{kij} + u_{kij}$$

Only the results from this second equation are shown in this paper.

Results

Summary statistics

The main similarity between the 1997/2000 dataset and the 2004/2006 dataset is that the prevalence of hypertension is roughly 10% in both datasets. The male population is over-reported: 80.9% in the 1997/2000 dataset and 74.8% in the 2004/2006 dataset. The surveys' proportion of overweight population increased from 20.2% in the 1997/2000 dataset to 24.0% in the 2004/2006 dataset. This trend is reflective of the increasing prevalence of overweight and obesity in China (Y.-X. Zhang & Wang, In Press).

In terms of differences, around 15% more of the respondents in the 2004/2006 dataset were insured (41.8%) compared to the 1997/2000 dataset (27.0%). The mean value of HHINC increased from RMB14,248 in the 1997/2000 dataset to RMB 27,783 in the 2004/2006 dataset. The standard deviation of HHINC increased as well. Close to one third of the respondents completed only middle school, followed by one fifth of the population which either finished primary school or had no formal education at all. Only around 5% of the respondents finished technical school or university. There were a similar number of respondents in the 1997 and 2000 surveys in the 1997/2000 dataset. There were a similar number of respondents in the 2004 and 2006 surveys in the 2004/2006 dataset, roughly 25% more respondents in either of the

1997 and 2000 surveys. The summary statistics for the 2004/2006 pooled data can be found in Table 2, and those for the 1997/2000 pooled data can be found in Table 3.

Estimates for the Perceived Health Status

In the regression of both datasets, respondents with higher income are more likely to think that their health is better than their age peers. This trend is similar for education: The more educated people are, the more likely they are to think that they have better health than their age peers. The most expanded model of the 2004/2006 dataset offers a good example because the model accounts for most of the probability out of all the different levels of econometric analyses. Respondents' perceived health status significantly improves with increased income between income levels 2 and 5 (from coefficient value -0.104 to -0.234). As well, respondents' perceived health status improves with increased education between those who have only attended lower middle school to those who have attended university (from coefficient value -0.106 to -0.215). The estimates using both pooled datasets are shown in tables 4.

Estimates for the General Health Dependent Variables

Daily smoking and drinking generally decreased for populations with higher income. The highest income bracket was dropped in the diabetes logit regression, and crosstab analysis showed that there were no respondents in income bracket five with diabetes.

In both datasets, respondents with higher levels of education are more likely to believe themselves in good health, but are also more likely to report themselves as overweight and/or diabetic. More educated respondents were less likely to adopt a daily smoking or drinking habit.

The trend of perceiving their health to be good seems to be more prevalent in males in both sets of data. In the 1997/2000 dataset, males are also significantly less likely to become overweight, diabetic, and hypertensive than females. In both datasets, males are more likely to smoke and drink daily.

The sense of good health seems to decrease with age in both sets of data. Older respondents are more likely to report being overweight, diabetic and hypertensive.

It is important to look at the changes over time within each of the two datasets. Respondents in 2006 are no more likely than respondents in 2004 to perceive themselves to be in better health nor more likely to develop chronic health conditions. However, respondents in 2000 seem to be less likely than respondents in 1997 to perceive themselves in good health and less likely to become overweight.

Interestingly, those with insurance in both datasets seem to feel as though they are in good health when in fact they are more likely to be overweight, diabetic, and hypertensive.

The urbanites have a poorer overall sense of health, and justifiably so because

they are more likely to be overweight, diabetic, and hypertensive in both datasets.

The regression results for these other dependent variables are shown in Table 5 for the 2004/2006 dataset, and Table 6 for the 1997/2000 dataset. The logit coefficients are the marginal effect estimates with the clustered standard errors in the brackets. The linear regression coefficients have their clustered standard errors in the brackets.

Estimates for the Knowledge and Health Dependent Variables

Generally, the Ordinary Least Squares (OLS) estimates of these regressions show that as income and education increase, the individuals are more aware of the effect of diet on their health. They are more likely to believe that milk and beans consumption should be increased while consumption of meat and fatty foods should be decreased. They are also more likely to believe in the benefit of physical activity, as long as they are not "sweaty sports" or "intense physical activities."

It is surprising to note that the knowledge of healthy diets and physical activities may be decreasing in some respects from 2004 to 2006. Compared to respondents in 2004, the respondents in 2006 believe that a diet with more fat, fewer staple food (rice, rice products, wheat, and wheat products), and more animal protein is beneficial for health. Respondents in 2006 are also more likely to believe that any physical activities, including the "sweaty sports" are not healthy. However, there are also some

encouraging improvements in knowledge of healthy diets: those in 2006 believe that a diverse diet with more milk, more beans, and less animal fat is good for health.

The regression results of these knowledge-related dependent variables using the 2004/2006 dataset are shown in table 7.

Estimates for the Dietary and Activity Inclinations

A respondent's SES seems to have little bearing on the likelihood of the individual's choice of diets or activities. However, computer gaming, reading, and soft drink consumption seem to show some correlation with the individual's SES. Those with more income generally show more interest in computer gaming and reading, but less consumption of soft drinks. Those with more education seem to like to consume more fruits and vegetable, take more walks, participate more in sports, and relax more with TV, computers, and books.

Compared to 2004, the 2006 respondents have a stronger preference for salty foods, fast foods, soft drink, fruits, and vegetable. The individual coefficients for fruits and vegetables are both approximately twice as large as for each of the unhealthy food choices. Respondents in 2006 also prefer to walk, participate in sports, but they also enjoy watching TV, playing computer games, and reading more than in 2004. The OLS regression analysis for the inclinations for diets and activities are shown in table 8.

Discussion

Summary Statistics

We can compare the self-reported rates of overweight, diabetes and hypertension with epidemiological findings from other research. The prevalence of self-reported overweight, diabetes, and hypertension was lower than the epidemiologically determined prevalence for all three conditions. The proportion of those who are overweight in the sample is slightly lower (20-25%) than the epidemiologically determined rate of 26.9% for men and 31.1% for women (Gu et al., 2005). The rate of diabetes determined in the survey dataset (1.6% to 3.9%) is lower than the rate of 9.7% determined in 2010 for all the Chinese age groups (Yang et al., 2010). The rate of self-reported hypertension in the sample is around 10%, which is much lower than the overall population prevalence rate (27.2%) determined in the epidemiological study by Gu *et al.* (Gu et al., 2002). These comparisons suggest that CHNS respondents underreport diabetes, hypertension, and overweight. This could be due to lack of knowledge of their conditions; the general Chinese population have been shown to be highly unaware of their health conditions as in the case of hypertension (Gu et al., 2002).

The HHINC showed a higher standard deviation in the 2004/2006 dataset compared to the 1997/2000 dataset, suggesting a growing inequality amongst the

citizens.

Studies have found that the Chinese population may be as high as 55% male (Ding & Hesketh, 2006). Even so, the CHNS data are heavily biased toward males (75% - 80%). The negative correlations between the SES and objective health measures may not generalize to Chinese women.

Dichotomy of Perceived Health vs. Objective Health Status

The analyses show that increases in the socioeconomic status (SES) generally lead to better perceived health status in the Chinese population. While SES has been widely shown to be correlated with increased perceived health status (Shibuya et al., 2002; N. Wang et al., 2005), this is the first study that offers direct evidence for the dichotomy between individuals' perceived health status and the objective health status.

This study shows that those in the higher income bracket or higher education levels—essentially those with higher socioeconomic status (SES)—believe that they generally have a better health status than their age peers. However, in reality, they are actually more likely to be overweight, diabetic, or hypertensive than their counterparts with lower SES. Even more interesting is that the higher a person's SES, the more likely the person is to believe that heavier weight does not imply good health. What this shows then is a distinct separation of a person's health knowledge from the person's actual judgment of his/her health status. This trend seems to be rather stable,

lasting from 1997 all the way through 2006.

But more importantly than noticing the dichotomy is exploring why such a dichotomy existed at all. It could be that the respondents are simply unaware of their conditions. Indeed, Gu *et al.* (2002) found that a high percentage of the population were not aware that they had hypertension, and Baker *et al.* (2004) have also found that self-reported health conditions generally had a considerable level of error. However, this reason seems inapplicable to the other conditions, which have more noticeable symptoms. Being overweight should be relatively apparent, especially if the overweight person is waddling amongst the generally skinny Chinese.

We offer two additional explanations for such dichotomous observations.

Firstly, those with higher SES are generally happier (Easterlin, 2008), and happier people generally perceive themselves to be in better health (Espen Røysamb et al., 2003).

Alternatively, we would like to advance the notion these individuals with higher SES can psychologically discount their health conditions because they have a stronger sense of wellbeing originating from higher social status.

Income is such an example. Now that the Chinese society is more market-oriented, it is certainly possible for the higher income to be associated with higher levels of well-being. Similarly, the education levels have been associated with higher

societal prestige since ancient times. This confidence-based hypothesis seems plausible as it is also observed in the males, who are generally more valued in the Chinese society (Hull, 1990; Johansson & Nygren, 1991). They are therefore more likely to believe themselves to be in better shape than they actually are despite evidence to the contrary.

It is possible to extend this explanation to those with insurance, which is a peculiar group of individuals who exhibit this type of dichotomous thought process as well. The once universal Chinese insurance system is no longer universal (Ling et al., 2011). Since the collapse of the Cooperative Medical System in the 1980's, the overall coverage for the Chinese population fell to around 10% in the 1990's and remained below 10% in 2000 (Liu & Rao, 2006; Tang & Squire, 2005). Those with the most coverage were mainly professionals, state employees, and other highly educated individuals (Akin et al., 2004). Effectively then, those insured were people with higher SES. Perhaps they were also more likely to derive higher esteem from their social status.

What this suggests then is when people have what society prizes—in this case, money, education, or being a male—they are more likely to believe that they have better health. This esteem-based hypothesis can draw support from a study in 1978 by Tessler et al. which had proposed that patients with less psychological distress may

believe themselves to be in better shape than those with similar conditions (Tessler & Mechanic, 1978). Since those with more income and more education are more likely to be in positions of more influence, they may feel psychologically superior and therefore less stressed than had they been in less influential positions.

SES Association with Better Health

In this study, because few patients were obese, we examined overweight instead. The analysis showed that higher SES in China is indeed correlated with more overweight status.

We also show in this study some contradictory evidence to the idea that higher SES individuals take on a more unhealthy diet with more fat, a more sedentary lifestyle, and increased drinking and smoking (Curtis & McCluskey, 2004; Kim et al., 2004a; Kim et al., 2004b; Popkin et al., 1993). We show that the higher SES individuals seem to have a generally better sense of dietary knowledge, healthier dietary inclinations, and take on more diverse relaxation activities. If the inclination for activity translates into the relative frequencies of performing those activities in the real life, then this finding shows that the higher SES individuals are actually not less likely to take on a more sedentary lifestyle, which would be a direct contradiction to the proposed mechanism for the development of overweight and chronic conditions.

But what can be happening is that despite the knowledge, the individuals are still

living in an unhealthy way. According to Ruhm (2000), when temporary economic expansions take place, individuals' time has a higher opportunity cost, causing leisure time to be more expensive. This thought process can be applied to those with higher SES, whose time has a higher opportunity cost, making it undesirable to spend to time to cook healthy meals or exercise.

To the survey's credit, it did include questions pertaining to the amount of time individuals spent on different types of relaxation and exercises. There simply were not enough cases left after the data clean-up to draw valid conclusions as all of the regressions had less than a thousand observations. However, it seems reasonable to assume that the individuals would act similarly to how they answered the inclination-based questions because there seemed to be no obvious reason for the respondents to conceal their true inclinations.

Another possibility that we fail to confirm here is that stressful lifestyle is causing the onset of weight gain (Kuo et al., 2007), thus leading to diabetes, and hypertension (Steinberger & Daniels, 2003). We proxied the psychological stress with the Daily Smoke and Daily Drink variables based on the evidence that there is a well-documented correlation between stress and cigarette or alcohol consumption (Aro, 1981; Brady & Sonne, 1999; Breslau, 1995; Carey et al., 1993; Chassin et al., 1988; Cronkite & Moos, 1984; DeFrank et al., 1987; File et al., 2002; Lasser et al.,

2000; Mulder et al., 2001; Pohorecky, 1991; Woolf et al., 1999; L. T. Wu & Anthony, 1999). However, we show that this theory is not feasible because the higher SES individuals did not show increased propensity to take on a destructive lifestyle defined by daily smoking or drinking; in fact, the study shows that they are less likely to consume alcohol and tobacco, which is also inconsistent with Ruhm's explanation that cigarette is a normal good (Ruhm, 2000).

This study shows that the chronic conditions related to higher SES are not likely to be brought on by a lack of health-related knowledge or stress. It is possible that the individuals with higher SES have unhealthy diets and sedentary lifestyles, but we can offer no conclusive evidence.

Chronological Effects on Dietary Knowledge

It is slightly troubling to see that, compared to 2004, the respondents in 2006 prefer salty foods, fast foods, and soft drinks. They also seem to believe that a diet with more fat is beneficial. It might be useful to first confirm if this trend is still continuing, and if so, perhaps the public health agencies in China should take on more public education services about the composition of a healthy diet.

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Tables

Table 1: Knowledge-related dependent variables and the respective questions

Variable	**Summarized Question**	**Reversed coefficient signs**
know_variety	Eating a variety of foods is good for health	No
know_fat	High fat diet is good for health	Yes
know_staple	High staple foods (e.g. rice) in diets is not good for health	Yes
know_prot	A lot of animal products in daily meals is good for health	Yes
know_meat_fat	Reducing fatty meat content is good for health	No
know_milk	Consuming milk is good for health	No
know_beans	Consuming beans is good for health	No
know_activity	Physical activity is good for health.	No
know_int_sports	Sweaty or intense sports is not good for health	Yes
know_weight	The heavier the body, the healthier the person	Yes

Table 2: Descriptive Statistics for the 2004/2006 pooled data

Variable	Mean	Standard Deviation	Min	Max	N
Dependent Variables					
General					
Health Status	2.382	0.787	1	4	8105
Good Health dummy	0.574	0.494	0	1	8105
HBP dummy	0.118	0.322	0	1	8103
Overweight dummy	0.240	0.427	0	1	8105
Diabetes dummy	0.020	0.139	0	1	8105
Smoke Daily dummy	0.435	0.496	0	1	8105
Drink Daily dummy	0.185	0.388	0	1	8105
Knowledge about foods and activities					
know_variety	3.384	0.661	1	5	7567
know_fat	2.189	0.636	1	5	7472
know_staple	2.778	0.809	1	5	7320
know_animal_prot	2.603	0.819	1	5	7728
know_meat_fat	3.273	0.736	1	5	7530
know_milk	3.497	0.619	1	5	7693
know_beans	3.519	0.592	1	5	7758
know_activity	3.457	0.624	1	5	7816
know_int_sports	2.951	0.836	1	5	7418
know_weight	1.966	0.582	1	5	7642
Inclinations for Diets and Interests					
like_fast_food	2.045	0.749	1	5	3337
like_salty_food	2.247	0.786	1	5	4077
like_fruit	3.492	0.730	1	5	7902
like_vegetable	3.707	0.595	1	5	8010
like_pop	2.431	0.820	1	5	5261
like_walk	3.025	0.967	1	5	4218
like_sport	2.480	0.874	1	5	2673
like_TV	3.436	0.768	1	5	7520
like_computer	2.267	0.910	1	5	2361
like_read	2.984	0.903	1	5	4360
freq_soft_drink	3.378	1.076	1	5	1385
Independent Variables					
Income					
Gross Household Income	21141.4	27800.12	0	872200	8105

(HHINC)					
Income level 1	0.343	0.475	0	1	8105
Income level 2	0.456	0.498	0	1	8105
Income level 3	0.157	0.364	0	1	8105
Income level 4	0.030	0.171	0	1	8105
Income level 5	0.014	0.116	0	1	8105
Education					
No Education	0.233	0.423	0	1	8105
Primary school dummy	0.223	0.416	0	1	8105
Lower middle school dummy	0.296	0.457	0	1	8105
Upper mid school dummy	0.131	0.337	0	1	8105
Technical school dummy	0.061	0.239	0	1	8105
University dummy	0.056	0.230	0	1	8105
General					
Age	53.798	13.301	12.15	97.11	8105
Age^2	3071.073	1480.12	147.623	9430.353	8105
Insured dummy	0.418	0.493	0	1	8085
Married dummy	0.461	0.498	0	1	8105
y2006 dummy	0.500	0.500	0	1	8105
Male dummy	0.748	0.434	0	1	8105
Urban dummy	0.331	0.471	0	1	8105

Table 3: Descriptive Statistics for the 1997/2000 pooled data

Variable	Mean	Standard Deviation	Min	Max	N
Dependent Variables					
Health Status	2.271	0.766	1	4	6941
Overweight dummy	0.202	0.402	0	1	6945
Good health dummy	0.345	0.475	0	1	6945
HBP dummy	0.077	0.266	0	1	6677
Diabetes dummy	0.016	0.125	0	1	6861
Dailysmoke dummy	0.499	0.500	0	1	6941
DailyDrink dummy	0.206	0.404	0	1	6941
Independent Variables					
HHINC	14244.52	14473.91	0	195320	6941
Income level 1	0.452	0.498	0	1	6945
Income level 2	0.465	0.499	0	1	6945
Income level 3	0.067	0.250	0	1	6945
Income level 4	0.011	0.0102	0	1	6945
Income level 5	0.005	0.073	0	1	6945
Age	50.239	13.591	14.42	93.55	6941
Age^2	2708.701	1439.762	207.936	8751.603	6941
Insured dummy	0.270	0.444	0	1	6863
Married dummy	0.426	0.495	0	1	6941
y2000 dummy	0.524	0.499	0	1	6945
Male dummy	0.809	0.393	0	1	6941
Urban dummy	0.342	0.474	0	1	6941

Table 4: Pooled estimates of perceived health status using pooled 2004/2006 data and pooled 1997/2000 data

Waves	**Pooled 2004/2006 data**				**Pooled 1997/2000 data**		
	Level 1	**Level 2**	**Level 3**	**Level 4**	**Level 1**	**Level 2**	**Level 3**
Income level 2	-0.209***	-0.135***	-0.101**	-0.104**	-0.143*	-0.079	-0.081*
	(0.020)	(0.019)	(0.018)	(0.019)	(0.046)	(0.037)	(0.033)
Income level 3	-0.263***	-0.154**	-0.140**	-0.148**	-0.165*	-0.131	-0.139*
	(0.034)	(0.033)	(0.030)	(0.033)	(0.068)	(0.062)	(0.058)
Income level 4	-0.270**	-0.157	-0.120	-0.133	-0.131	-0.064	-0.101
	(0.069)	(0.071)	(0.073)	(0.069)	(0.133)	(0.128)	(0.105)
Income level 5	-0.396***	-0.282***	-0.229**	-0.234***	-0.017	-0.047	-0.051
	(0.045)	(0.043)	(0.043)	(0.037)	(0.134)	(0.089)	(0.093)
Primary school		-0.209**	-0.036	-0.042			
		(0.047)	(0.039)	(0.036)			
Lower middle school		-0.377***	-0.100*	-0.106**			
		(0.031)	(0.033)	(0.031)			
Upper middle school		0.380***	-0.099	-0.110			
		(0.031)	(0.051)	(0.049)			
Technical school		-0.324***	-0.107**	-0.113**			
		(0.047)	(0.028)	(0.028)			
University		-0.407***	-0.197**	-0.215**			
		(0.055)	(0.037)	(0.040)			
Male			-0.127**	-0.123**		-0.116*	-0.094*
			(0.026)	(0.024)		(0.039)	(0.032)
Age			0.015***	0.025**		0.017***	0.016**
			(0.002)	(0.006)		(0.001)	(0.004)
Age^2				-0.0000948			0.000004
				(0.0000513)			(0.00004)
y2006				0.016			0.061
				(0.017)			(0.032)
Insured				-0.030			-0.110**
				(0.020)			(0.031)
Urban				0.069**			0.127
				(0.028)			(0.059)
Province FE[#]	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0203	0.0556	0.1108	0.1133	0.0089	0.1051	0.1127
N[##]	8105	8105	8105	8085	6941	6941	6863

[#]Fixed Effects [##]Number of observations *P<0.05 ** P<0.01 ***P<0.001

Table 5: Estimates of objective general health variables using pooled 2004/2006 data

Variable	lin prob goodhealth	logit goodhealth	lin prob overweight	logit overweight	lin prob diabetes	logit diabetes	lin prob HBP	logit HBP	lin prob dailysmoke	logit dailysmoke	lin prob dailydrink	logit dailydrink
Income	0.047*	0.049**	0.019	0.021	0.005	0.003	-0.001	-0.002	-0.019	-0.024	0.014	0.013
level 2	(0.014)	(0.015)	(0.020)	(0.022)	(0.005)	(0.003)	(0.014)	(0.011)	(0.016)	(0.0.19)	(0.008)	(0.007)
Income	0.063*	0.067**	0.039	0.040	0.011*	0.005*	0.024	0.018	0.008	0.009	0.036	0.033
level 3	(0.023)	(0.025)	(0.020)	(0.022)	(0.004)	(0.003)	(0.015)	(0.012)	(0.25)	(0.032)	(0.021)	(0.018)
Income	0.035	0.037	0.053*	0.054*	-0.0002	0.0002	0.044	0.036	0.015	0.014	0.019	0.017
level 4	(0.035)	(0.038)	(0.019)	(0.022)	(0.011)	(0.006)	(0.062)	(0.025)	(0.042)	(0.049)	(0.028)	(0.024)
Income	0.160***	0.171***	0.125*	0.126**	0.009	0.007	0.045	0.043	-0.078	-0.89	0.032	0.029
level 5	(0.023)	(0.0.025)	(0.040)	(0.044)	(0.012)	(0.009)	(0.062)	(0.060)	(0.042)	(0.043)	(0.053)	(0.048)
Primary	0.017	0.016	0.023	0.025	-0.001	-0.004	0.018	0.008	-0.056***	-0.071**	-0.018	-0.021
school	(0.019)	(0.020)	(0.013)	(0.015)	(0.006)	(0.003)	(0.013)	(0.009)	(0.011)	(-0.014)	(0.019)	(0.016)
Lower middle	0.052**	0.050**	0.048	0.051*	0.008	0.002	0.012	0.001	-0.043	-0.061*	-0.015	-0.017
school	(0.015)	(0.016)	(0.022)	(0.025)	(0.004)	(0.002)	(0.013)	(0.010)	(0.022)	(0.028)	(0.016)	(0.013)
Upper middle	0.066*	0.064*	0.090*	0.096**	0.012	0.007**	0.035	0.034	-0.094**	-0.113***	-0.056**	-0.042***
school	(0.028)	(0.029)	(0.029)	(0.032)	(0.005)	(0.004)	(0.019)	(0.020)	(0.020)	(0.021)	(0.013)	(0.009)
Technical	0.073**	0.074***	0.102*	0.106**	0.010	0.002	0.047	0.032*	-0.085*	-0.100**	-0.085*	-0.060**
school	(0.014)	(0.014)	(0.033)	(0.037)	(0.009)	(0.003)	(0.026)	(0.020)	(0.028)	(0.030)	(0.029)	(0.018)
University	0.125***	0.126***	0.043	0.046	0.016	0.004	0.008	0.004	-0.179***	-0.176***	-0.088*	-0.063***
	(0.022)	(0.022)	(0.040)	(0.042)	(0.015)	(0.006)	(0.024)	(0.019)	(0.036)	(0.031)	(0.029)	(0.016)
Male	0.082**	0.089***	-0.032	-0.033	-0.005	-0.003	-0.029*	-0.002**	0.521***	0.526***	0.226***	0.216***
	(0.015)	(0.017)	(0.017)	(0.017)	(0.005)	(0.002)	(0.018)	(0.009)	(0.024)	(0.023)	(0.017)	(0.016)
Age	-0.013***	-0.017***	0.014**	0.016***	0.001	0.003***	0.002	0.017***	0.016***	0.025***	0.020**	0.021***
	(0.002)	(0.003)	(0.004)	(0.004)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Age^2	0.000042*	0.00007**	-0.0001**	0.0001*	$-3.9x10^{-6}$	-0.00002***	0.00003	-0.0001***	-0.0002***	-0.0003***	-0.0002**	-0.0002***
	(0.000018)	(0.00002)	(0.00003)	(0.00003)	$(6.8x10^{-6})$	(0.00001)	(0.00002)	(0.00002)	(0.00003)	(-0.00003)	(0.00003)	(0.00004)
y2006	-0.008	-0.009	-0.004	-0.004	-0.0001	0.0002	0.002	0.003	-0.012	-0.016*	-0.013	-0.012
	(0.011)	(0.012)	(0.009)	(0.009)	(0.002)	(0.001)	(0.004)	(0.003)	(0.006)	(0.008)	(0.007)	(0.006)
Insured	0.022	0.025*	0.056*	0.056**	0.013**	0.006***	0.026*	0.019*	-0.030*	-0.031*	0.013	0.010
	(0.011)	(0.012)	(0.022)	(0.021)	(0.003)	(0.001)	(0.011)	(0.008)	(0.012)	(0.015)	(0.018)	(0.014)
Urban	-0.044	-0.049*	0.041	0.040*	0.020**	0.010***	0.054*	0.041**	0.004	0.006	0.010	0.007
	(0.011)	(0.024)	(0.020)	(0.020)	(0.004)	(0.002)	(0.021)	(0.016)	(0.020)	(0.025)	(0.019)	(0.016)
Province FE[#]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0923	0.0701	0.0240	0.0218	0.0220	0.1211	0.0770	0.1140	0.2337	0.2104	0.0774	0.1076
N[##]	8085	8085	8085	8085	8085	8085	8083	8083	8085	8085	8085	8085

[#]Fixed Effects [##]Number of observations *P<0.05 ** P<0.01 ***P<0.001

Table 6: Pooled estimates of general health variables using pooled 1997/2000 CHNS data

Variable	lin prob goodhealth	logit goodhealth	lin prob overweight	logit overweight	lin prob diabetes	logit diabetes	lin prob HBP	Logit HBP	lin prob dailysmoke	logit dailysmoke	lin prob dailydrink	logit dailydrink
Income	0.039	0.041*	0.023	0.024	-0.006*	-0.005*	0.006	0.005	-0.029	-0.037	0.017	0.015
level 2	(0.018)	(0.019)	(0.013)	(0.013)	(0.003)	(0.002)	(0.005)	(0.004)	(0.016)	(0.019)	(0.012)	(0.011)
Income	0.094*	0.094**	0.073*	0.071**	-0.002	-0.001	0.014	0.009	-0.037	-0.044	0.014	0.012
level 3	(0.033)	(0.032)	(0.027)	(0.028)	(0.007)	(0.004)	(0.014)	(0.009)	(0.019)	(0.023)	(0.021)	(0.019)
Income	0.009	0.008	-0.075	-0.074	-0.004	-0.002	0.002	0.002	-0.061	-0.074	0.098	0.095*
level 4	(0.005)	(0.056)	(0.044)	(-0.040)	(0.013)	(0.009)	(0.035)	(0.026)	(0.045)	(0.053)	(0.044)	(0.046)
Income	0.113	0.104	-0.011	-0.007	-0.022***		0.087	0.050	-0.130	-0.142	0.078	0.071
level 5	(0.065)	(0.058)	(0.085)	(0.078)	(0.004)		(0.068)	(0.035)	(0.087)	(0.100)	(0.081)	(0.085)
Male	0.054*	0.055**	-0.052*	-0.052**	-0.008*	-0.005**	-0.026	-0.016*	0.502***	0.521***	0.230***	0.219***
	(0.017)	(0.018)	(0.019)	(0.019)	(0.003)	(0.003)	(0.012)	(0.007)	(0.031)	(0.028)	(0.017)	(0.016)
Age	-0.008*	-0.014***	0.011**	0.012***	0.001	0.002*	0.001	0.011***	0.018**	0.027***	0.015***	0.015***
	(0.003)	(-0.002)	(0.002)	(0.003)	(0.001)	(0.001)	(0.002)	(0.002)	(0.004)	(0.004)	(0.002)	(0.002)
Age^2	$-1.5x10^{-5}$	0.00005*	-0.0001***	-0.0001***	$-3.78x10^{-6}$	$-1.4x10^{-5}$	$3.2x10^{-5}$	$-6.9x10^{-5}$***	-0.0002	-0.0003***	-0.0001***	-0.0001***
	($2.5x10^{-5}$)	(0.00002)	(0.00002)	(0.00002)	($8.3x10^{-6}$)	($1x10^{-5}$)	($1.7x10^{-5}$)	($2x10^{-5}$)	(0.00003)	(0.00004)	(0.00002)	(0.00002)
y2000	-0.060*	-0.065**	0.040*	0.040**	-0.002	-0.002	0.027**	0.018***	-0.034**	-0.044***	0.005	0.005
	(0.020)	(0.021)	(0.013)	(0.014)	(0.006)	(0.004)	(0.007)	(0.005)	(0.009)	(0.010)	(0.015)	(0.014)
Insured	0.049*	0.052**	0.098**	0.095**	0.004	0.003	0.032	0.019	-0.052**	-0.062***	0.002	0.001
	(0.016)	(0.017)	(0.027)	(0.026)	(0.005)	(0.004)	(0.018)	(0.011)	(0.012)	(0.015)	(0.025)	(0.022)
Urban	-0.082*	-0.089*	0.041*	0.040**	0.009	0.007	0.031	0.021**	0.001	0.004	0.010	0.008
	(0.034)	(0.038)	(0.015)	(0.015)	(0.006)	(0.005)	(0.014)	(0.008)	(0.015)	(0.017)	(0.028)	(0.026)
Province FE[#]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0977	0.0779	0.0319	0.0311	0.0080	0.0499	0.0662	0.1300	0.1925	0.1626	0.0550	0.0700
N[##]	6863	6863	6863	6863	6603	6573	6786	6786	6863	6863	6863	6863

[#]Fixed Effects [##]Number of observations *P<0.05 ** P<0.01 ***P<0.001

Table 7: Pooled estimates of the knowledge in pooled 2004/2006 data

Variable	lin prob know_variety	lin prob know_fat	lin prob know_staple	lin prob know_prot	lin prob know_meat_fat	lin prob know_milk	lin prob know_beans	lin prob know_activity	lin prob know_int_sports	lin prob know_weight
Income	0.023	0.034	-0.004	0.037	0.031	0.033**	0.004	0.016*	-0.025	0.039
level 2	(0.014)	(0.021)	(0.020)	(0.027)	(0.017)	(0.009)	(0.006)	(0.006)	(0.029)	(0.018)
Income	0.057*	0.085	-0.024	0.101	0.047	0.042*	-0.003	0.040	-0.026	0.088**
level 3	(0.019)	(0.039)	(0.033)	(0.050)	(0.025)	(0.016)	(0.010)	(0.022)	(0.034)	(0.023)
Income	0.015	0.060	0.026	0.099*	0.057	0.042*	-0.023	0.013	0.001	0.079
level 4	(0.049)	(0.057)	(0.038)	(0.031)	(0.044)	(0.014)	(0.031)	(0.030)	(0.053)	(0.039)
Income	0.053	0.124*	-0.029	0.187*	0.033	0.046	0.026	0.059	-0.084*	0.081
level 5	(0.046)	(0.046)	(0.048)	(0.080)	(0.066)	(0.025)	(0.040)	(0.029)	(0.035)	(0.048)
Primary	0.015	0.125**	-0.002	0.118*	0.042	0.033	0.029	0.028	-0.047	0.049*
school	(0.015)	(0.035)	(0.027)	(0.041)	(0.031)	(0.017)	(0.019)	(0.019)	(0.022)	(0.015)
Lower middle	0.031*	0.153**	0.011	0.176**	0.084**	0.056*	0.046**	0.029	-0.066	0.079*
school	(0.014)	(0.044)	(0.026)	(0.040)	(0.023)	(0.017)	(0.013)	(0.018)	(0.032)	(0.027)
Upper middle	0.017	0.228**	0.031	0.256***	0.149**	0.076*	0.062**	0.031	-0.095*	0.088*
school	(0.020)	(0.047)	(0.023)	(0.041)	(0.030)	(0.024)	(0.016)	(0.020)	(0.032)	(0.027)
Technical	0.085**	0.262**	0.067	0.444***	0.182***	0.099*	0.087**	0.074*	-0.123	0.109
school	(0.025)	(-0.050)	(0.034)	(0.058)	(0.031)	(0.035)	(0.027)	(0.030)	(0.057)	(0.049)
University	0.088**	0.287**	0.016	0.323***	0.204**	0.122*	0.112**	0.033	-0.206**	0.120*
	(0.019)	(0.052)	(0.054)	(0.038)	(0.052)	(0.052)	(0.023)	(0.036)	(0.040)	(0.049)
Male	-0.013	-0.022	-0.007	-0.041	-0.052**	-0.025*	-0.012	0.018	-0.002	-0.007
	(0.019)	(0.021)	(0.033)	(0.030)	(0.018)	(0.011)	(0.008)	(0.018)	(0.031)	(0.015)
Age	-0.002	0.0001	-0.003	-0.002	0.004	0.007	0.001	0.004	0.002	-0.002
	(0.001)	(0.004)	(0.003)	(0.007)	(0.005)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Age^2	-0.00001	$4.88x10^{-6}$	0.00003	0.00004	-0.00004	-0.00001	-0.00002	-0.00003	-0.00003	0.00001
	(0.00001)	(0.00003)	(0.00002)	(0.00007)	(0.00005)	(0.00002)	(0.00002)	(0.00003)	(0.00004)	(0.00004)
y2006	0.858***	-0.196***	-0.465***	-0.413***	0.798***	0.872***	0.872***	0.846***	-0.604***	-0.056*
	(0.013)	(0.025)	(0.027)	(0.041)	(0.016)	(0.020)	(0.012)	(0.018)	(0.044)	(0.024)
Insured	0.073*	0.087**	-0.052	0.080*	0.019	0.042**	0.050***	0.033*	-0.090*	0.020
	(0.025)	(0.022)	(0.032)	(0.029)	(0.027)	(0.011)	(0.004)	(0.012)	(0.038)	(0.027)
Urban	0.012	0.058	-0.058	0.084	0.020	0.001	0.023	0.027	-0.012	0.044
	(0.017)	(0.038)	(0.030)	(0.064)	(0.015)	(0.012)	(0.013)	(0.015)	(0.034)	(0.020)
Province FE[#]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.4454	0.0583	0.0890	0.0937	0.3100	0.5163	0.5609	0.4727	0.1482	0.0167
N[##]	7552	7456	7303	7710	7513	7675	7741	7799	7401	7625

[#]Fixed Effects [##]Number of observations *P<0.05 ** P<0.01 ***P<0.001

Table 8: Pooled estimates of inclinations in diet and activities using pooled 2004/2006 CHNS data

Variable	lin prob like_fast_ food	lin prob like_salty_ food	lin prob like_fruit	lin prob like_ vegetable	lin prob like_act_ walk	lin prob like_ pop	lin prob like_ sport	lin prob like_ tv	lin prob like_comp	lin prob like_read	lin prob freq_pop
Income	0.005	-0.029	-0.004	-0.007	-0.025	-0.052	0.047	0.014	0.021	0.061*	-0.134*
level 2	(0.027)	(0.048)	(0.030)	(0.019)	(0.028)	(0.041)	(0.021)	(0.015)	(0.030)	(0.026)	(0.056)
Income	-0.017	-0.052	-0.005	0.023	0.044	-0.026	0.074	-0.003	0.068	0.126*	-0.235***
level 3	(0.036)	(0.057)	(0.027)	(0.027)	(0.067)	(0.061)	(0.041)	(0.020)	(0.041)	(0.042)	(0.063)
Income	-0.037	-0.086	0.048	0.014	0.119	-0.018	0.070	0.025	0.142*	0.191	-0.481*
level 4	(0.044)	(0.062)	(0.057)	(0.046)	(0.125)	(0.074)	(0.065)	(0.042)	(0.052)	(0.096)	(0.185)
Income	0.024	0.160	0.056	-0.032	-0.015	-0.089	-0.125	0.001	0.146	0.212*	-0.760**
level 5	(0.087)	(0.111)	(0.057)	(0.038)	(0.126)	(0.121)	(0.180)	(0.087)	(0.116)	(0.073)	(0.186)
Primary	-0.091	-0.079	0.044	0.048*	0.191**	-0.050	0.020	0.070	-0.154*	0.204*	0.182
school	(0.041)	(0.038)	(0.022)	(0.019)	(0.047)	(0.052)	(0.039)	(0.034)	(0.060)	(0.065)	(0.123)
Lower middle	-0.051	-0.142**	0.053	0.045*	0.220**	-0.072	0.059	0.066*	-0.107	0.518***	-0.009
school	(0.052)	(0.033)	(0.027)	(0.016)	(0.051)	(0.045)	(0.047)	(0.026)	(0.061)	(0.083)	(0.147)
Upper middle	0.018	-0.100	0.122**	0.069**	0.315**	-0.015	0.208*	0.067*	0.062	0.784***	-0.078
school	(0.077)	(0.058)	(0.030)	(0.019)	(0.075)	(0.054)	(0.067)	(0.028)	(0.055)	(0.083)	(0.159)
Technical	-0.036	-0.131	0.125	0.090*	0.491***	-0.227**	0.489***	0.114**	0.406**	0.833***	0.048
school	(0.054)	(0.062)	(0.071)	(0.034)	(0.065)	(0.067)	(0.076)	(0.025)	(0.080)	(0.070)	(0.189)
University	0.020	-0.064	0.207***	0.100**	0.479**	-0.090	0.638***	0.063	0.620***	0.983***	-0.045
	(0.065)	(0.074)	(0.024)	(0.028)	(0.094)	(0.060)	(0.099)	(0.047)	(0.069)	(0.075)	(0.107)
Male	-0.054	-0.089*	-0.145***	-0.049**	-0.097	-0.065	0.224**	0.030	0.050	0.135*	-0.031
	(0.025)	(0.032)	(0.021)	(0.010)	(0.054)	(0.029)	(0.054)	(0.029)	(0.047)	(0.057)	(0.045)
Age	-0.036**	-0.036**	-0.008	0.008**	0.030***	-0.030***	-0.028	-0.001	-0.051***	-0.010	-0.022
	(0.007)	(0.007)	(0.004)	(0.002)	0.005	(0.004)	(0.006)	(0.006)	(0.008)	(0.009)	(0.019)
Age^2	0.0002**	0.0003**	0.00004	-0.0001**	-0.0001	0.0002**	0.0002*	-0.00003	0.0003**	0.00001	-0.0001
	(0.0006)	(0.00006)	(0.00004	(0.00002)	(0.00005)	(0.00004)	(0.00006)	(0.00006)	(0.00006)	(0.00008)	(0.0002)
y2006	0.297***	0.190**	0.498***	0.436***	0.319***	0.315***	0.283***	0.465***	0.367***	0.266***	0.047
	(0.038)	(0.039)	(0.029)	(0.026)	(0.025)	(0.022)	(0.045)	(0.023)	(0.048)	(0.038)	(0.078)
Insured	-0.029	-0.026	0.002	0.016	0.070	0.011	0.009	0.069	0.125*	0.128**	-0.016
	(0.037)	(0.033)	(0.116)	(0.027)	(0.032)	(0.020)	(0.048)	(0.030)	(0.051)	(0.029)	(0.112)
Urban	-0.109*	-0.154*	-0.004	0.041	0.251*	-0.032	0.096	0.100**	0.027	0.241**	-0.131
	(0.033)	(0.057)	(0.027)	(0.035)	(0.076)	(0.033)	(0.046)	(0.023)	(0.054)	(0.053)	(0.109)
Province FE[#]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R^2	0.0957	0.0546	0.1305	0.1433	0.1365	0.0604	0.1267	0.1099	0.2128	0.2054	0.0450
N[##]	3329	4069	7883	7991	4208	5250	2671	7502	2357	4350	1379

[#]Fixed Effect [##]Number of observations *P<0.05 ** P<0.01 ***P<0.001