

# What Really Determine Happiness of Different Groups: Some Evidences

## from A Case Study in Bangkok

Sauwalak Kittiprapas (Faculty of Economics, Rangsit University, Thailand)

Abstract: The case study aims to investigate happiness determinants of different groups of people in Bangkok, Thailand, by integrating Eastern Buddhist concept of inner happiness. The study utilizes more than 400 sample surveys for empirical tests of significant variables in happiness domains, i.e., health, education, economics (income, employment), relationship with family and friends, as well as inner happiness such as from mind development (variables by giving & helping others, desire for materials, mindfulness practice, ans stress) on life satisfaction. The results show that happiness determinants vary among different groups of people such as those classified by income levels and employment statuses as well as among those in private sector and government officials, etc. Detailed analysis of happiness determinants of people in different socio-economic statuses are highlighted in this paper.

Empirical results find that health is an important factor across most groups, while income is significant for only some groups with relatively little effect among significant variables. The findings also present the important of giving/sharing affecting happiness. The results lead to a better understanding of happiness deterinants of different groups and contribute to a new finding confirming the importance of inner happiness; such as, the role of giving and helping people affect positively to happiness, as well as the desires for materials and stress having negative relationship to happiness for some groups. These findings are consistent with happiness in Buddhism approach that people may not necessary be happier from more material consumption or acquisition for themselves, but from lower want for themselves and giving to help other people as well as lower stress from unattachment to suffering. While giving is witnessed in the better-off economic status, stress reduction is significant particularly to some lower economic status such as the lowest income group and the unemployed. Generally, health is important with high impact on happiness for most groups, while income have less impact and significant for only some groups with economic insecurity. Education and family relationship are essential to happiness of many groups.

Key words: happiness economics; Buddhist economics; well-being; happiness determinants; happiness in Buddhism

**JEL codes:** O20, O53

Sauwalak Kittiprapas, Ph.D., Assistant Professor, Faculty of Economics, Rangsit University; research areas/interests: development economics, happiness and well-being, regional economics. E-mail: skittiprapas@gmail.com, skittiprapas@rsu.ac.th.

## **1. Introduction**

It is widely acceptable that development should not rely only on economic growth, but quality of life and happiness of people. Therefore, the development concern now is moving beyond economic indicator such as Gross Domestic Product (GDP) to human well-being. The studies for better life quality such as on happiness have been increasing. Researches on happiness and well-being have been increasing popular, especially in academic journals and development forums.

What really affect happiness has been a subject of interest and has attracted researches in multidisciplines, not only economists and psychologists. Economists have questions "Does incrasing income and GDP actually create greater happiness?", particularly since Easterlin paradox (Easterline, 1974). Psychologists and sociologists are interested in what makes people happy and how to lead a happy life or building happy societies. Policy makers have been interested in what kind of public policy that can raise people happiness and reduce problems. Many development organizations need appropriate indicators for development measurement, etc. To find answer for these quries, it is necessary to start with the understanding of what determine people happiness.

There have been many works attempting to explain various factors affecting happiness. However, happiness determinants can vary in different cases/countries/cultures, while concepts and definitions of happiness in various studies and areas are also different. There have been many empirical studies on happiness economics to date, but most do not focus on happiness from inside such as mind development. As most of studies in happiness economics have done in Western countries with western economic development approach, the paper aims to shed some light on different kinds of case study conducted in Asia by integrating Eastern Buddhist approach focusing on inner happiness.

This case study attempts to investigate what really make people happy from different kinds of happiness domains as well as inner happiness. However, it has a hypothesis that human behaviours under different socio-economics circumstances can be different, and factors affecting their happiness can be different. To understand what affect people's happiness, particularly of different groups would be useful for development and policy design.

Thus, this study introduces a concept of happiness in Buddhism and conducts a survey in Bangkok, Thailand, to test factors affecting happiness at individual level, based on a concept that integrating happiness in Buddhism. The study also examines different happiness determinants of different groups to understand different behaviors and needs of people in different statuses/life conditions.

## 2. Conceptual Framework and Methodology

Happiness domains from many reseraches/studies includes components such as health, economics (income, job), education, family relationship or community/social connectedness, securities, etc. (Kittiprapas, 2009). In Easterlin and Sawangfa (2007), four main happiness domains are: income, health, job, and family life. Borooah (2006) also indicates that happiness comes from no health and income problems. As indicated In Kittiprapas (2009), two main non-economic determinants from many studies around the world are health and social relationship, while income is also important with modest role. Verme (2007) using World Value Survey indicated that perception on health perception and relative income strongly correlate with life satisfaction. This also indicates that subjective indicators/feelings of life domains much affect happiness. This may due to effects of

social comparison that makes own perception on health or relatively socioeconomic statuses are important than actual ones.

How much income or economic factors affect happiness of people seems nonlinear. Happiness studies indicate that income effects on happiness can vary, depending on income level/status that people have. For example, Kahneman and Deaton (2010) indiated that although higher income improve individual life evaluation, beyond \$75,000 in the contemporary United States higher income is neither the road to experienced happiness nor the relief of unhappiness or stress. That reflects that income is not a prime factor affecting happiness especially for the high income level much beyond basic need level.

Clark et al. (2006) show that while real income percapita keeps on rising in US. From 1973-2994, happiness has almost unchanged. Similar to Eaterlin paradox (Easterlin, 1974) showing that the increasing in income overime in USA. had not increased the level of happiness of population (though the rise in income at a certain time can make people happy). However, part of explanation for that findings relate to psychological effect of social comparison; for example, eventhough one's income keeps on increasing, but relatively the others' are increasing more; that makes the one feel relatively inferior and not happy. Thus, that type of happiness is temporary or unsustainable.

Eastern approach based on Buddhism focus more on happiness from inside (or inner happiness based on mind and wisdom) which is more sustainable than happiness from material acquisition commonly used in modern economic theories. In Buddhism, the concept of happiness includes happiness at higher level than physical level; namely, at mind level and wisdom level which can be generated from inside oneself that called as inner happiness (Kittiprapas, 2015). With this inner happiness, people can be happy from mind development; i.e., from giving or helping others (rather than taking for themselves) and can also be happy with less material wants, as well as from wisdom level (i.e., understanding natural truths and, thus, free from suffering).

Buddhist based concept of Sufficiency Economy Philosophy (SEP), initiated by King Bhulmipol of Thailand, focuses on moderation and the middle-path. With that concept, the feeling of "satisfaction with what one have" and "enoughness" can create inner happiess and avoid the unhappiness from social comparison. In fact, the lack of inner happiness from satisfaction and enoughness can lead to unhappiness from social comparison as explained in many happiness studies. With this kind of inner happiness, people can be happy with modest life style or low desires/want for material consumption. This concept is contrast with modern economic theory that implies the higher consumption leads to higher happiness (represented by utility concept).

This study, thus, aims to test some factors affecting inner happiness at mind and wisdom levels, besides those affecting happiness at physical level that often founded in general studies. Some proxies for mind and wisdom levels of happiness are selected for this case studies. For example, happiness at mind level from quality of mind are: inner happiness from giving/ sharing or helping others and less demand on materials for themselves, and at wisdom level is happiness from the mindfulness practice and less stress (less attach to suffering). Thus, this empirical study includes these variables which have indications for inner happiness which have not much been focused in other previous studies.

Other key indicators often found in many happiness studies such as income, job, health, family life, and social relation are included, Besides, subjective health or health perception from self-rate is used as a proxy for health variable.

Therefore, the overall framework of this empirical study are happiness domains that found significant in various happiness studies around the world; namely, health (by health perception), economics (by income levels and job/employment statuses), social and family relations (by good frienship and warm/loving family), but also introducing new variables to test inner happiness such as: levels of material wants, frequency of helping or giving/donation to others, levels of stress, as well as frequency of mindfulnes practice(a proxy for mind/wisdom development level). In addition, there are demographic indicators such as sex, age, education as well as occupational statuses.

These above factors are independent variables, or Xi, denoted as vectors of independent variables.

As life Satisfaction has been used as a proxy of Subjective Wellbeing or happiness of population, it is used for the dependent variable or  $\mathbf{Y}$ . The levels of overall life satisfaction are in order scales from 0 to 10.

Empirical model is as the equation

## $y = \alpha + \beta i X i + \mu$

In this case study, independent variables and proxies are:

<u>Variables</u>	Proxy indicators for Xi
Health:	perception on health or self-rate health (0-5 rates from poor to excellent ),
Income:	monthly income level (7 levels from below 10,000 baht to beyond 200,000 baht)
Work:	working status (0 unemployoed and 1 employed)
Education:	education level (4 levels from below university to PhD. degree)
Friend:	level of good friendship, (5 levels from none to a lot of good friendship)
Family:	level of warm/loving family (5 levels from none to very warm/loving family)
Stress:	level of stress (5 levels from none to very highest stress)
Giving:	frequency of donation or voluntary help others in a month (for giving/helping others), (4
	levels from none to lots of giving)
Want:	level of want in materials, (5 levels from none to highest demand for materials for life)
Mind:	frequency of mindfulness practice (or mind development from religion activities) in a month
	(5 levels from none to regularly)

and demograpical factors such as age and sex (0 female, 1 male).

With the Yanabe's formula (Yamane, 1967), the study aims for at least 400 sample size. Totally, 467 responses to questionares online during February-March of 2017 were recieved. As those proxy indicators in the questionare are also in order scales, these tests are run with ordered probit regression.

In addition to run general test for all samples, the study also disaggregate the samples into several categories in order to test significantly happiness determinants of different groups for a better understanding of behaviors of different people who are in different statuses. There are 10 tests and results, which are one for the total/general case and nine groupings for the sub-groups. Results are discussed in the following section.

## 3. Results and Discussions

In general, most people in the survey satisfy with their lives. Life satisfaction levels of this survey samples are displayed as in Figure 1, showing that the level 8 is the highest frequency and the average level is 7.2.

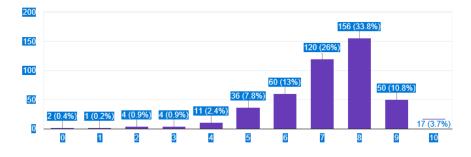


Figure 1 Distribution of Life Satisfaction Levels of the Samples

#### 3.1 Empirical Results and Discussions

Empirical results are run by STATA with firstly selected 12 indicators. However, independent variables of friends and family have high coorelated and the statistical program omitted friend. Thus, only family relationship is included in the model and, consequently, there are 11 independent variables in total. Results of factors affecting happiness from all samples is shown as in Table 1. The Table represents the relationship of happiness, represented by life satisfaction, and all independent variables. Results in later Tables are for category groupings that may drop some independent variables.

Table 1 represent a general results/findings of from all sameples and variables.

Table 1 Relationship of Happiness and Related Domain variables		
Variables	Coeficient	P >  Z
Sex	.202761	0.50
Age	0191863	0.655
Income	.0938302	0.011
Work	.040493	0.786
Health	.3479488	0.000
Education	.3907453	0.001
Family	.2749818	0.002
Mind	.978878	0.204
Giving	.2622642	0.012
Want	0677691	0.376
Stress	1936421	0.012

Table 1 Relationship of Happiness and Related Domain Variables

Results from the Table 1 shows that significant variables at 95% confidence (P > Z less than .05) are health, income, education, warm/loving family, giving or helping others, and stress (with negative relationship). It can be interpreted that, in general, happiness has positive relationship with health, education, family, helping or giving to others, and has negative relationship with stress. Among these significant variable, the most effects (with the largest coefficient) are from education and health (.39 and .35 respectively), followed by family and giving (.27 and .26 respectively) while stress has negative effect (-.19), and income has the least effect with coef. only .09. This general results indicate that other factors in life domains are more important to people happiness than income.

## 3.2 Disaggregation for Different Groups

In addition to general results, the study aims to investigate further by disaggregating people into different groups in order to investigate how happiness determinants vary among different groups (disaggregated by income

levels, employment statuses, occupations only). This is to examine whether factors affecting happiness are different among people with different socio-economics statuses. Therefore, demographic factors such as age and sex which are insignificant and not in the research question are dropped in the disaggreation.

3.2.1 Disaggregating by Income Group

The first disaggregation is by income; thus, there are 3 different income groups — the lowest income, the medium income and the highest income groups relatively. The lowest income group in this sample are those who have monthly income below 20,000 baht (approximately about US. \$600), the medium income are those having between 20,000-60,000 baht (or between \$600 and \$1,800), and the highest one are those beyond 60,000 baht (or beyond \$1,800).

a) The relatively low income

For the relatively low income group, results are shown in Table 2.

Table 2 Relationship of Happiness and Domain variables of the Lowest Income Group		
Variables	Coeficient	P >  Z
Income	.1044415	0.595
Health	.4405086	0.001
Education	.3109866	0.032
Family	.3930994	0.001
Mind	.1150255	0.321
Giving	.043879	0.738
Want	1192903	0.251
Stress	2164227	0.020
Work	.1233704	0.542

 Table 2
 Relationship of Happiness and Domain Variables of the Lowest Income Group

Table 2 shows those variables significantly affect happiness at 95% confidence. For those who have low income (those monthly income less than 20,000 Baht or about 600 US. \$), Table 2 shows that health, education, family relation positively affect their happiness while stress is negatively affect happiness. The largest size of effect (with the highest coefficient) on happiness for this group is health (.44), followed by loving family (.39), education (.31), and stress (-.22), respectively.

b) The medium income

For the medium income group, results are presented in Table 3.

Table 3	Relationship of Happiness and Domain Variables of the Medium Income Group
---------	---

Variables	Coeficient	P >  Z
Income	.2788671	0.187
Health	.3330677	0.037
Education	.8843002	0.001
Family	.2095488	0.253
Mind	.0978184	0.441
Giving	.6338468	0.001
Want	0565523	0.594
Stress	120992	0.455
Work	.0005197	0.999

Empirical results for the medium income group (those monthly income between 20,000-60,000 Baht or around 600\$-1,800\$) are shown in Table 3. It demonstrates that significant variables are health, education and giving/helping others which relate to happiness positively. Thus, the medium income group, who has more ability to help others than the low income group, can be happine by more giving (compared to the lowest income group that giving is not significant). Its effect on happiness, considering from coefficient .63 is the second highest one after education (.88), while that of health is .33.

c) The relatively high income

For the relative high income group, the results are shown in Table 4.

Variables	Coeficient	P >  Z	
Income	.1866429	0.634	
Health	.3201532	0.191	
Education	.3887531	0.314	
Family	1612455	0.396	
Mind	0238628	0.892	
Giving	1.083016	0.000	
Want	08708	0.672	
Stress	.3041248	0.145	
Work	2845471	0.610	

Table 4	Relationship	of Happiness and Domain	Variables of the Highest Income Group

The relatively highest income group of the samples in this study is those monthly income higher than 60,000 Baht (or about 1,800\$). Table 4 shows that the only significant variable for this group is giving or helping others. In addition, the coefficient of giving of the relatively high income group (1.08) is larger than those of the middle income (.63); that means it has higher effect on happiness on this group than the previous group. This may due to the fact that this group with relatively higher income than the others has higher ability to help or give others than the rest. Also, giving or help others can make them feel good (that they are good and perhaps for social recognition). Thus, they are happy with giving and has ability to do so. It is also understandable that giving is not significant for the lowest income group who may still face economic difficulties for their lives and families.

It is shown that income variable for each group is not significant when classified the samples by income levels into three groups, making income little vary within each group. The small variation of income in each group can have little effect and reflected by the insignificance of this variable. However, the effect of income to happiness of people in different economic status is more obvious when classified the total samples by employement statues as explained in the next section 2.2.

3.2.2 Disaggregating by Employment

The total samples are now classified into employed and unemployed statuses in order to see the different factors affecting happiness of both groups. For this classification, we put income variable to replace work variable (as it is already grouped into employed and unemployed) in the equation.

#### *a)* The employed

Results of the employed group is shown in Table 5.

In Table 5, the significant variables for the employed group by magnitude respectively are: health (.476), followed by education (.47), giving (.426), loving family (.36), and income (.08). Similar to the higher income

group, the employed seem to have more ability to help or give others; therefore, their happiness also correlate with giving/helping, apart from income and others. However, income has relatively less effect than other significant variables.

Variables	Coeficient	P> Z
Health	.4758619	0.000
Education	.4702898	0.007
Family	.3596262	0.001
Mind	.0327883	0.748
Giving	.4259336	0.004
Want	1474687	0.157
Stress	0472298	0.661
Income	.0829797	0.031

#### Table 5 Relationship of Happiness and Domain Variables of the Employed Group

## b) The unemployed

Results of the unemployed group is shown in Table 6.

Variables	Coeficient	P >  Z
Health	.5593809	0.037
Education	.4671556	0.116
Family	.3140314	0.175
Mind	.3781199	0.086
Giving	.1416154	0.616
Want	.0864689	0.625
Stress	5927234	0.002
Income	.2962715	0.020

#### Table 6 Relationship of Happiness and Domain Variables of the Unemployed Group

The results for the unemployed group in Table 6 shows that their happiness go along well with less stress (with coef. .59), good health (.56), and income (.296). Thus, less stress has the highest effects for the unemployed. Athough income has less size effect to happiness than other variables, income effect for the unemployed has larger positive effect than that of the employed (compared .3 vs .08). Thus, it is understandable that happiness of the unemployed relates to income more than the employed (who have salary or stable income).

Results from classification by the employed and the unemployed groups shows that income has more effect to happiness for those who may short of money like the unemployed. In comparison, income has less effect to those who has better economic status, like the employed group who also has more ability to give donation or help social works (as giving is significant to the employed but not for the unemployed). This also confirms the hypothesis that income has more effect to happiness to the lower income/economic status group than the higher income/economic status due to the diminishing marginal return of happiness to income.

As in literatures mentioned earlier, happiness may increase with income at a point in time, but once income/ GDP keep rise to reach a certain level there is little gain in happiness or unchanged. Thus, income seems to have effects to happiness to the poor or developing countries rather than the rich or developed countries. A explanation for this is also due to social comparison and adaptation that getting better off economically overtime doesnot bring in happiness. Thus, with social comparison/aspiration and adaptation behavior, the rich may not feel happier with the increase in income. Although this case study is cross-section analysis, the effect of income to people happiness in different economic statuses seems to support that argument in previous studies.

3.2.3 Disaggregating by Occupations/Statuses

Occupations are grouped for comparison into four groups: from three sectors: (business, government, and students), and the rest is the unclassified group.

a) The business entrepreneurs and workers

Table 7 presents results for those in business sector.

	rrr	
Variables	Coeficient	P >  Z
Health	.3698344	0.015
Education	.6713622	0.002
Family	.1131761	0.457
Mind	.1375004	0.273
Giving	.6428505	0.001
Want	0352385	0.731
Stress	3119135	0.020
Income	.1203994	0.012

For business workers and entrepreneurs, Table 7 shows that their happiness significantly relate to education (.67), giving (.64), health (.37), less stress (.31), and income (.12). These are factors important to those working in business sector. However, income has the least effect (similar to the cases of total sample and the unemployed).

### b) Government officials

Table 8 presents results of those in the government sector.

Variables	Coeficient	P >  Z
Health	.767188	0.038
Education	1.511229	0.125
Family	.9958822	0.007
Mind	2253731	0.520
Giving	.6036767	0.074
Want	057363	0.837
Stress	5987282	0.314
Income	.3070583	0.084

Table 8	Relationship of Happiness and Domain Variables of the Government Officials
---------	--

For the government officials, Table 8 shows that their happiness more depend on loving family (.996) and health (.767). Unlike those in business sector, income is not significantly relate to their happiness. Perhaps, those who work in government sector do not consider high income as a priority, but work security and time for family and health (which are significantly important for their happiness).

## c) University students

There is also another status: univerity students. Results for students are presented in Table 9.

Variables	Coeficient	P >  Z
Health	.546051	0.003
Education	.3041321	0.073
Family	.2793949	0.065
Mind	.0793307	0.603
Giving	.0896228	0.586
Want	.0341401	0.784
Stress	1391135	0.196
Income	.1392887	0.210
Work	.1170714	0.542

Table 9 Relationship of Happiness and Domain Variables of University Students

For university students, the only significant variable is health which affect their happiness positively as much as .546 coef. As students are not much different in terms of working status and level of income, these variables do not vary much among individuals in this group and so they are not much affect their happiness.

However, there are the rest small groups such as academics, other workers, housewifes, etc., and they are grouped together as the unclassified.

#### d) The unclassified

For other occupation/statuses, they are grouped into one (combining other careers and statuses such as academics, housewifes, unclassified careers, etc.). The results for the unclassified group are shown in Table 10.

Variables	Coeficient	P >  Z
Health	.2208818	0.278
Education	.3253389	0.288
Family	.2416998	0.292
Mind	.0721832	0.674
Giving	.5009032	0.104
Want	4832331	0.007
Stress	.2484459	0.396
Income	0858455	0.479

Table 10 Relationship of Happiness and Domain Variables of Others/Unclassified Group

The empirical results in Table 10 show that the only significant variable is want with negative relationship. This means that the more they want for materials, the less they are happy, as want is the only significant variable that affect happiness negatively as much as -.483. It can be interpreted that the higher desire for materials, the more suffering they experience; and thus, their happiness declines. Thus, for this unclassified group, less desire for materials in life can lead to the increase in happiness.

This is a case showing that satisfaction with what ones have and even less want, rather than keep on wanting for more, can lead to happiness. In contrast, the higher disires for materials from outside (i.e., driven by aspiration and/or social comparison) can make one unhappy or suffering when those desires are not met. Moderation and enoughness is a way to find inner happiness in a more sustainable way, as this can solve the unsustainable happiness problem from social compartion/aspiration. Thus, inner happiness is encouraged in the concept of happiness in Buddhism to move to a more sustainable happiness path in mind and wisdom level.

## 4. Conclusion

In this study, results from overall sample shows that the most effects on happiness are from health and education, followed by loving family and giving, and less stress. People in different life condictions have different factors affecting their happiness, however. The study, then, investigates further into happiness determinants of different groups in the sample, with the hypothesis that factors affecting people happiness can vary, depending on socio-economic statuses of people.

The study found that, generally, health is a significant variable for most groups, while income seems not so important for many groups. Even income is significant (for the unemployed, the business workers, and the general case), it has the smallest effects, compared to other significant variables. However, income has more effect especially to the unemployed (who need it as they have no job and salary) than to those for all samples and the business sector. But for other groups, income is not a significant factor affecting happiness, including for those having medium and high income levels.

The results also show that those who have medium and high income who are able to give or help others are happier with more giving/sharing. Thus, for those who have enough income beyond basic need level, their happiness does not necessary gain from getting something for themselves but from giving something for others as well. The results contribute to a new concept of happiness and economics that inner happiness is important, and the increased happiness and wellbeing of people does not necessary come from more material consumption or increased income (as indicated in mainstream economics thoery). On the other hand, happiness can gain from giving to others or less acquistion.

Furthermore, for unspecific occupation group, demand for materials (or wants) is negatively affect happiness with significance. This implies that the higher wants for materials, the less happiness they experience. In other words, the less want for themselves (or selflessness) leads to higher happiness. These results also reflect the importance of inner happiness in Buddhism. Happiness may drop with higher desires; whereas, it can increase more with less wants and giving.

Stress indicator is significant negatively to happiness in the general case and for some specific groups (which are likely to have tension such as the low-income group, the unemployed, and those in business sector). Thus, stress management is important for happiness particulary those who still face difficulties in life and work. Personal ability to understand nature of suffering and unattachment can help release stress.

These case results confirm the concept of happiness in Buddhism that happiness can increase with the lower want for oneself but to give or help others more, and also low attachment to suffering (indicated by less stess). Although another indicator of inner happiness such as mindfulness practice is not significant in this case study, more investigations are needed for different cases/areas and a larger scale of study which are planned for further studies.

In sum, results from classifying people into different groups or socioeconomic statuses indicate that factors affecting happiness at different life condictions can vary. It may also implying that what determine happiness in onelifes can depend on life situation at that time. When ones still have physical suffering (i.e., from low income or unemployed), money matters. However, when one have better economic status, they can move to non-material types of happiness (or higher level of happiness); such as, happiness from mind level ( i.e., from giving/ helping others or from less wants in materials, etc.) and wisdom level (i.e., understand nature of suffering and ability to manage it) showing by less stress. After all, non-economic factors for basic life well-being such as health is

essential for most groups ..

#### References

- Borooah V. K. (2006). "What makes people happy? Some evidence from Northern Ireland", *Journal of Happiness Studies*, Vol. 7, pp. 427-465.
- Easterlin R. A. (1974). "Does economic growth improve the human lot? Some empirical evidence", in: P. A. David and M. W. Reder (Eds.), *Nations and Households in Economic Growth: Essays in Honour of Moses Abramowitz*, New York and London: Academic Press.
- Easterlin and Sawangfa (2007). "Happiness and domain satisfaction: Theory and evidence", in: International Conference on Happiness and Public Policy, Bangkok, 18-19 July.
- Kahneman and Deaton (2010). "High income improves evaluation of life but not emotional well-being", *Proceedings of the National Academy of Sciences*, Vol. 107, No. 38, pp. 16489-16493.

Kittiprapas S. et. al. (2009). Happiness: New Paradigm, Measurement, and Policy Implications, Happy Society Associates, Bangkok.

Kittiprapas S. (2015). "Inner happiness: The Key to Buddhist sustainable development", in: T. Puntarigvivat & S. Duangsomosorn (Eds.), *Buddhist Studies in Contemporary World*, The World Buddhist University, Bangkok..

Layard Richard (2005). Happiness: Lessons from a New Science, Penguin Books.

Office of the Prime Minister (2006). "Sufficiency economy based on the principles of Buddhist economics", in: Inside Thailand Review 2006 "Sufficiency Economy".

Verme P. (2007). "Happiness and freedom", in: *International Conference on Happiness and Public Policy*, Bangkok, 18-19 July. Yamane T. (1967). *Statistics: An Introductory Analysis* (2nd ed.), New York: Harper and Row.