



Happiness and Relative Income: Perception and Reality

Nisachon Leerattanakorn

Faculty of Economics, Maejo University, Sansai District, Chiang Mai 50290

Corresponding author. E-Mail address: nisa.aom@gmail.com

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Abstract

Research into happiness increased recently. Kahneman's objective measure of life self-evaluation is a popular measure of happiness. The objective of this study was to explore the relationship between happiness and relative income. Income is classified into two, namely, real relative income and attitude toward relative income. Attitude toward relative income can be divided into attitude toward income aspiration and attitude toward mean income in community. This study applied the Order Logit Model and found that happiness depends on perception and reality. Aspirational attitude toward relative income is more important in determining individual happiness than real relative income. By contrast, attitudes to relative income were insignificant compared with other variables. The policy implication of this study is that governments should not only increase real income, but should also support income perception, such as by reducing greed, increasing mental strength, and upgrading self-esteem, to increase happiness.

Keywords: Happiness, Attitude toward Relative Income, Real Relative Income, Relative Income

Introduction

In terms of human happiness studies, most previous studies in economics focused on subjective happiness, which is classified into two, namely, experienced happiness and life evaluation (Kahneman and Deaton, 2010). Experienced happiness refers to the emotional quality of an individual's everyday experience, whereas life evaluation refers to a person's thoughts about his or her life. The present study focuses on the second aspect of happiness, namely, life evaluation, which has the same meaning as well-being.

The relationship between income and happiness has been endlessly debated. Traditional economic theories claim that absolute income is the most important factor that determines happiness (Yamada and Sato, 2013) or well-being. Following the concept of welfare economics, income and happiness have a positive relationship, that is, high income increases happiness (Tsui, 2014). The absolute income hypothesis suggests that rich people are happier than less affluent individuals within the same society (Diener, 1984). This theory has also been accepted for a long time until empirical studies in economics and psychology suggested that money does not matter in human happiness (Lakshmanasamy, 2010). Moreover, the power of income on happiness was questioned after the introduction of Easterlin Paradox (Easterlin, 1974), which posits that income can increase happiness within a given country at a point in time, but there is no systematical correlation between income and happiness over time. Many factors influence human happiness.

The first interesting factor is relative income. One explanation for the Easterlin Paradox is social comparison mechanism. From a social comparison perspective, people with an income higher than the reference group are happier. Similarly, people have lower happiness if they are lower income than the reference group.

Reference income hypothesis states that increased income will increase happiness if other factors are held constant (or decrease). Several studies, such as MacKerron (2012), McBride (2001), Blanchflower and Oswald (2004), Layard et al. (2010), Knight et al. (2009), Oshio et al. (2011), Ferrer-i-Carbonell (2005), pointed out the fact that relative income affects happiness. The comparison effect is asymmetric between upward comparison



and downward comparison (Blanchflower and Oswald, 2004; Duesenberry, 1949; Ferrer-i-Carbonell, 2005; Knight et al., 2009).

However, the important thing to consider is the two aspects of relative income, namely, real relative income and attitude toward relative income. Some rich people feel that they are "poor," which means that real relative income and attitude toward relative income are inconsistent. This study was designed to measure the factors that affect happiness. The finding is important in creating effective public policies to raise Thai happiness.

This study focuses on the relationship between happiness and the concept of relative income. The main contribution from this study is the confirmation that human happiness comes from perceived happiness and real happiness.

Data and Variable

This study collected primary data from a survey. We ranked the provinces of Thailand by population and selected the first two provinces located in separate region, namely, Chiang Mai and Nakhon Ratchasima Province.

Bangkok was excluded due to the mix characteristics of people who stay in the area. Data from these two provinces were good representative of Thai characteristics.

This study used stratified multistage sampling method based on population characteristic distribution. Provincial level was used as a stratum until Tambon level. In each sample household, one member of household aged over 18 years answered the questionnaire in October 2016. The sample size of each province is as follows.

Chiang Mai Province 323 Observations:

Mueang Chiang Mai District	169	Observations
San Sai District	94	Observations
Sankamphaeng District	60	Observations

Nakhon Ratchasima Province 501 Observations:

Mueang Nakhon Ratchasima District	252	Observations
Pak Chong District	109	Observations
Phimai District	73	Observations
Pak Thong Chai District	67	Observations

The details of data and variable are given as follows:

Individual self-reported subjective happiness is determined by the following question: "Considering everything, how happy were you 12 months ago?" Respondents used a seven-point scale to answer the questions (1 means "not happy at all" and 7 means "completely happy"). The survey shows that only 17% of the respondents are happy at the 1–4 level (being not happy at all to so-so). Thus, we grouped happiness into first to fourth levels and regrouped happiness data into four levels (1–4):

Happiness level (old) 1–4 is regrouped into Happiness level (new) 1

Happiness level (old) 5 is regrouped into Happiness level (new) 2

Happiness level (old) 6 is regrouped into Happiness level (new) 3

Happiness level (old) 7 is regrouped into Happiness level (new) 4

This study considers two different measures of attitude toward relative income. The first measure is attitude toward relative income compared with individual mindset. Respondents were asked the following question: "Is your regular income adequate for you and your family?" The answers are coded as inadequate (–1), adequate



(0), and more than adequate (1). The second measure is attitude toward relative income compared with other people in society. Respondents are asked the following question: “What would you say about your household income compared with those of the other households in your own community?” The choices for this question are coded as lesser income than other households (–2), lesser income than other households (–1), equal income as other households (0), higher income than other households (1), and higher income than other households (2).

In the survey, respondents reported their own household income using a list of 10 categories of household income. Real relative income is derived by calculating reference income, which is defined as mean of categories of household income in the same district. The difference between categories of household income and reference income is calculated, which is shown as real relative income. Positive real relative income indicates that a person has higher household income than others in the same district and vice versa.

In real situations, real relative income and attitude toward relative income may not be consistent. Some people feel that they are poor when in fact they are richer than others in the same society.

Self-esteem is a universal and crucial factor that captured attention from empirical studies of factors that determine happiness (Sato and Yuki, 2014). Many studies find a positive relationship between self-esteem and happiness (Baumeister et al., 2003; Cheng and Furnham, 2003; Brown, 2010). Self-esteem will block negative psychology outcomes, such as depression and overthinking. We constructed 10 questionnaire items with a seven-point Likert scale to measure the self-esteem index. High index refers to a high degree of self-esteem.

Belief in life after death is a proxy of faith in God. Faith in God and faith in afterlife established an understanding that justice will eventually be served. Tolstoy (2008) claimed that faith in God builds the assertion that everything that happens in life happens for a reason and is meaningful. Thus, believers in God are happy individuals. Faith in God is the belief in Merit and Karma in (Thai) Buddhism. Respondents were asked about their belief in life after death: Do you believe in life after death? A ten-point Likert scale was used to measure the degree of belief in life after death. The answers are: does not believe at all (0) to believe so much (10).

Trust and community happiness level are proxies of social capital. Respondents were asked the following question: “In general, what do you think about Thai people?” Respondents have two possible answers: they must be careful when making a connection (0) and most people can be trusted (1). The level of community happiness is the average level of respondents’ happiness in the same district.

Control variables are composed of gender, age, marriage, educational level, occupation, and having children. All variable details are listed in Table 1.

Table 1 Description of variables in the regression analysis

Variables	Definition	Mean	SD.	Min	Max
Subjective Happiness Level	Subjective happiness (1–4)	2.4988	0.9367	1	4
Attitude toward Self-Relative Income	Attitude toward relative income when compared with individual mindset (–1 to 1)	–0.2233	0.4610	–1	1
Attitude toward Social-Relative Income	Attitude toward relative income when compare with other people in society (–2 to 2)	–0.0559	0.6353	–2	2
Real Relative Income	Real relative income (compare with average income in the same District)	0.1762	0.7959	–4	1
Self-Esteem	Self-esteem index (1–7)	5.3054	0.6562	3.4	7
Believe in Life after Death	Degree of believe in life after death (0–10)	5.6032	2.7666	0	10
Trust	Trust (0, 1)	0.0752	0.2639	0	1



Table 1 (Cont.)

Variables	Definition	Mean	SD.	Min	Max
Community Happiness Level	Average happiness level of respondents in the same District (1–7)	5.4727	0.0875	5.4	5.6
Male	Male = 1; female = 0	0.4757	0.4997	0	1
Age	Age (Year)	43.1602	15.2515	18	84
Married or Living as Couple	Married or living as couple = 1; otherwise = 0 (Single is reference group)	0.6290	0.4834	0	1
Divorce/Widowed/Separate	Divorce/Widowed/Separate = 1; otherwise = 0 (Single is reference group)	0.0945	0.2932	0	1
Education Level	Education category (elementary school = 0; junior high school = 1; senior high school = 2; diploma = 3; Bachelor's degree = 4; higher than bachelor's degree = 5)	1.8956	1.5318	0	5
Business Owner	Business owner = 1; otherwise = 0 (Worker/Employer in public and private sector is reference group)	0.3993	0.4900	0	1
Housewife/Student/Unemployed	Housewife/Student/Unemployed = 1; otherwise = 0 (Worker/Employer in public and private sector is reference group)	0.2039	0.4032	0	1
Retired and Others	Retired and others = 1; otherwise = 0 (Worker/Employer in public and private sector is reference group)	0.0534	0.2250	0	1
Children	Have children = 1; Don't have children = 0	0.6505	0.4771	0	1

Methodology

Ordered Logit Model is applied in this study because the dependent variables (subjective happiness level) are polytomous variables. We run the happiness equation in the following form:

$$Happy_i^* = \phi X_i + \varepsilon_i \quad (1)$$

Where X_i = Set of Independent Variables,
 ε_i = Error Term,
 i = Index of Individual

The dependent variable $Happy_i^* = \phi X_i + \varepsilon_i$ is the self-reported subjective happiness, which can take four values (as discussed before). The happiness function can be written as follows:

$$Happy = f(AR_1, AR_2, RI, SE, DB, TR, CH, O) \quad (2)$$

where Happy is subjective happiness level, AR_1 is attitude toward self-relative income, AR_2 is attitude toward social-relative income, RI is real relative income, SE is self-esteem, DB is belief in life after death, TR is trust, CH is community happiness level, O is control variable (gender, age, married status, education level, occupation and having children).

Results

Figure 1 illustrates the distribution of (new) four levels of subjective happiness. The figure shows that more than 80% of the respondents are “happy”, 30% are quite happy, and only 14% are completely happy.

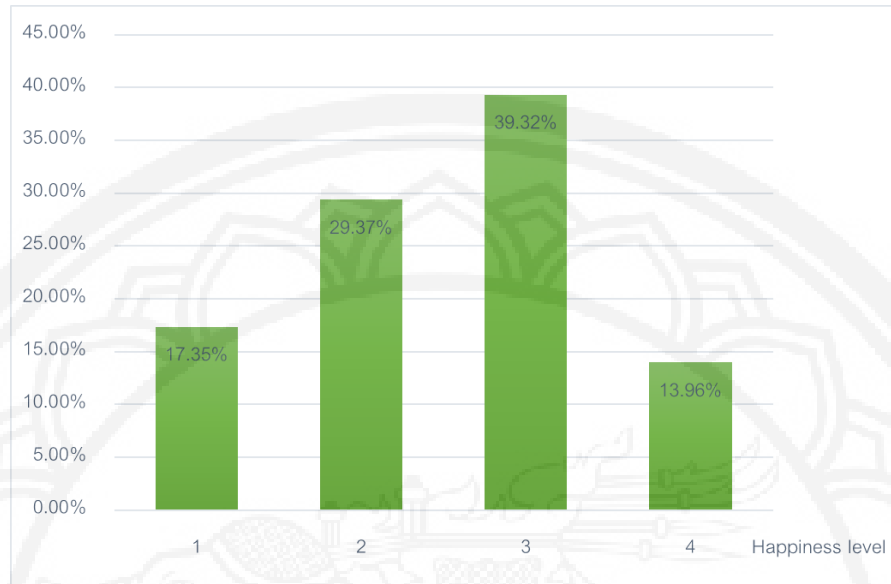


Figure 1 Distribution of happiness level

Order Logit estimation of happiness equation is presented in Table 2. The marginal effects of the ninth happiness equation are reported in Table 3. The highest Log Likelihood and Pseudo R^2 of ninth happiness equation confirm that the ninth equation has the most fit to the data.

Table 2 Order Logit estimates of happiness equation

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Coefficients									
Attitude toward Self-Relative Income	1.0623*** (0.1452)		0.9000*** (0.1681)	0.9371*** (0.1695)	0.9783*** (0.1695)	0.9774*** (0.1697)	0.9649*** (0.1696)	0.9636*** (0.1700)	0.9339*** (0.1713)
Attitude toward Social-Relative Income		0.5644*** (0.1036)	0.2380** (0.1196)	0.3052** (0.1240)	0.1905* (0.1255)	0.1832* (0.1258)	0.1816* (0.1257)	0.1832* (0.1260)	0.1632 (0.1278)
Real Relative Income				0.1835** (0.0833)	0.1823** (0.0832)	0.1673** (0.0834)	0.1659** (0.0832)	0.1691** (0.0835)	0.2107*** (0.0854)
Self-Esteem					0.4971*** (0.1032)	0.5006*** (0.1032)	0.4961*** (0.1032)	0.5017*** (0.1033)	0.4567*** (0.1055)
Believe in Life after Death						0.0399* (0.0233)	0.0390* (0.0234)	0.0490** (0.0253)	0.0397* (0.0241)
Trust							0.5172** (0.2532)	0.5282** (0.2532)	0.5921** (0.2546)
Community Happiness Level								1.6220** (0.7427)	1.4760** (0.7537)
Male									0.0981 (0.1312)
Age									-0.0027 (0.0052)
Married or Living as Couple									-0.3310** (0.1503)
Divorce/Widowed/ Separate									-0.3270 (0.2450)



Table 2 (Cont.)

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Coefficients									
Education Level									-0.0403 (0.0522)
Business Owner									-0.0668 (0.1686)
Housewife/ Student/ Unemployed									0.2545 (0.1986)
Retired and Others									0.7072** (0.3222)
Children									0.4740*** (0.1472)
Statistical Reports									
Log Likelihood	-1048.4545	-1058.8151	-1044.3112	-1041.9449	-1030.2765	-1128.8112	-1026.7186	-1024.3276	-1009.4389
Pseudo R^2	0.0255	0.0141	0.0276	0.0298	0.0407	0.0420	0.0440	0.0462	0.0566
LR χ^2	54.77	30.31	59.31	64.05	87.38	90.31	94.50	99.28	121.16
Prob > χ^2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of Observations	824	822	822	822	822	822	822	822	820

Remarks: *, **, *** indicate the level of significance at 10%, 5%, and 1%, respectively. The standard error is in parenthesis.

Table 2 shows the coefficients of nine happiness equations estimated from Ordered Logit Model. The first column indicates the coefficient of only one explanatory variable: attitude toward self-relative income, which is the attitude toward relative income compared with individual mindset. The coefficient is significant at 99% confident level and has a positive sign. Individuals who feel that their incomes are adequate or more than adequate are happier, *ceteris paribus* (all respondent incomes are above the poverty line). This finding supports aspiration level theory of happiness. Income aspiration affects income satisfaction. A wider gap between aspiration and achievement implies lower happiness. If higher past incomes trigger higher aspirations, the gap between aspiration and achievement maybe constant. Thus, higher real income dose not bring happiness. This finding explains the Easterlin Paradox.

Column 2 of Table 2 reports the coefficient of another aspect of attitude toward relative income: attitude toward social-relative income. The attitude toward relative income compare with other people in society has a significant positive impact on individual happiness. This confirms the social comparison effect and the relative income hypothesis (Duesenberry, 1949). Human beings automatically compare themselves to the reference group and make judgment about their life based on their observations. People feel good when making downward comparisons, but they feel bad about themselves when making upward comparisons. Two aspects of attitude relative income were used, namely, attitude toward self-relative income and attitude toward social-relative income, as independent variables in the same happiness equation. The results in Column 3 confirm that attitude toward relative income has a large and positive effect on individual happiness. However, the power of attitude toward self-relative income and attitude toward social-relative income decrease when control variables are added into the model. Real relative income variable was added into the model in Column 4. It has a positive and significant impact on individual happiness. Rich people are happier with their lives than poor people. An increase in real income gap between a person and others in society reduces happiness. This finding confirms the influence of income inequality on happiness. Column 5 shows that self-esteem exerts a positive effect statistical significance on happiness. Self-esteem may contribute to success in life, positive thinking, and strong sense of self-worth. Low self-esteem is

more likely to lead to depression than high self-esteem, which is an effect of stress in life (Baumeister et al., 2003; Graham, 2011).

In terms of faith in God effect, Column 6 added the variable of belief in life after death. This study found that individuals who believe in life after death are happier than those who do not. This finding means that faith in God or in religion establishes an understanding that justice will eventually be served. Merit and karma lead an individual in finding the exact meaning of life and living with happiness. Similar studies (Clark and Lelkes, 2005; Lelkes, 2006; Dolan et al., 2008) found that happiness and belief of God in one's life were highly correlated. Frey and Stutzer (2002) stated that religion links value of life and goal of life, which finally leads to happiness.

This study focuses on social capital measured by trust and community happiness level. In accordance with literature, Columns 7 and 8 show that a higher level of social capital generated more happiness. Individuals who feel that they can trust other Thais people are happier than who feel they cannot trust others. Social trust leads to a feeling of safety and security, happiness, and the feeling of being part of society by giving and receiving (Coleman, 1988; Lane, 2000). However, mean trust is quite low (0.08 out of 1). This finding can be attributed to the possibility that the question in the survey asked about trust in overview (trust in Thai people) rather than trust in narrow view, such as trust in living in society or the same village. Nevertheless, trust should be higher.

Community happiness is a social characteristic. The estimated model clearly shows that the level of community happiness is the most important factor that increases happiness level among all explanatory variables. Living in a happier society results in elevated happiness levels. Living in a happy atmosphere with low violence, peace, and low conflict results in high well-being. Thus, living in a trustful and happy society induces individual happiness.

The last column presents the full model with control variables, namely, gender, age, marital status, educational level, occupation, and having children. We find that married people or those who live as couples are happier than single people. Individuals who have children are significantly happier than those have no children. Retirees are happier than working or employed individuals. However, we did not find a statistically significant difference in happiness levels in terms of gender.

Table 3 Marginal Effects of 9th happiness equation

Variables	(1)	(2)	(3)	(4)
	Predicted prob.	Predicted prob.	Predicted prob.	Predicted prob.
	Happiness = 1	Happiness = 2	Happiness = 3	Happiness = 4
Attitude toward Self-Relative Income	-0.1197*** (0.0225)	-0.1127*** (0.0229)	0.1356*** (0.0270)	0.0968*** (0.0186)
Attitude toward Social-Relative Income	-0.0209 (0.0264)	-0.0196 (0.0155)	0.0237 (0.0184)	0.0168 (0.0133)
Real Relative Income	-0.0270*** (0.0110)	-0.0254*** (0.0106)	0.0306*** (0.0126)	0.0218*** (0.0090)
Self-Esteem	-0.0573*** (0.0137)	-0.0539*** (0.0136)	0.0649*** (0.0162)	0.0463*** (0.0112)
Believe in Life after Death	-0.0051* (0.0031)	-0.0048* (0.0029)	0.0058* (0.0035)	0.0041* (0.0025)



Table 3 (Cont.)

Variables	(1) Predicted prob. Happiness = 1	(2) Predicted prob. Happiness = 2	(3) Predicted prob. Happiness = 3	(4) Predicted prob. Happiness = 4
Trust	-0.0635** (0.0227)	-0.0781** (0.0352)	0.0675*** (0.0201)	-0.0741*** (0.0380)
Community Happiness Level	-0.1892** (0.0971)	-0.1780** (0.0921)	0.2143* (0.1110)	0.1529** (0.0783)
Male	-0.0125 (0.0168)	-0.0118 (0.0159)	0.0142 (0.0190)	0.0101 (0.0137)
Age	0.0003 (0.0007)	0.0003 (0.0006)	-0.0004 (0.0008)	-0.0002 (0.137)
Married or Living as Couple	0.0412** (0.0183)	0.0407** (0.0189)	-0.0464** (0.0206)	-0.0355** (0.0168)
Divorce/Widowed/Separate	0.0459 (0.0375)	0.0357 (0.0237)	-0.0510 (0.0403)	-0.0306 (0.0207)
Education Level				
Business Owner	0.0052 (0.0067)	0.0048 (0.0063)	-0.0059 (0.0076)	-0.0041 (0.0054)
Housewife/Student/ Unemployed	0.0086 (0.0218)	0.0080 (0.0202)	-0.0097 (0.0247)	-0.0069 (0.0173)
Retired and Others	-0.0310 (0.0229)	-0.0319 (0.0258)	0.0349 (0.0256)	0.0280 (0.0231)
Children	-0.0724** (0.0259)	-0.0941** (0.0442)	0.0738*** (0.0198)	0.0927*** (0.0517)
Age	-0.0639*** (0.0210)	-0.0539*** (0.0163)	0.0712*** (0.0231)	0.0466*** (0.0141)

Remarks: *, **, *** indicate the level of significance at 10%, 5%, and 1%, respectively. The standard error is in parenthesis.

In terms of marginal effects, results reveal that attitude toward self-relative income, real relative income, self-esteem, trust, and community happiness level significantly contribute to individual happiness for all categories of happiness.

The results for attitude toward self-relative income suggest that increased attitude toward self-relative income by one level lowers the probability of being in the lowest happiness category by 12%, reduces the probability of being in the second happiness category by 11%, increases the probability of being in the third happiness category by 4% and increases the probability of being in the highest happiness category by 10%.

According to real relative income, we find that a one-level increase in real relative income reduces the probability to being in the lowest happiness category by 3%, reduces the probability to being in the second happiness category by 3% and increases the probability to being in the third and fourth happiness category by 3% and 2%, respectively.

The analysis of the marginal effects of explicative variables confirms that attitude toward relative income is a more important factor for increasing happiness than real relative income for all levels of happiness. By contrast, the analysis of other factors from coefficient estimated by Ordered Logit Model (Table 2) did not significantly differ from the analysis of marginal effects. The results for other variables are the same.



Conclusion and Recommendation

This study found that the happiness of respondents extremely depends on real situation and attitude. Attitude toward self-relative income is more powerful influence of individual happiness than real relative income. Happiness is based on individual attitude or perception, wherein individuals interpret and organize sensation to produce a meaningful experience. The relationship between attitudes toward social-relative income is not clear. Self-esteem has noticeable effects on the happiness of respondents. Considering one's attitude toward relative income simultaneous with self-esteem assures that one's feeling or evaluation about oneself is a key factor that contributes to the happiness of Thai people.

The government should pay attention to the importance of real income, and promote positive self-perception, especially attitude toward one's own income and self-esteem. These concepts can be created and developed by applying Sufficiency Economy Philosophy. This philosophy was introduced by the late King Bhumibol Adulyadej as a guideline for living. Sufficiency Economy Philosophy yields several positive implications, such as decreasing the level of income aspiration, greed, comparison behavior, and envy. Even if an individual is self-reliant, his or her self-esteem level is accelerated. The goal of the Thai government is to create one's own happiness and that of society.

Real relative income significantly affects happiness level. Thus, the Thai government should prioritize resource for creating an equal society.

However, happiness also depends on other contexts, such as having children at home and being retired. Thus, the government should also focus on constructs that support the social environment and create positive social value.

This study has limitations. The survey was conducted in two provinces of Thailand due to budget and time constraints. Moreover, individual happiness level was measured through self-evaluation. Other happiness measurements can be employed to expand the survey area. Sample size should be increased and other happiness measurements should be applied to increase application in future studies.

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