TEPS-B Working Paper No. 2015-01

Clues of subjective social status among young adults in Taiwan

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This working paper is prepared for "2015 Workshop for the Comparative Study of Transition to Adulthood among Japanese and Taiwanese Youths: JLPS and TEPS-B" held at Room 401, Dept. of Sociology, National Taiwan University, Taipei, Taiwan on May 9th, 2015. The workshop is co-sponsored by Dept. of Sociology, National Taiwan University, Dept. of Sociology, National Chengchi University, and Institute of Social Research, University of Tokyo.

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Abstract

An emerging trend of research has revealed that subjective social status (SSS) is significantly associated with physical and mental health outcomes. A recent study using Add Health data in the US indicates that proximate factors, such as educational attainment and current socioeconomic and job situation are the major determinants of SSS, rather than distal characteristics such as family background, although high school GPA has a lingering effect on SSS. This study, using the longitudinal data gathered by TEPS in 2001 and TEPS-B in 2010, investigates SSS of a cohort of Taiwanese young adults born in 1984/1985. The findings confirm the major effects of proximate factors, but also lingering weak influences of family background. However, high school general capability test does not have any significant influence. Income, followed by educational attainment, job satisfaction, and job autonomy, is the most potent predictor of perceived social position among young adults in Taiwan. Preliminary analysis also shows positive relationship between SSS on young adults' perceived health conditions.

Keyword: Subjective Social Status, Taiwan Education Panel Survey and Beyond, Young adults

Socioeconomic Status and Health

Mainstream social stratification research has favored objective measures of socioeconomic status to explore the influences of social position in individuals' social life (Myles, 2003; Nielson et al., 2015). Among others, objective socioeconomic status is significantly associated with health outcomes. Extensive research has revealed the negative impacts of socioeconomic inequality on subjective well-being (happiness), population health, and other aspects of social life (e.g., Alesina, Di Tella, & MacCulloch, 2004; Neckerman & Torche, 2007; Wilkinson & Pickett, 2009; Zhao 2012).

According to Nock and Rossi (1979), social status is defined as "that dimension of social stratification which translates the objective distribution of societal resources into meaningful perceptions of relative desirability." The concept of social status in modern society is mainly related to the "prestige" of one's occupation (Ganzeboom et al., 1991). The prestige of an occupation as rated by respondents could be a linear function of average education and average earnings (Blau and Duncan, 1967; Duncan and Hodge, 1963).

Subjective Social Status (SSS) and health

There has been an emerging interest in the relationship between subjective social status (SSS) and health (Chen, Covinsky, Cenzer, Adler, Williams, 2012). A major reason for the new aspect results from the findings that the health-SES association is related to stress due to one's perceived low social position, instead of direct effects of adverse material conditions on health outcomes (Nielsen, Roos, and Combs, 2015).

SSS, or one's perceived social standing, is thought to be determined in part by a cognitive average of one's past, present and expected socioeconomic status (Andersson, 2015). The subjective social status measure was introduced by Adler et al. (2000). Subjective SES is a self-anchoring scale, from best off to worst off in terms income, education, and occupation. SSS was measured using the MacArthur scale, a 10-rung ladder on which individuals indicate where they think they stand in the social hierarchy (Hu, Adler, Goldman, Weinstein, and Seeman. 2005, 2005; Miyakawa, Magnusson Hanson, Theorell, and Westerlund, 2012).

Research has revealed that subjective social status are also significantly associated with health conditions, both mental and physical (Andersson, 2015; Destin, Richman, Varner, and Mandara, 2012; Miyakawa, Magnusson Hanson, Theorell, and Westerlund, 2012; Wolff, Subramanian, Acevedo - Garcia, Weber, and Kawachi, 2010). Individuals of lower perceived social position experience worse health conditions (Adler and Stewart, 2010; Nielsen et al., 2015).

SSS and Health in Taiwan and Mainland China

There are some studies confirm the positive association between subjective social status and older people's health condition in Taiwan (Chen et al., 2012; Hu et al.,2005). Hu and her colleagues (2005) studied a sample of older Taiwanese people and found that low ladder score was associated with poorer self-rated health and more reported IADL (Instrumental Activities of Daily Living) and physical activity difficulties, even after adjustment for objective measures of SES.

In China, research shows that both subjective social status and objective socioeconomic status are linked to self-rated health and psychological distress (Han, 2014). Subjective social status and socioeconomic status associated with self-reported health and psychological distress net of each other and other control variables. Among focal socioeconomic characteristics, income is significantly associated with both health outcomes, education exhibits a robust effect on self-reported health. The associations between subjective social position and health conditions are more salient for those who have 6 years or less of education (Zhao, 2012).

Advantages of the SSS measure

The advantage of subjective social status measure is that it may be able in principle to capture some within-occupation variation that traditional occupational status measure cannot do (Nielson et al., 2015; Singh-Manoux, Adler, and Marmot, 2003). The owner of a grocery store and the owner of a department store may both fall into the same category, while they have difference levels of prestige and income. Furthermore, some of these clues used by respondents may be available to researchers, such as educational attainment, but other may be only known by respondents, such as their past, future prospects, as well as their self-rated capabilities (Garbarski, 2010).

Subjective social status (SSS), or one's perceived social standing, is thought to be determined in part by a cognitive average of one's past, present and expected socioeconomic status (Andersson, 2015). Perceived social status may be a composition of one's experience of stress, social position, and perception of inequality, or even the cumulative effect of changing SES over a lifetime (Chen et al., 2012).

Empirical findings show that SSS reflects a "cognitive averaging" of standard dimensions of socioeconomic status (Nielsen et al., 2015). Some researchers propose that the sense of relative deprivation makes perceived social ranking matter for health, with status anxiety and unhealthy behaviors occurring to those who feel

faring worse than others (Wilkinson, 1999). Others argue that subjective social status may manifest one's sociocultural conditions more comprehensively than measurable objective characteristics (Singh-Manoux et al., 2003).

Determinants of SSS

Recent research has identified predictors of subjective social status in different societies (Miyakawa, Magnusson Hanson, Theorell, Westerlund, 2012; Nielsen et al., 2015). The major factors are more likely to be personal and proximate characteristics, rather than household and distal ones (Miyakawa et al. 2012). However, high school GPA is found to have a lingering effect on perception of SSS in young adulthood (Nielson, 2014). Another study also indicates that SSS is positively associated with high school GPA (Destin, Richman, Varner, Mandara, 2012). In general, the main determinants are occupational prestige, personal income and educational attainment (Miyakawa et al., 2012).

Some other household factors are also related to perception of subjective social status, including household financial situation, household income, and house asset. Furthermore, women put more weight on household financial situation and men on their personal income when ranking their SSS (Miyakawa, Magnusson Hanson, Theorell, Westerlund, 2012).

Data and Methods

Data

The present study uses the data collected by TEPS (Taiwan Education Panel Survey) in 2001 and TEPS-B (Taiwan Education Panel Survey and Beyond) in 2010 to investigate distal and proximate factors influencing the subjective social status of young adults in Taiwan. In 2001, the respondents were 15 or 16 years old and they turned into young adulthood of 25 or 26 in 2010. TEPS surveyed 19,051 respondents in 2001. In 2010, TEPS-B surveyed a subsample of the original TEPS 2001 respondents and completed 3,973 interviews.

Outcome variable - Subjective social status

The data have information of a self-rated 1 to 10 rung scale of social status, which is measured by showing respondents the following description along with an image of a 10-rung ladder:

> In our society, a group of people are more close to the top of the ladder, and another group of others are more close to the bottom of the ladder. Below is an image of a ladder. Which rung would you place yourself on this ladder?

Background variables

For father's education, mother's education, respondents were asked to answer the highest level of education of their parents. Categories range from none to doctoral degree. These categories are recoded as corresponding years of education. Elementary school education indicates 6 years of education, college education means 16 years of education, master degree refers to 18 years, and doctoral degree represents 22 years of education. Male variable is created as an indicator for male gender. Number of sibling variable is the sum of four sibling related variables, the number of older brother, the number of older sister, the number of younger brother, and the number of younger sister. Father's ethnicity as the majority group, Minnan, Hakka, Mainland, Native, and other are included. Family income in 2001 is also considered.

Respondent's educational attainment, high school performance and income variables

For educational attainment, respondents are invited to answer their highest level of education, including currently attending. Levels of education range from high school to doctoral degree. In addition, a high school academic performance predictor is included, 3-P mode of performance of "General analytical ability test," which is comparable with different waves and different school programs. Income of incumbent job is numerical variable.

Occupational variables

There are two job-related predictors in the study. Job satisfaction of the incumbent job asks: "Are you satisfied with current job?" recoded as 1= very unsatisfied, 2= unsatisfied,3= either, 4=satisfied, and 5=very satisfied. Another one, Job autonomy, asks: "your current job meets the following statement: I can decide or change the job content and schedule." Recoded as 5=totally agree, 4= agree, 3= either, 2=disagree, 1=totally disagree.

Methods

Ordinary least squares regression models are utilized with SSS as the dependent variable. Both unstandardized coefficients and the standardized coefficients (beta) are presented to compare the relative impacts of different variables on subjective social status. The OLS regression analyses are weighted by the multiplication of sampling weights of TEPS-B 2010 and the sampling weights of TEPS 2003.

Findings

Descriptive statistics

Table 1 presents how respondents rated themselves in the social ladder. About a half of these young adults perceived themselves at the 5th and 6th rung. Compared to the 9th and 10th rung, more people rated themselves below the third rung, accounting for 8.26%. Generally speaking, most people regard themselves as middle class, or slight below average of social hierarchy. Very few people, less than one out of one hundred people perceive themselves at the top of the social ladder.

Table 1. Descriptive statistics of subjective social status

Subjective social status	%
1	4.01
2	4.25
3	13.26
4	15.43
5	29.35
6	20.89
7	9.7
8	2.61
9	0.18
10	0.32
N	3,792

The descriptive statistics of other predictors, including sibling numbers, family monthly income, father's ethnicity, educational attainment, college type, job satisfaction, job autonomy, gender, high school performance, personal monthly income, mother's years of education, father's years of education, are shown in the appendixes.

In brief, most of the respondents have 1 or 2 siblings, accounting for 82.77%. Also about 80% of their fathers belong to Minnan Han ethnic group. Over 85% of them have at least college degrees. And more than a half of the types of college are private daytime colleges. And 40.86% of them earn between 20 thousands and 50 thousands of NT dollars every month. About 48% of them are males. Their average monthly income is 29745. Parents have education around 10 and 11 years. Over a half of them are satisfied with their current jobs. Also about a half of them believe that they have control over their jobs.

OLS regression

Model I show that father's ethnicity of other category has a positive effect on respondents' perceived social position, indicating that compared to Minnan ethnic group, they regard themselves with higher subjective social position and do not think they fit any of the provided ethnic categories. Father's years of education also has a positive effect of subjective social status, despite its slight effect. Furthermore, compared to the family income category of 20,000- < 50,000, if the respondents' family earned more than 100,000 and less than 150,000 NT dollars monthly, they think themselves stand higher in the social hierarchy. However, if their parents refused to answer the family income question, their children are more likely to regard themselves have a lower social status.

Model II includes the predictors not only family background but also respondent's educational attainments. After controlling respondent's educational attainments, father's education lost its significant effect on perceived social status. Compared to 4-year general college education, high school, vocational school and 4-year technical college have significant negative effects on subjective social status, while master's degree and doctoral degree have positive influences. In addition, compare to public daytime college, private daytime college is negatively associated with perceived social status.

In model III, variables pertaining to occupational situations are added. Two distal factors (the other category of father's ethnicity and the other category of monthly family income) and respondent's own educational variables remain significant in their influences. Respondent's occupational situation variables also significantly related to subjective social position. Job satisfaction, job autonomy, and income all have significant positive effects on perceived social position. Among all predictors, vocational school is the most potent factor in affecting subjective social status, followed by job satisfaction, job autonomy, income, and 4-year technical college. These findings reveal that educational attainment, tracking and occupation situations are the most important predictors.

Table 2. OLS Regression Models on Subjective Social Status among Young Adults in Taiwan

	Model I		Model II		Model III	
	Beta	p	Beta	p	Beta	p
Father's ethnicity (Ref: Minnan)						
Hakka	-0.068	0.085	-0.040	0.219	-0.059	0.146
Mainlander	0.021	0.472	0.023	0.329	0.004	0.869
Aborigines	-0.012	0.374	-0.010	0.406	0.007	0.535
Other	0.033	0.001	0.044	0.000	0.067	0.001
No. of siblings	-0.010	0.721	0.100	0.704	0.050	0.590
Mother's year of education	0.003	0.925	-0.023	0.511	-0.0180	0.629
Father's year of education	0.063	0.080	0.020	0.576	0.024	0.506
Family monthly income (Ref.: NT$ 20k - <50k)						
Less than NT$20k	-0.038	0.311	0.000	0.999	0.010	0.773
50k- < 100k	0.018	0.583	0.002	0.948	-0.036	0.341
100k- < 150k	0.061	0.013	0.037	0.132	-0.002	0.953
150k- < 200k	0.026	0.161	0.010	0.583	-0.016	0.418
200k and above	0.036	0.014	0.027	0.058	-0.008	0.570
Other	-0.110	0.000	-0.100	0.000	-0.055	0.000
Male	-0.009	0.752	-0.0234	0.376	-0.027	0.362
W1all3p	0.033	0.273	0.0338	0.205	0.050	0.096
Education level and track (Ref.: 4-year college)						
High school			-0.065	0.003	-0.071	0.002
Vocational school			-0.204	0.000	-0.226	0.000
5-year junior college			0.0035	0.810	-0.003	0.880
2-year junior college			-0.0062	0.871	-0.010	0.804
4-year technical college			-0.070	0.021	-0.102	0.002
Master's degree			0.067	0.017	0.074	0.002
Doctoral degree			0.042	0.015	0.033	0.000
School/College type (Ref.: Public college (daytime))						
Public college (night-time)			0.008	0.731	0.018	0.529
Private college (daytime)			-0.065	0.038	-0.049	0.172
Private college (night-time)			-0.061	0.097	-0.056	0.204
Foreign college			0.018	0.209	0.007	0.699
Occupational conditions						
Job satisfaction					0.142	0.000
Job autonomy					0.115	0.000
Monthly income					0.113	0.000
R-squared	0.035		0.091		0.152	
N	3462		3462		2632	

Discussions

This study confirms that the effects of proximate predictors are more important than distal factors. And the findings also support the hypothesis that most of the potent clues are individual characteristics rather than family background. Both educational attainment and tracking exert significant and profound influences on perceived position in social hierarchy. Job satisfaction, job autonomy, and income also have significant effects on subjective social status. These factors in part reflect perceived social and economic values in social hierarchy in Taiwan.

Most family background factors, such as parents' education, sibling numbers, do not affect subjective social ranking for young adults in Taiwan. However, the "other" categories of father's ethnicity and family monthly income have significant influence on subjective social status require further investigations. Tehse effects are persistent even when education and occupation factors are controlled in the models. For the other category of income, it seems that those who did not want to disclose their own family income are less advantaged group. Compared to those with family income between 20,000 and 50,000, their income is associated with lower subjective social status. Further exploration reveals that over a half of the fathers in these families have only 9 years or less of education. However, for those who did not know their father's ethnicity, the possible reasons could be that their fathers are of more than one ethnicity, or they really did not know the ethnicity.

Different from previous research by Nielsen and his colleagues in the United States, high school performance did not exert any significant influences on perceived social status of young adults in Taiwan. High school performance may significantly determine the types of college they attended, such as more prestigious public or non-technology colleges. However, the results show that educational levels and successively occupational income are the major predictors for their subjective social status. The findings of the present study indicate that their perceived social standings were formed during the course of postsecondary education and after entering job markets. These significant differences in subjective social status resulting from educational level and income also implies what they majored in college matters. Not only years of education increase subjective social status, but so does income, which is mainly determined by their disciplines in college. People major in medicine and engineering fields are more likely to earn higher income than humanities and arts, regardless of the colleges are public or private, and technology or academic oriented.

Preliminary analysis also shows positive relationship between SSS on young adults' perceived health conditions, which are not reported. Respondents regard themselves at higher social rankings are more likely to report that they lead a happy life, and more likely to perceive better health conditions, after controlling other

demographic and socioeconomic variables. It is important to take into account subjective social status in health research. Since subjective social ranking is usually linked to social pressure, the cumulative effects of subjective social status on health may increase in the long run. The data collected from the panel surveys in the future will be especially valuable for the causal examinations between subjective social status and health outcomes in the transition from young adulthood to marriage and family formation in Taiwan.

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Appendix 1. number of siblings

Sibling	%
0	4.06
1	42.75
2	40.2
3	9.91
4	2.37
5	0.47
6	0.21
8	0.03
N	3,794

Appendix 2. Descriptive statistics of family background

Monthly family income	%	Father's ethnicity	%
less than NT$20,000	8.34	Minnan	79.6
NT$20,000- < NT$50,000	40.86	Hakka	10.78
NT$50,000- < NT$100,000	36.79	Mainland	8.46
NT$100,000- < NT$150,000	9.27	Native	0.5
NT$150,000- < NT$200,000	2.6	Others	0.16
NT$200,000 and above	1.67	Do not know	0.5
No answer	0.47		
N	18,533	N	3,794

Appendix 3. Descriptive statistics of educational attainment

Educational attainment	%	College type	%
High school	1.27	Public (day)	31.73
Vocational school	3.58	Public (night)	2
5-year junior college	3.45	Private (day)	56.19
2-year junior college	3.69	Private (night)	8.46
Technology college	32.42	Foreign	1.61
College	34.48		
Master's degree	20.08		
Doctoral degree	1.03		
N	3,794	N	3,794

Appendix 4. Descriptive statistics of job situations

Job satisfaction	%	Job autonomy	%
very unsatisfied	1.98	strongly disagree	10.07
unsatisfied	11.83	disagree	32.18
either	24.01	either	6.52
satisfied	53.32	agree	39.5
very satisfied	8.86	strongly agree	11.73
N	2,924	N	3,633

Appendix 5. Descriptive statistics of more background variables

Variable	N	Mean	S.D.	Min	Max
Male	3794	0.4844	0.4998	0	1
w1all3p	3775	1.6603	1.1333	-2.0413	4.7784
income	2892	29745	12801.2400	0	250000
mother's year of education	3645	10.4587	3.2930	0	22
father's year of education	3653	11.3833	3.4881	0	22