Relative deprivation based on occupation: An effective predictor of Chinese life satisfaction

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Relative deprivation (RD) refers to the fact that individuals may feel deprived of some desirable thing in social comparison relative to a reference group. Occupational group is widely recognized as the essential reference group and generally used to compare differences in earnings and social position. Four waves’ data from the Social Attitudes Survey of Urban-Rural Residents (China) (SAS-C; 2005/2007/2008/2009) were used to compute to Stewart’s new measure of RD for different occupational groups and its relationship to life satisfaction (a cognitive component of subjective well-being). Results showed that both economic RD (defined as individuals’ RD of material benefits, such as income, wealth etc.) and social status RD (defined as individuals’ RD on their evaluation of social status) consistently predicted Chinese life satisfaction for a period of time from 2005 to 2009; meanwhile, individual economic RD was moderately correlated to social status RD. The effects of RD and some demographic variables on life satisfaction are discussed and possible improvements for future research are suggested.

Key words: economic status, life satisfaction, reference group, relative deprivation, social status, subjective well-being.

Introduction

China’s economic reform and opening up started in 1978, when the country was so poverty-stricken that per capita GDP was only 381 RMB.1 This figure had increased to 18 934 RMB2 by 2007. However, the Gini coefficient of China increased sharply from approximately 0.203 in the early 1980s to 0.4694 in 2007, which indicates that the degree of income inequality is above the alarm line (0.4). There is a well-known Chinese adage ‘sit down to enjoy one’s dinner, stand up to rail at inequity’ which means that although some people may live a better life than others, their total dissatisfaction may have increased (Zhang, Zhou, & Wang, 2009).

This is a typical example of relative deprivation (RD), which is defined as one’s feeling of disadvantage or deprivation for some desired thing in comparison with a reference group (Crosby, 1976; Runciman, 1966; Walker & Pettigrew, 1984). The reference group represents grounds for making comparisons with other individuals or social groups. Relative deprivation has been a par excellence social psychological concept since Stouffer et al. (1949) first articulated it, being widely used not merely in social psychology but also in economics, sociology, politics, and other social sciences for more than half a century (Pettigrew et al., 2008; Walker & Smith, 2002). Runciman defined four conditions for an individual to feel RD: (1) he does not have X (some desired object or opportunity called X); (2) he sees some other person or persons, which may include himself at some previous or future time, as having X; (3) he wants X; (4) he sees it as feasible that he should have X. Since then, the measurement of RD has been focused on conditions (1) and (3), emphasizing the utility derived from X, the objective deprivation of the person who lacks X, and the availability of a reference group for social comparison [conditions (2) and (4)], as necessary conditions for relative deprivation to emerge (Berrebi & Silber, 1985; Hey & Lambert, 1980; Kakwani, 1984; Stark & Taylor, 1989; Stark & Yitzhaki, 1988; Yitzhaki, 1979, 1982). With this approach, Stark and Taylor generated a classic measure of individual relative deprivation RDi with the formula of

\[ RD_i = AD(Y_i)P(Y_i) \] (1)

Here, \( Y_i \) is a continuous score (e.g. earnings), \( AD(Y_i) \) is the mean score difference between individual \( i \) and those above individual \( i \) in the score distribution, and \( P(Y_i) \) is the proportion of individuals in the society with scores greater than \( Y_i \) [for a proof of Equation 1, see Stark and Taylor, p. 13]. This measure assumes that an individual’s relative deprivation, \( RD_i \), is a function of the expected value of the difference between an individual \( i \)’s score and an individual with a score greater than \( Y_i \), (i.e. \( AD(Y_i) = E[Y_i - Y_j] \) for all \( Y_j > Y_i \)), and an individual’s position in the score distribution (Stewart, 2006). This method considers the reference group as incorporating all the people with an advantaged
position above someone who has RD. This definition, however, is at odds with the social psychological definition of reference groups as large social categories (occupation, race, age group etc.) affiliated with institutional norms that encourage social comparison because of their ‘similarity’ (Festinger, 1954; Merton & Kitt, 1950). For instance, a psychology professor would compare his salary with professors of other departments in his college. He would not compare his salary with campus cleaners or cooks because that they are not in the same occupation group and are not viewed as relevant social comparisons.

The core of RD is social comparison (Stouffer, Suchman, DeVinney, Star, & Williams, 1949). Therefore, choosing an appropriate reference group is vital. By reviewing previous studies, we found that occupation group is widely recognized and generally used to compare differences in earnings and social position for the reason that work is a basic necessity for survival (Della Fave, 1980; Hauser & Warren, 1997; Hochschild, 1981; Hodge, Siegel, & Rossi, 1964; Jasso & Rossi, 1977; Kluegel & Smith, 1986; Robinson & Bell, 1978; Sen, 1992; Shepelak & Alwin, 1986; Williams, 1990). A man may feel depressed because of his relative position in an occupational reference group. That is to say, individuals don’t suffer from absolute or objective conditions, their feeling of deprivation stems from subjective assessments of their own situation, in relation to the perceived situation of others (Taylor & Moghaddam, 1987; Tropp & Wright, 1999).

Another shortcoming of the above measure (Eqn 1) is that the measure assumes that individuals feel deprived when they make comparisons with individuals above themselves within a reference group, but they haven’t received satisfaction (or gratification) from making comparisons with those below themselves in this reference group (Stewart, 2006). This assumption is inconsistent with the concept of RD defined by Runciman (1966) and other social psychological researchers (Alves & Rossi, 1978; Crosby, 1976; Gartrell, 2002; Jasso & Rossi, 1977; Merton & Kitt, 1950; Sweeney, McFarlin, & Inderrieden, 1990; Turner, 1956), which supposes that persons can reduce their sense of RD by making comparisons with other reference group members in worse conditions. Given the limitations of the measure of RD by Stark and Taylor, 1989, Stewart proposed an alternative measure of RD that improves upon earlier measures. The new index uses deviations from a standard in a reference group to measure RD relative to both upwards and downwards comparisons (exact formula to be discussed later). By strictly reasoning from social psychological theory and using empirical analysis, Stewart confirmed that his proposed index is an improved measure of RD. His measure verified the significant negative relationship between an individual’s economic RD (defined as an individual’s RD of material benefits, such as income, wealth etc.) and happiness, which other measures of both objective earnings and RD calculated by Equation 1 failed to do (Stewart).

Through an objective measure of income, economic RD is easily quantified. We consider that the connotation of RD isn’t limited to material benefits, however. Review the RD definition: individuals may feel deprived of some desirable thing relative to a reference group. Here ‘some desirable thing’ can be money, social status or other things desired by people. In other words, non-economic inequalities of subjective social status, power, and even environmental quality can lead to RD (Stewart, 2006; Walker, Wong, & Kretzschmar, 2002). A person who has high social status does not always have corresponding economic status and vice versa. For example, teachers have prevalently been respected as ‘the engineers of the human soul’ in China, so they have honourable social status. However, teachers’ average wages are only of middle and lower level, ranking 12th among 19 types of vocation in 2007. Thus, we can see that the relationship between social status and economic status may not be as close as assumed, although they are generally positively correlated. Belonging to a social class is not only an objective fact, but also a subjective perception of class identity. Subjective status has been typically assessed by requiring respondents to indicate the social class to which they belong (e.g. upper, middle, working) (Adler et al., 2000). Besides confirming that economic RD is a significant predictor of life satisfaction (defined as a cognitive evaluation of one’s life as a whole for subjective well-being) (SBW; Diener, Oishi, & Lucas, 2009; Diener, Suh, Lucas, & Smith, 1999), we are also interested in the influence of subjective social status RD (defined as individuals’ RD on their evaluation of the social status to which they belong).

There is an extensive body of literature on the relationship between subjective social status and health (see Gerry, 2005; for a review). However, few researchers have focused on subjective social status and life satisfaction. Gitmez and Morcol (1994) indicated that socio-economic status was a strong determining factor of satisfaction with Turkish life domains. Zagefka and Brown (2005) found that perceived personal status discrepancy has a negative link with life satisfaction. We expect that an individual’s RD of subjective social status has a similar effect on life satisfaction. By measuring RD for both economic status and social status, we can get a more general picture of the connection between RD and life satisfaction.

As Stewart pointed out, his research had a major limitation in that the data he analyzed were cross-sectional: he only used the data from the 1998 General Social Survey (GSS) (Davis & Smith, 1998). Hence, the significant results he found may not be stable. As we are now in 2010, data collected 10 years ago may not be indicative of current conditions. To improve this situation, we use four waves of data from the Chinese social attitude survey during the past...
5 years (2005, 2007, 2008 and 2009). In each wave we investigated thousands of people (details to be discussed below). Although it is hard to conduct a social survey with large sample sizes, we collected highly representative samples with Ns >5000 from 2005 to 2009. While the economy and society of China has changed over this period, we sought for regularity despite these changes.

In summary, in the present study, Stewart’s index is applied and developed to explore the relationship between RD and life satisfaction through the following set of hypotheses for mainland China.

Hypothesis 1: Individual economic RD consistently predicts life satisfaction for a period of time from 2005 to 2009;

Hypothesis 2: Individual social status RD consistently predicts life satisfaction for a period of time from 2005 to 2009;

Hypothesis 3: Individual economic RD is moderately correlated to individual social status RD.

Method

Respondents and data

Data for this analysis come from the Social Attitudes Survey of Urban-Rural Residents (China) (SAS-C), which is a key program supported by National Natural Science Foundation of China. SAS-C covers various attitudes of people’s social life. It is a sample of metropolitan areas and non-metropolitan countries in Western and Central China conducted by the Research Center for Social & Economic behavior (RCSEB) in the Institute of Psychology, Chinese Academy of Sciences (CAS). Data for the SAS-C are collected through face-to-face interviews by trained interviewers at respondents’ households from 2005 until now in the early months of each year (except for 2006, when the survey paused that year for certain reasons). The respondents come from Gansu, Shaanxi, Hubei and Sichuan provinces. The response rates for the four waves (2005, 2007, 2008 and 2009) were all above 90%. Table 1 shows some basic statistics for respondents.

Table 1 Descriptive statistics of sex and age

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<td>Female</td>
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<td>2299</td>
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<tr>
<td>Age (years)</td>
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<tr>
<td>Mean</td>
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<td>Max</td>
<td>86</td>
<td>83</td>
<td>86</td>
<td>85</td>
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<tr>
<td>SD</td>
<td>11.9</td>
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</tr>
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Measures of economic RD, social status RD and life satisfaction

RD formula. In Stewart’s (2006) research, he proposed a new measure of RD which is based on the poverty index developed by Foster, Greer, and Thorbecke (1984). The Foster’s poverty measure P defined by

\[ P(Y; z) = \frac{1}{n} \sum_{i=1}^{n} g_i z_i \]

where \( z > 0 \) is the predetermined poverty line, \( n \) is total number of households, \( g \) is the number of poor households, and \( g_i = z - y_i \), for all \( y_i \leq z \), where \( y_i \) is the incomes of the \( i \)th household. For more details, see Foster et al.: ‘a class of decomposable poverty measures’. To expand this classic poverty measure to the examination of RD, Stewart specified that there is a deprivation line \( z_i \) within a reference group \( k \). \( z_i \) is a point in a score distribution where relative satisfaction perfectly offsets RD. It can be crudely estimated as the mean in a score distribution by assuming that satisfaction and deprivation are proportional (e.g. feelings of satisfaction are equal in magnitude to feelings of deprivation). Stewart pointed out that this crude estimate is in line with recent theories in poverty research which maintained that a poverty threshold should reflect the mainstream standard of living in a given country and time period (Brady, 2003; Osberg & Xu, 2000; Rainwater & Smeeding, 2005; Ruggles, 1990). Therefore, the formula of RD within a reference group \( k \), \( Q_k \), is:

\[ Q_k(Y; z_k) = \frac{1}{N_k z_k} \sum_{i=1}^{N_k} g_i z_i \]

where \( z_k > 0 \) is the deprivation line in the reference group \( k \), \( N_k \) is the population size of the reference group \( k \), \( I_k \) is the size of the population below the deprivation line in the reference group \( k \), and \( g_i = z - y_i \), for all \( Y \leq z_i \), where \( Y \) is the score of the \( i \)th individual in the reference group \( k \) (Stewart). The measure of RD aggregates the dissatisfaction associated with not having scores higher than the deprivation line in a reference group. As such, this measure defines the operational form of individual i relative deprivation, \( d_i \), as:

\[ d_i = g_i z_i / z_i^2 = (z_i - y_i) / (z_i) \]

where the terms are the same as those in Equation 2 (Stewart). This measure accords with three assumptions of Equation 2 (Stewart): (1) Individuals above the deprivation line in a reference group do not contribute to the total deprivation because their level of relative satisfaction offsets all felt deprivation (\( d_i = 0 \)). (2) Individuals below
the deprivation line in a reference group have levels of relative deprivation that offset all felt satisfaction (di > 0).

(3) The feeling of deprivation geometrically increases as an individual moves farther away from the deprivation line (see Alves and Rossi (1978) for empirical support of last assumption).

Reference group. As mentioned previously, occupational group was chosen to be the reference group. Therefore, an individual makes comparisons with others in the same occupation. Based on the occupational categories of the Chinese Bureau of Statistics, we used 10 broad categories: (1) farmers; (2) enterprise workers; (3) non-profit sector staff; (4) administrative and managerial clerks; (5) household businessmen; (6) migrant labourers; (7) retirees; (8) unemployed persons; (9) freelancers or self-employees; (10) students.

Economic RD. Considering that household income is a more accurate representation of a person’s real economic resources (Foster et al., 1984; Schnitker, 2008; Stark & Taylor, 1989; Stewart, 2006), and Shu and Zhu’s (2009) finding that household income has a significant effect on personal life satisfaction in China, we examined household income differences within occupational groups. By using Stewart’s procedure, the deprivation line of economic RD is estimated as the mean household incomes of individuals who are at least ‘more or less satisfied’ with their household financial position in their own occupation. This estimate is consistent with the idea of RD (Crosby, 1976; Runciman, 1966). To test the sensitivity of our results to the deprivation line estimates, we replicated the analysis using an alternative estimate, which is the median income of those very satisfied with their household income (this analysis can be obtained on request from the authors – they replicated the main pattern of findings nicely). Now, the individual’s economic RD, di, can be calculated by Equation 3 for each case in the data set. Suppose that the deprivation line of the farmers group is $1000. If a farmer’s annual household income is $500, then his economic RD should be: di = (1000 – 500)²/1000² = 0.25.

Social status RD. Subjective social status is measured by one item: ‘In contrast to surrounding people, which social status do you consider yourself to belong to from 1 (low) to 5 (high status)’? Another item measures social status satisfaction: ‘What do you think about your current social status?’ The options were the same as for household income satisfaction (see end note 7). The deprivation line of social status RD is estimated as the mean of self-rated satisfaction for the social status of individuals, who are at least ‘more or less satisfied’ with their social position in their own occupation. As in economic RD, individual social status RD, di, can be calculated by Equation 3 for each case in the data set. Suppose that the deprivation line of the enterprise workers group is 3, and one worker’s self-rated social status is 2, then her social status RD should be: di = (3 – 2)²/3² = 0.11.

Life satisfaction. A single item derived from the World Values Survey (World Values Survey Association, 1999) was chosen to assess global life satisfaction: ‘All things considered, how satisfied are you with your current family life as a whole?’ The options ranged from 1 (not at all satisfied) to 5 (extremely satisfied). This simple item performs as well or better than other complex formulations (Veenhoven, 1994). As the focus of this analysis is the relationship between RD and its negative outcome (life dissatisfaction), we recoded life satisfaction into binary distinctions of ‘satisfied’ and ‘dissatisfied’. Here ‘satisfied’ refers to those who were either ‘very satisfied’ or ‘extremely satisfied’, and ‘dissatisfied’ refers to those who considered themselves either ‘not very satisfied’ or ‘not at all satisfied’. The neutral point of ‘more or less satisfied’ was excluded.

Demographic variables can also affect evaluation of life satisfaction, so the effect of respondents’ demographic information, such as sex, age, family size, nationality/ethnicity, occupation and education, was also examined.

Results

We carried out a logistic regression to analyze the data on life dissatisfaction. The purpose was to ascertain the relationship between the two components of an individual’s RD and life dissatisfaction controlling for demographic predictor variables. The results are presented in three sections: first, concerning the economic RD’s effects on life dissatisfaction; second, concerning the social status RD’s effects on life dissatisfaction; and third, concerning the relationship between economic RD and social status RD.

Economic RD and life satisfaction

Besides Stewart’s measure of economic RD (new index by Equation 3), objective household income and an old index of RD (Stark & Taylor’s measure by Equation 1) were also added as independent predictors in the respective model to contrast their effectiveness. Table 2 contains the logistic regression results for predicting life dissatisfaction by objective incomes, two indices of economic RD and other demographic variables.

Table 2 shows that the new index di of economic RD is a significant predictor of life dissatisfaction for model 3 in all four waves from 2005 to 2009, whereas both objective income and an old index of RD were not significant predictors of life dissatisfaction for model 1 and model 2 in 2008 and 2009. Individual i’s economic RD di is calculated...
Logistic regression of life dissatisfaction on objective income, and old/new indices of economic RD

| Year | Model | Objective income | Old index RDi | New index di | Demographic variables | Age | Sex (RCV: female) | Family size | Nationality | Education | Occupation | Likelihood ratio
<table>
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<td>2005</td>
<td></td>
<td>-0.501***</td>
<td>0.239***</td>
<td>0.067</td>
<td>0.027***</td>
<td>0.027***</td>
<td>-0.010</td>
<td>0.020</td>
<td>0.030</td>
<td>0.034</td>
<td>0.030</td>
<td>0.085***</td>
</tr>
<tr>
<td>2006</td>
<td>Model 1</td>
<td>1.938***</td>
<td>1.109***</td>
<td>0.012</td>
<td>-0.002</td>
<td>0.032</td>
<td>-0.013</td>
<td>0.023</td>
<td>0.012</td>
<td>0.013</td>
<td>0.012</td>
<td>0.069***</td>
</tr>
<tr>
<td>2007</td>
<td>Model 2</td>
<td>1.199***</td>
<td>0.012</td>
<td>0.012</td>
<td>0.037</td>
<td>0.037</td>
<td>-0.013</td>
<td>0.023</td>
<td>0.012</td>
<td>0.012</td>
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<td>0.069***</td>
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<tr>
<td>2008</td>
<td>Model 3</td>
<td>1.938***</td>
<td>1.109***</td>
<td>0.012</td>
<td>0.037</td>
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<td>0.023</td>
<td>0.012</td>
<td>0.012</td>
<td>0.012</td>
<td>0.069***</td>
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Table 2: Logistic regression of life dissatisfaction on objective income, and old/new indices of economic RD

Table 3 contains the logistic regression results for predicting life dissatisfaction by subjective social status, social status RD and other demographic variables.

Table 3 shows that social status RD is a significant predictor of life dissatisfaction for model 2 in all four waves from 2005 to 2009, whereas subjective social status are not significant predictors of life dissatisfaction for model 1 in 2008. The coefficient indicates that individuals with higher levels of social status RD, as measured by \( d_2 \) (Eqn 3), are more likely to be dissatisfied with life conditions than others. Therefore, Hypothesis 2 is fully confirmed, social status RD consistently predicts respondents’ life satisfaction for 4 years.

Relationship between economic RD and social status RD

Based on the previously reported measures of economic RD and social status RD, Pearson correlations across 4 years were calculated. The results are shown in Table 4.

Table 4 indicates that economic RD is positively correlated with social status RD at a low level in all four waves (the highest value of correlation coefficients is 0.188 in 2007; all significant level at \( p < 0.001 \)). Although the correlations between them are small, the relationship between economic RD and social status RD is robust and consistent (values range from 0.172 to 0.188). It can be implied that economic RD and social status RD are different components of relative deprivation in China.

Therefore, this result endorses Hypothesis 3: individuals’ economic RD is moderately correlated to individuals’ social status RD.

Table 5 indicates that when economic RD and social status RD are entered into the model together, the regression coefficients for both decline in terms of predictive value for life satisfaction. However, each coefficient is still significant. Meanwhile, some demographic variables such as age, education and occupation have effects on life dissatisfaction. Specifically, age is negatively correlated to life dissatisfaction \( (p < 0.01) \). Individuals whose education levels are higher than senior high school are more satisfied than those with lower education levels. Moreover, individuals who are affiliated with advantaged occupation groups with relatively high household income and social status (such as non-profit sector staff, administrative clerks and household businessmen) have more life satisfaction than...
those who are affiliated with disadvantaged occupation groups (e.g., farmers, except in 2005).

Discussion

The concept of life satisfaction is more complicated than it looks. An individual’s evaluation of life satisfaction can be influenced by many factors, such as objective income, health, subjective social status, living environment, interpersonal relations, and culture or background characteristics. In the present study, we focused on two important antecedents – relative deprivation of annual household income and subjective social status. Supported by the SAS-C, we obtained representative sample data of respondents’ life satisfaction, annual household income and subjective social status in China. Generally speaking, we successfully confirmed that RD is an effective predictor of Chinese life satisfaction for a period of time from 2005 to 2009 through Stewart’s new relative deprivation measure. Compared to their occupational reference group, individuals who are below the deprivation line may have feelings of economic RD or social status RD. It indicates that their physical and psychological needs are not satisfied. The results confirmed theories such as Maslow’s (1970) hierarchical needs model. More recently, Sheldon, Ellior, Kim, and Kasser (2001) found that the degree to which an individual’s needs were met was positively associated with the degree of their life satisfaction.

To explore the relationship between relative deprivation and life satisfaction deeply, two aspects of relative deprivation (economic RD and social status RD) were calculated. The former is obtained from objective household income data, whereas the latter is obtained from subjective self-ratings. Table 2 shows that economic RD was a significant predictor of life dissatisfaction in all four waves from 2005 to 2009, with regression coefficients ranging from 1.05 to 1.95. Careful readers may have noticed that the regression coefficient values for Objective Income, Old Index RD, and New Index all consistently declined across the four survey waves.
The discrepancy can mainly be attributed to scale differences in the measures of social status RD compared to economic RD. Therefore, the influence of both the old and new indices of objective income RD all weakened in periods (although the New Index picks up again in 2009). In contrast, most of the average annual household incomes of occupational groups from 2005 to 2009 consistently increased (data available from authors). We don’t think it’s a coincidence. A sizable literature examining the relationship between income and happiness (or subjective well-being) demonstrates that when people meet their basic needs, income will not have strong effects on happiness (Diener & Diener, 2002; Diener, Sandvik, Seidlitz, & Diener, 1993; Easterlin, 2001, for reviews). With the improvement of income for different occupational groups, people may pay more attention to non-material factors that can enhance life satisfaction (Diener et al., 2009; Diener & Seligman, 2004). Therefore, the influence of both the old and new indices of objective income RD all weakened in models 1–3 across the four survey periods. Table 3 shows that social status RD was also a consistent significant predictor of life dissatisfaction of all four waves from 2005 to 2009, with regression coefficient values ranging from 5.4 to 5.8. We asked respondents to evaluate their social status compared with surrounding people. An issue here is whether this item, which is based on perceived social status, implicitly incorporates the comparison or evaluation component that the deprivation line intends to address. Specifically, if persons answer the social status question in the absence of a reference groups, then our measure is sound – in this case, they only count how much they have of each good (e.g. earnings, wealth, network position, and neighbourhood) to compute some raw measure of status. However, if persons incorporate a comparison into judgments used to estimate status, then there may be an issue – in this case, a person may measure status as a function of the aforementioned goods and the amount of goods they have relative to similar others. Therefore, we compared model 1 (where subjective social status is a predictor of life satisfaction) to examine this issue. The results (Table 3) shows that social status RD is a better predictor than social status, which implies that individuals are more likely to estimate their social status without incorporating much comparison.

Table 5 Logistic regression of life dissatisfaction on economic and social status RD

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<th>2005</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
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<tbody>
<tr>
<td>Economic RD ($d_{i}$)</td>
<td>1.663***</td>
<td>1.168***</td>
<td>0.540**</td>
<td>0.903***</td>
</tr>
<tr>
<td>Social status RD ($d_{i}$)</td>
<td>5.030***</td>
<td>5.221***</td>
<td>5.655***</td>
<td>5.292***</td>
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<tr>
<td>Demographic variables</td>
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<tr>
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<td>-0.016**</td>
<td>-0.015**</td>
<td>-0.021***</td>
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<td>Sex (RCV = female)</td>
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<td>-0.071</td>
<td>-0.011</td>
<td>-0.024</td>
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<td>Family size</td>
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<td>-0.056</td>
<td>-0.033</td>
<td>-0.027</td>
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<td>Nationality (RCV = minority)</td>
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<td>-0.275</td>
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<td>Junior high school</td>
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<td>-0.431**</td>
<td>-0.204</td>
<td>-0.735**</td>
</tr>
<tr>
<td>Senior high school</td>
<td>-0.051</td>
<td>-0.454**</td>
<td>-0.540*</td>
<td>-0.951**</td>
</tr>
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<td>College and above</td>
<td>-0.746**</td>
<td>-0.651**</td>
<td>-0.242</td>
<td>-0.907***</td>
</tr>
<tr>
<td>Occupation (RCV = farmers)</td>
<td>0.232</td>
<td>-0.330</td>
<td>-0.020</td>
<td>-0.071</td>
</tr>
<tr>
<td>Non-profit sector staff</td>
<td>0.384*</td>
<td>-0.754***</td>
<td>-0.503**</td>
<td>-0.426*</td>
</tr>
<tr>
<td>Administrative clerks</td>
<td>0.303</td>
<td>-1.303***</td>
<td>-0.705**</td>
<td>-0.494</td>
</tr>
<tr>
<td>Household businessmen</td>
<td>-0.421***</td>
<td>-0.628***</td>
<td>-0.789***</td>
<td>-0.390*</td>
</tr>
<tr>
<td>Migrant labourers</td>
<td>0.404**</td>
<td>0.215</td>
<td>-0.586**</td>
<td>0.508***</td>
</tr>
<tr>
<td>Retirees</td>
<td>0.004</td>
<td>-0.627*</td>
<td>-0.873**</td>
<td>-0.227</td>
</tr>
<tr>
<td>Unemployed persons</td>
<td>0.901***</td>
<td>0.269</td>
<td>-0.071</td>
<td>0.256</td>
</tr>
<tr>
<td>Freelancers or self-employees</td>
<td>0.332</td>
<td>0.083</td>
<td>-0.508*</td>
<td>-0.109</td>
</tr>
<tr>
<td>Students^{14}</td>
<td>-</td>
<td>-0.271</td>
<td>-0.953***</td>
<td>-0.203</td>
</tr>
<tr>
<td>N</td>
<td>4244</td>
<td>3336</td>
<td>2987</td>
<td>3431</td>
</tr>
<tr>
<td>Likelihood ratio $\chi^2$</td>
<td>653.54</td>
<td>558.40</td>
<td>420.15</td>
<td>431.56</td>
</tr>
<tr>
<td>Constant</td>
<td>0.631*</td>
<td>0.032</td>
<td>0.495</td>
<td>0.209</td>
</tr>
</tbody>
</table>

*p < 0.05; **p < 0.01; ***p < 0.001.

—, data are default for that year; RCV, reference categorical variable; RD, relative deprivation.

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values (the same self-rated social status have equal social status RD, social statuses. (One possible result is that individuals with RD, for each respondent could only choose one from five ranks, from 1 low to 5 high. This fact made the scale of subjective social status has an annual income of the richest family is as much as 400 000 RMB. However, the scale of subjective social status has different components of relative deprivation. They can’t be substituted with each other.

The relationship between some demographic variables and evaluations of life satisfaction is also examined in this paper. As shown in Table 5, the effect of age on life satisfaction is small, but consistently negative. Some researchers confirmed age is related to subjective well-being, but the effects are small and depend on the component of subjective well-being measured (see Mroczek, 2001, for a review). Older Chinese people who experienced hard times for two or three decades or more are more satisfied with current life conditions. This result confirmed international research findings that life satisfaction often increases, or at least does not drop, with age (Herzog & Rodgers, 1981; Horley & Lavery, 1995; Larson, 1978; Stock, Okun, Haring, & Witter, 1983). Sex and family size did not have significant effect on life satisfaction. In an earlier meta-analysis, Haring, Okun, and Stock (1984) indicated that men were slightly happier than women (the magnitude of this difference was only mean \( r = 0.04 \)). In the 2005 model, life dissatisfaction for the Han nationality/ethnicity was more than that of minority groups (\( \beta = 0.269, p < 0.05 \)). However, this result was not supported by data from 2007 to 2009. One cause might be the high default rate (25.9% of data missing) of the nationality/ethnicity variable in 2005. These results attest to the importance of replicating findings from several years to determine which findings are robust: the effect of majority-minority nationality/ethnicity is not.

The trend of education’s effect is that life dissatisfaction for the Han nationality/ethnicity was more than that of minority groups (\( \beta = 0.269, p < 0.05 \)). This research has several limitations that are worth noting: First, we chose occupation group as the reference group. One reason for not choosing other categories, such as ethnic group, is that respondents were mostly Han (the ratio is up to 95% for all waves). Future research could be developed in the area of minority inhabitants (Xinjiang,...
Tibet, Inner Mongolia, Ningxia, Guangxi, Yunnan etc., where ethnic group might be the most important reference group. Second, our measure on the subjective social status is crude. We designed only five ranks from 1 low to 5 high to match the rest of the questionnaire. Future research could use more precise scales, such as the MacArthur Scale of Subjective Social Status, which has a ‘social ladder’ with 10 stairs. Third, although economic and subjective social status are universal and important aspects of relative deprivation, there are still other factors that can be used to measure RD, such as grades, interpersonal relations, and environment quality. Last but not least, this research only investigated a sample of residents in central and western China. Compared to rich areas in eastern and southern China, the economic development of our areas is worse. Poor people may be more sensitive to material satisfaction. Therefore, they have more experience of economic RD. Future studies could cover other areas, where a more general conclusion on the relationship between relative deprivation and life satisfaction might be derived.

Our study expands Stewart’s (2006) measure of economic RD to social status RD, and also confirmed that both economic RD and social status RD are consistent significant predictors of life satisfaction for a period of time from 2005 to 2009, in spite of China’s economic changes. The empirical evidence of four waves of representative samples strongly supported our hypotheses. Not only Stewart’s study, but other previous studies on relative deprivation are usually cross-sectional in design. Accordingly, these researchers have to conclude carefully and limitedly. We are gratified that the present research successfully redresses this limitation, and consider this to be the main contribution of our study.

**Acknowledgements**

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**End notes**

2. Data source: Ibid.
6. In each province, we randomly selected about 40 cities; in each city, we randomly selected about 40–60 individuals. Meanwhile, the ratio of urban and rural samples is approximately 3:7, based on the population distribution of China.
7. One item of the SAS-C Questionnaire is: What do you think about your current household income? 1, not at all satisfied; 2, not very satisfied; 3, more or less satisfied; 4, very satisfied; 5, extremely satisfied.
8. This demographic information is included in the last part of the SAS-C Questionnaire.
9. The unit of individuals’ household income is ten thousand yuan.
10. Family size refers to the number of respondent’s family members.
11. Here, Nationality is divided into Han (Chinese main nationality) and minority (55 other nationalities, such as Man, Menggu, Hui, Zang, Tuji etc.).
12. Education is partitioned into six categories: illiteracy, elementary school, junior high school, senior high school, junior college, college and above. The significance of the total test on education is shown here. Each category’s beta coefficient of model 3 can be seen in Table 5.
13. Occupation is partitioned into 10 categories. Here is shown the significant probability of the total test about occupation. Each category’s beta coefficient of model 3 can be seen in Table 5.
14. The occupation group of 2005 SAS-C Questionnaire did not contain students.

**References**


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