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Determinants of Life Satisfaction in Asia

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Abstract While many studies on life satisfaction have been conducted in Western countries, there is still a dearth of such studies in Asia and other parts of the less developed world. To fill the lacuna in research, we used data from the Asia Barometer survey to examine the differentials in life satisfaction across Asian countries, and analyse the determinants of life satisfaction in the four sub-regions of Asia. We found that many other factors such as marital status, standard of living, and role of government have a greater influence than income on life satisfaction in Asia. The importance of marital status on life satisfaction in Asia can be attributed to Asian culture which places great emphasis on family values. The standard of living is probably a better measure of quality of life than income, as it takes into account non-monetary benefits such as better facilities provided by state. In low resource countries, good governance and efficient utilization of resources for the benefit of the citizens contributes to life satisfaction. However, education, gender and age are not significant determinants of life satisfaction in Asian countries. Be that as it may, education may have an indirect role as it tends to improve the job status of an individual and hence one's income and standard of living. Policies that are formulated to enhance life satisfaction should be geared towards strengthening the family institution, improving the standard of living and good governance, while pursuing socioeconomic development and increasing the country's GDP.

Keywords Asia · Life satisfaction · Well-being · Happiness · Determinants

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1 Introduction

The study of happiness and well-being is gaining keen interest among economists, sociologists, psychologists, and demographers. The study on happiness dated back as early as the time of Greek philosopher Socrates Aristotle (469 BC–399 BC) for his, "virtues guarantee a happy life eudaimonia". For a long time since then, happiness as a field of study did not receive the due attention as a useful and valid measurement metric in scholarly research. The objectivity of the measurement of happiness and wellbeing has often been challenged. Some of these critiques include: "happiness cannot be measured as it is different from one individual to another", "we cannot average individual's happiness or life satisfaction" and "happiness is subjective" (Turton 2009; Powdthavee 2010). Despite these reservations, of late more and more researchers are using scientific approaches to conduct research on happiness and wellbeing. Happiness economics study not only opens a field of research on well-being, it also enriches the study on the behavioural economics or the national well-being indicators for a better understanding on economic growth and political behaviour patterns as well as creation of a better policy (Graham 2005).

According to Wills (2009), "Subjective well-being explores the evaluations, both positive and negative, of how people experience their lives." Subjective well-being is composed of affective and cognitive aspects. The affective component is explained by happiness (Ott 2013) and the cognitive component is represented by life satisfaction (Duncan 2010; Van Hoorn et al. 2010). Happiness can be divided into affective happiness, evaluative happiness and objective happiness. Affective happiness is the happiness gained from a person's involvement and interaction with the society, evaluative happiness is experienced when the social status of a person is higher than another (Helliwell et al. 2011) while objective happiness is measured by the experienced utility or average utility over time, taking into account the mood and enjoyment of an individual (Alexandrova 2005). Objective happiness, measured by brainwave and other medical approaches, is more of a scientific research rather than social science study. As for cognitive component of subjective well-being, life satisfaction is a measure of one's overall satisfaction of his or her life. It is considered as a rational evaluation of one's well-being. Some researchers define the terms happiness, life satisfaction and subjective well-being differently, while others use these terms interchangeably (Frey 2008; Veenhoven 2007, 2012; Griffin 2007).

Happiness, life satisfaction and wellbeing as a measurement of the human condition should be viewed in the socio-economic context of the country. The level of development of a country is defined by its economic condition and growth, improvement in the standard of living of her people, poverty reduction, health improvement, educational attainment and other related conditions. With higher disposable income, individuals have the means to spend and consume material things to maximize their utility and life satisfaction. Maslow's hierarchy of needs reflects this progress aptly in his pyramid model of 5 categories of needs progressing from physiological needs,[1] safety needs,[2] love or belonging,[3] esteem[4] and self-actualization.[5] Once one level of needs hierarchy has been fulfilled, people will tend to

[1] Breathing, food, water, sex, sleep, homeostasis, excretion.

[2] Security of: body, employment, resources, morality, the family, health, property.

[3] Friendship, family, sexual intimacy.

[4] Self-esteem, confidence, achievement, respect of others, respect by others.

[5] Morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts.

crave for the next higher level of hierarchy. From the perspective of happiness study, this movement up the higher hierarchies indirectly projects the happiness, satisfaction and well-being need for the people. Much of the research on happiness has evolved around the Maslowian postulation.

Happiness has been widely studies in the developed countries in North America and Europe. One of the renowned universities which conducted extensive happiness research program is Eramus University Rotterdam in Netherland. Among the prominent researchers in this field are Veenhoven, R., Andrew E. Clark, Oswald, Graham, Di Tella, Blanchflower, Diener, Frey and Sturzer. In contrast, there is a dearth of research on subjective well-being, life satisfaction and happiness in Asia; with only a few case studies in China and other Asian countries (Smyth et al. 2010; Tsou and Liu 2001; Chen 2012; Appleton and Song 2008).

Many past studies have examined the determinants of life satisfaction, happiness or subjective well-being. These determinants include age, gender, marital status, education level, income and the perceived role of the government.

The effect of income on life satisfaction, happiness or subjective well-being has not been consistent across different studies. Many studies found that higher income has positive effect on life satisfaction or happiness, on the premise that higher income will bring happiness or subjective well-being (Frey and Stutzer 2000a, b; Ball and Chernova 2008; Appleton and Song 2008; Clark and Oswald 1994; Blanchflower and Oswald 2004; Peiro 2006; Dolan et al. 2008). The positive effect of higher income on happiness is stronger in the short term than in the long term (Hagerty and Veenhoven 2003). However, other studies found that higher income level raises happiness only to a small extent (Frey and Stutzer 2000a, b; 2002), and it may not have the same effect on different individuals (Easterlin 1995). The positive income effect on happiness and life satisfaction was also found to be stronger for the poor than for the rich. (Helliwell et al. 2011). The study by Vendrik and Woltjer (2007) found concavity of the income effect on life satisfaction in the United States, i.e. happiness increases with income, up to a certain level, but this does not appear to be the case in Europe and Japan (Binder and Coad 2011; Vendrik and Woltjer 2007). The curvilinear relationship between income and happiness can be attributed to the decrease in marginal utility of income on happiness (Easterlin 2005; Diener and Biswas-Diener 2002; Inglehart and Klingemann 1999).

Studies also found a U shaped relationship between age and happiness or life satisfaction. Middle age people tend to be less happy as compared to younger and older people (Clark and Oswald 1994; Blanchflower and Oswald 2004; Blanchflower, 2008; Peiro 2006; Dolan et al. 2008). According to Sotgiu et al. (2011), older people are happier as they survived the unhappy moments in their mid-life and were able to adapt themselves.

The gender differential on life satisfaction, happiness or subjective well-being varies from country to country, but the differentials are generally insignificant. Only a few studies have found significant gender differential in life satisfaction or subjective well-being. For example, females are happier than males in United States, but the reverse is true in Russia (Graham 2004; Dolan et al. 2008).

Married people are happier as compared to the singles and singles are happier than the separated or divorced (Clark and Oswald 1994; Peiro 2006; Dolan et al. 2008). According to Gove et al. 1983: "family function to provide private satisfaction that makes life meaningful and rewarding for adults who live in families.", and that "married people tend to have better mental and physical health as well as life satisfaction and well-being, and are less inclined to negative psychological behaviour such as suicide". Patricia Frazier et al.

(1996) explained that married people, especially men, tended to have more support from their family, and hence have a higher life satisfaction.

Past studies found that higher education increases subjective well-being, life satisfaction and happiness (Cuñado and de Gracia 2012; Chen 2012; Dolan et al. 2008). However, some studies also found that education does not automatically increase happiness but its effect is mediated through the higher opportunity created by education to earn higher income, which is an important determinant of life satisfaction, subjective well-being and happiness (Schimmel 2009). However, according to Binder and Coad (2011), the positive relation between education and subjective well-being, life satisfaction and happiness will become negative beyond certain level.

Generally, good governance will reduce inequality and increase happiness (Kim and Kim 2012; Ott 2011). There are two theories on the role of government on the individuals' quality of life. The neoclassical economics theory explains the rationale of government's intervention and its' impact on the individuals' quality of life. The failure on the part of the government to discharge its duty will adversely affect the quality of life of the citizens. Failures on the part of the government may arise due to the selfish act of those in power to fulfil their own interest, for example, lobbying, cronyism, and lack of control in monitoring the budget. The government's role is to solve the market failures such as externalities through the provision of public goods in order to improve welfare and people's quality of life and enhance their life satisfaction (Besley and Coate 1997). Public choice theory suggests that government's involvement and regulation would affect the quality of life of the citizens. Furthermore, happiness is also affected by cross country cultural differences, per capital income level, political freedom and access to public goods (Graham 2011; Lai et al. 2013).

While neoclassical economic theory predicts that government plays a positive role for individuals' quality of life, the public choice theory shows that higher government spending has an adverse effect on life satisfaction of the citizens, especially in countries with left wing median voters, and is alleviated by government effectiveness where the government has a small role (Bjørnskov et al. 2008). Democracy, federal structure, local autonomy, and the perceived free choice will increase an individual's well-being (Frey and Stutzer 2000a, b; Inglehart et al. 2008). Frey and Stutzer (2010) argued that "the role of happiness research as seeking to improve the nature of the political processes where individuals should have more opportunity of advancing what constitutes their idea of the good life, both individually and collectively".

While many studies on happiness and life satisfaction have been conducted in the west, there is a dearth of such research in less developed countries, including Asia. To fill the lacuna in research in non-Western countries, this paper focuses on life satisfaction in Asian countries, based on data from Asia Barometer survey.

The next section describes the source of data and methodology. The analysis of determinants of life satisfaction will be discussed in part three of the paper, followed by a discussion of our findings as well as comparison with those past studies in the West. The final section concludes the paper with some recommendations.

2 Data and Methodology

2.1 Data

Data for this study are taken from wave 5 of Asia Barometer survey conducted between 2005 and 2007. This study uses data from 28 countries covering 27,323 respondents

(Table 1). Regions in Asia are grouped following Asian Development Bank categorization: East Asia (5 countries), South Asia (6 countries), Central and West Asia (8 countries) and Southeast Asia (9 countries) where data are available.

2.2 Methodology

In this study, the overall life satisfaction is obtained from a series of questions on: "Please tell me how satisfied or dissatisfied you are with the following aspects of your life". This general question is commonly adopted for the studies on life satisfaction (Di Tella and MacCulloch 2001; Easterlin 2005; Diener and Biswas-Diener 2002). The Asia Barometer survey covered the following domains or aspects related to life satisfaction: housing, friendships, marriage, standard of living, household income, health, education, job, neighbours, public safety, environmental condition, social welfare system, the democratic system, family life, leisure and spiritual life. All of the aspects are measured on a 5-point scale ranging from "very dissatisfied" to "very satisfied". A reliability test was used on the sixteen domains. Reliability test based on Cronbach's Alpha is a test on the consistency between the questions which measure the correlation of the same concept or construct (Tavakol and Dennick 2011). The accepted Alpha value lies between 0.75 and 0.95. The higher value of Alpha indicates high relatedness between the questions and construct.

A regression model is used to determine the importance of the various determinants of life satisfaction in Asia. The dependent variable, life satisfaction is the composite index of the sixteen domains mentioned above and it is regressed on selected independent variables to ascertain the effects of each of the set of variables on life satisfaction of the people.

$$life\ satisfaction = \alpha + \beta_1 D_1 + \beta_2 D_2 + \beta_3 D_3 + \ldots + U \qquad \text{(Model1)}$$

Life satisfaction is a composite index created by summation of mean values of all the domains/aspects. α is the intercept, β_s are the regression coefficients of the independent variables, D_s are the dummy variables, U is an error term.

The independent variables consist of two categories: demographic (gender, age group and marital status), and socio economic variables (income group, education group, employment status, role of government index, standard of living index). The computation and explanation of the independent variables are summarised in Table 2. For categorical independent variables, dummy variables are created for the regression analysis. A particular group will be coded as 1 and the reference group as 0 (Cohen and Cohen, 1983). The reference category for each variable is marked as * in Table 2.

2.3 Diagnostic Checking

A few of the diagnostic tests were performed to check on the validity of the model. We began with the test for normality. Jarque–Bera (JB) is used to determine if the residuals of the regression are normally distributed. When JB shows the value of zero and the p value >0.05, the residuals of the regression are deemed to be normally distributed. The results of the normality test performed in all four regions have failed to achieve JB of zero value and the p value is 0.0000. This indicates that the residuals are not normally distributed. However, Central Limit Theorem (CLT) points out that the residuals can be normality distributed if the sample size is greater than 30 number of observation (Gujarati and Porter 2009). If the samples are large (with the sizes of more than 30 or 40), there should be no

Table 1 Number of countries and number of respondents from year 2005 to 2007 in Asia Barometer surveys

East Asia: (5 countries)			South Asia: (6 countries)			Central and West Asia: (8 countries)			Southeast Asia: (9 countries)		
Year	Countries	No. of respondent	Year	Countries	No. of respondent	Year	Countries	No. of respondent	Year	Countries	No. of respondent
2006	China	2000	2005	India	1,238	2005	Kazakhstan	800	2006	Singapore	1,038
2006	Hong Kong	1,000	2005	Sri Lanka	813	2005	Pakistan	1,086	2006	Vietnam	1,000
2006	Japan	1,003	2005	Bangladesh	1,008	2005	Afghanistan	874	2007	Malaysia	1,000
2006	South Korea	1,023	2005	Maldives	821	2005	Mongolia	800	2007	Indonesia	1,000
2006	Taiwan	1,006	2005	Bhutan	801	2005	Tajikistan	800	2007	Philippines	1,000
			2005	Nepal	800	2005	Turkmenistan	800	2007	Thailand	1,000
						2005	Kyrgyzstan	800	2007	Myanmar	1,000
						2005	Uzbekistan	800	2007	Cambodia	1,012
						2005			2007	Laos	1,000
Total		6,032			5,481			6,760			9,050

Table 2 Computation and explanation of variables

Variables	Explanatory notes
Demographic variables are: gender, age group, and marital status	
Gender	Male and female* Group gender: 1 if male, 0 if female
Age group	20–29*, 30–39, 40–49, 50–59, 60–69 Group age 30–39: 1 if Age 30–39, 0 otherwise Group age 40–49: 1 if Age 40–49, 0 otherwise Group age 50–59: 1 if Age 50–59, 0 otherwise Group age 60–69: 1 if Age 60–69, 0 otherwise
Marital status	Single*, married and separated Group married: 1 if married, 0 otherwise Group separated: 1 if separated, 0 otherwise
Socioeconomic variables are: education group, income group, employment status, role of government index and standard of living index	
Highest level of education completed	Low*, middle and high Middle education: 1 if middle education, 0 otherwise High education: 1 if high education, 0 otherwise
Income group	Low*, middle and high Since the countries recorded in year 2005 do not have the categorization of income group, the categorization for the countries in year 2005 is calculated Llow income : 1 if low income, 0 otherwise Middle income: 1 if middle income, 0 otherwise
Employment	Employed and unemployed * Group employment status: 1 if employed, 0 if unemployed
Role of Government index is created from *Question 32* *How well do you think the [YOUR COUNTRY'S] government is dealing with the following issues?* The issues are as follows with point 1 on "not well at all" to point 4 on "very well" (after reversing from the original point 1 on "very well" to point 4 on "not well at all") The issues covered: Economy, Political corruption, Human rights, Unemployment, Crime, The quality of public services, Increase of immigration, Ethnic conflict, Religious conflict, Environmental problems	Mean from this question is calculated and is applied as the Role of Government Index
Standard of Living Index is created from *Question 9* *How would you describe your standard of living?*	Point 1 on "low" to point 5 on "high" is obtained after reversing from the original point 1 on "high" to point 5 on "low". Mean from this question is calculated.

* Refers to reference group

major problems caused by this violation of the normality assumption and the sampling distribution is considered normal (Ghasemi and Zahediasl 2012).

Multicollinearity occurs when the two or more predictors in the multiple regression have high inter-correlation. Variance Inflation Factor (VIF) is used to check on the linear relationships among the independent variables to determine if there exists multicollinearity. High multicollinearity results in large standard error, which affects the estimation of

the coefficients. VIF ranges between 1 and 10. High VIF indicates serious multicollinearity problem. The VIFs for all the variables included in this study are less than 3, indicating there is no serious multicollinearity problem.

Homoscedasticity is a situation where constant variance of error term is obtained from Ordinary Least Squares (OLS). On the contrary, heteroscedasticity exists when the errors or disturbances do not have the same variances. The existence of heteroscedasticity will cause inefficiency in the model, but it does not cause unbiasedness or inconsistency in the predictors. The test shows that heteroscedascity exists in the model for all the four regions. Since most of the data are dummy variables, it is difficult to perform log transformation. Instead White heteroscedasticity-consistent variance was used to rectify the problem of heteroscedascity. Compared to the original model, the rectified model (shown in Table 4) showed only minor differences in standard error and t statistics, but the coefficients, adjusted R-square and significance of the determinants remained about the same. The insignificant variables are also omitted from the model and results from the regression do not deviate much from the model with the "full" model.

3 Results

3.1 Analysis of Life Satisfaction in Asia

As alluded to above, the life satisfaction index is a composite measure obtained by summing the sixteen aspects or domains of life. The Cronbach's Alpha value of 0.811 based on reliability test indicates that there is high correlation between the aspects for the construction of the index.

Table 3 shows that of the 28 countries where the surveys were conducted, the people of Maldives in South Asia have the highest life satisfaction (mean of 64.4), followed by Indonesia (64.3) and the Philippines (63.6) in Southeast Asia), Bhutan (62.8) and Sri Lanka (62.1) in South Asia. In contrast, the people in Turkmenistan, Uzbekistan and Mongolia (in Central and West Asia), Myanmar (Southeast Asia) and China (East Asia) have the lowest life satisfaction mean ranging from 47.9 to 51.2.

Many low income countries are placed in the middle of the life satisfaction ranking. Among the low income countries, Myanmar had the lowest life satisfaction while Afghanistan had the highest, and it is placed at the 10th spot out of the 28 countries. Some of the upper middle income and lower middle income countries have high level of life satisfaction, while others have low level of life satisfaction. Among high income countries, Singapore and Japan were ranked 7th and 14th in the life satisfaction while Hong Kong and Republic of Korea were ranked 18th and 23rd. The life satisfaction ranking clearly shows that high income level of the country does not necessarily translate to high life satisfaction.

People in Southeast Asia and South Asia generally have higher life satisfaction, while people in Central and West and East Asian regions have lower life satisfaction (Table 3). Political instability in Central and West Asia may have probably contributed to the low life satisfaction of people in these countries.

Within each country, large variation in life satisfaction is found in Maldives, Kazakhstan, Mongolia, Tajikistan and Kyrgyzstan (mostly from Central West Asia). On the other hand, relatively smaller variation in life satisfaction within country is found in Hong Kong, Myanmar, Taiwan, Cambodia, Laos and Nepal. The coefficient of variation (standard deviation times 100 divided by mean) ranges from about 13 in Indonesia and Cambodia to about 21 in Mongolia and Turkmenistan.

Table 3 The mean score and standard deviation of life satisfaction for 28 countries in Asia

Ranking	Income Group	Region	Country	Mean	N	SD
1	UM	SA	Maldives	64.3691	821	11.75508
2	LM	Southeast	Indonesia	64.2640	1,000	8.32392
3	LM	Southeast	Philippines	63.5940	1,000	8.63885
4	LM	SA	Bhutan	62.7990	801	9.08052
5	LM	SA	Sri Lanka	62.0529	813	8.28441
6	UM	Southeast	Thailand	62.0410	1,000	9.06131
7	H	Southeast	Singapore	62.0010	1,038	8.23855
8	UM	Southeast	Malaysia	60.7080	1,000	8.02802
9	LM	SA	India	60.6761	1,238	8.49590
10	L	CW	Afghanistan	60.2174	874	9.84302
11	L	SA	Bangladesh	57.6567	1,008	9.64304
12	L	Southeast	Cambodia	56.2372	1,012	7.28283
13	LM	Southeast	Laos	55.8360	1,000	7.35930
14	H	EA	Japan	55.5075	1,003	8.89126
15	UM	CW	Kazakhstan	55.1950	800	10.70304
16	L	SA	Nepal	53.9363	800	7.62528
17	L	CW	Kyrgyzstan	53.3588	800	10.20528
18	H	EA	Hongkong	53.2510	1,000	6.49540
19	UM	EA	Taiwan	52.9195	1,006	7.22341
20	L	CW	Tajikistan	52.5675	800	10.32794
21	LM	Southeast	Vietnam	52.3650	1,000	7.85579
22	LM	CW	Pakistan	52.1998	1,086	10.52973
23	H	EA	Korea	51.3206	1,023	8.44279
24	UM	EA	China	51.1690	2,000	9.05889
25	LM	CW	Mongolia	50.8925	800	10.60644
26	LM	CW	Uzbekistan	50.3588	800	9.53316
27	L	Southeast	Myanmar	49.4660	1,000	6.73530
28	UM	CW	Turkmenistan	47.9075	800	9.99920

Income group: low income (L), lower middle income (LM), upper middle income (UM) and high income (H) are categorized by Asian Development Bank

Region: East Asia (EA), South Asia (SA), Southeast Asia (Southeast) and Central and West Asia (CW)

3.2 Analysis of Life Satisfaction by Region

3.2.1 East Asia

The eight independent variables listed in Table 4 explain 31.1 percent of the variance in life satisfaction for the East Asian region. Most of the independent variables have significant effects on life satisfaction in this region except gender, age group 30–39, divorced, widowed or separated group and employed group. The regression model shows that standard of living is the most important determinant of life satisfaction, with a coefficient of 5.196, followed closely by marital status (with a coefficient of 4.897). In East Asia, married people have higher life satisfaction as compared to the singles.

Table 4 Regression of life satisfaction on selected variables for Asia and its' regions

Independent Variables		Regions			
		East Asia	South Asia	Central and West Asia	Southeast Asia
Constant	Coefficient	25.943*	37.722*	29.408*	35.817*
	s.e	.684	.688	.600	.476
	t	37.921	57.858	49.039	75.255
Male	Coefficient	.144	−.049	1.340*	.145
	s.e	.182	.242	.226	.162
	t	.793	−.203	5.919	.897
Age 30-39	Coefficient	−.274	.049	−1.160*	.117
	s.e	.295	.310	.319	.230
	t	−.927	.158	−3.641	.507
Age 40-49	Coefficient	.546**	.009	−1.712*	−.041
	s.e	.326	.359	.333	.253
	t	1.674	.024	−5.135	−.161
Age 50-59	Coefficient	.594**	.285	−2.177*	−.143
	s.e	.358	.421	.385	.293
	t	1.662	.677	−5.649	−.487
Age 60-69	Coefficient	2.100*	1.510*	−1.734*	.347
	s.e	.415	.609	.509	.380
	t	5.055	2.480	−3.408	.913
Middle edu	Coefficient	1.948*	2.732*	−.128	1.001*
	s.e	.230	.301	.299	.195
	t	8.466	9.083	−.428	5.127
High edu	Coefficient	3.050*	2.349*	.337	1.231*
	s.e	.262	.304	.302	.227
	t	11.647	7.733	1.117	5.414
Middle income	Coefficient	.668*	1.158*	.971*	1.304*
	s.e	.205	.260	.270	.202
	t	3.261	4.460	3.588	6.467
High income	Coefficient	1.022*	1.982*	2.283*	2.120*
	s.e	.279	.340	.270	.220
	t	3.669	5.833	8.459	9.655
Married	Coefficient	4.897*	5.077*	6.012*	5.422*
	s.e	.276	.340	.345	.224
	t	17.713	14.908	17.426	24.240
Divorced/separated/widowed	Coefficient	−.277	−1.665*	−1.327*	.004
	s.e	.492	.838	.511	.384
	t	−.563	−1.986	−2.596	.009
Employed	Coefficient	−.327	−2.265*	−.257	2.485*
	s.e	.384	.709	.393	.292
	t	−.851	−3.194	−.655	8.518

Table 4 continued

Independent Variables		Regions			
		East Asia	South Asia	Central and West Asia	Southeast Asia
Standard of living	Coefficient	5.196*	2.821*	3.993*	2.473*
	s.e	.163	.170	.139	.137
	t	31.844	16.598	28.740	18.075
Role of government	Coefficient	2.510*	3.324*	3.796*	4.832*
	s.e	.199	.176	.161	.082
	t	12.591	18.857	23.650	58.722
R^2		0.312	0.232	0.309	0.359
Adjusted R^2		0.311	0.230	0.307	0.358

Dependent variable: life satisfaction

* Denotes the *p* value significant at 5 %, ** significant at 10 %

People with higher education have higher life satisfaction compared to those with lower education. Although Life satisfaction is positively related to income, the difference in life satisfaction is much less pronounced between the middle income and higher income groups, as compared to the difference between those from lower income and middle income groups. The role of the government has a much weaker association with life satisfaction as compared to the marital status, standard of living and education. The older people (age group of 60–69) have higher life satisfaction as compared to those in the 20–29 age group, while there is no significant difference between other age groups.

3.2.2 South Asia

In South Asia, only gender and age are not significant predictors of life satisfaction, except for age those aged 60–69 years, the group that had significantly higher life satisfaction. Marital status turns out to be the most important predictor of life satisfaction: married people have higher life satisfaction as compared to singles, but those who were widowed or divorced have lower life satisfaction. The second and third most important predictors for life satisfaction in South Asia region are the role of government and standard of living. This indicates that government plays an important role in people's life satisfaction. The positive effect of income on life satisfaction is much less pronounced as compared to marital status, role of government, standard of living and education. Interestingly, although education was found to have a positive effect on life satisfaction in East Asia, people with higher education in South Asia have slightly lower life satisfaction as compared to middle education group. Employed people also have lower life satisfaction as compared to unemployed people.

3.2.3 Central and West Asia

The main predictors of life satisfaction in Central and West Asia are similar to those in South Asia, with marital status as the most important predictor, followed by standard of

living and the role of the government. Income is the fourth important predictor of life satisfaction. The higher income group have higher life satisfaction (regression coefficient of 2.283) as compared to poor income group, but the life satisfaction of the middle income group does not differ from the poor (with a regression coefficient of 0.971). The income effect in this region is different from the rest of Asia, where the differential in life satisfaction was more pronounced between the poor and middle income group rather than between the middle and higher income group. The males in this region have significant higher life satisfaction than females. This can probably be attributed to the persistent gender inequality in the region. Age is also an important determinant for life satisfaction and a U-shape relation is detected for this region. The age group with the lowest life satisfaction is the 50–59 age group. Education and employment status are not significant variables in explaining the differentials in life satisfaction.

3.2.4 Southeast Asia

In Southeast Asia, marital status is also the most important determinant of life satisfaction, followed by the role of government, employment status and standard of living. Being married has a positive effect on life satisfaction, but those who were previously married have about the same level of life satisfaction as those who had never been married. Compared to other regions, the role of the government in Southeast Asia has the strongest effect on life satisfaction. Education and income have only a small positive effect on life satisfaction. In this region, life satisfaction is not significantly related to gender and age.

3.2.5 Summary of Findings Across the Four Regions

Marital status is the most significant determinant of life satisfaction in South, Central/West and Southeast Asia and the second most significant determinant of life satisfaction in East Asia. Married people have higher life satisfaction than singles. However, the divorced, separated and widowed have significantly lower life satisfaction in South Asia and Central and West Asia. Marital dissolution has a negative impact in South Asia and Central and West region. Gender differential in life satisfaction is significant only in Central and West Asia region, where gender inequality is most pronounced. In Central and West Asia, the young and old have higher life satisfaction as compared to those in the middle age. In East Asia and South Asia, those aged 60–69 have higher life satisfaction than the younger people aged 20–29 years, but the opposite is true in Central and West Asia. Low level of education is significantly associated with lower life satisfaction except in Central and West Asia. Although income increases life satisfaction and is a significant factor in all four regions, it is of lesser importance compared to some other variables. The employment status has little or no effect on life satisfaction across the four regions. The role of government in tackling issues has a significant effect on the life satisfaction of the people in all the four regions. The effectiveness of the government has a positive impact on the life satisfaction of the people, especially in Southeast Asia (with a coefficient of 4.832), followed by Central and West Asia (3.796), South Asia (3.324) and East Asia (2.510). The standard of living is also a significant determinant of life satisfaction across four regions, with a coefficient of 5.196 (ranked 1) in East Asia, 3.993 (ranked 3) in Central and West Asia, 2.821 (ranked 3) in South Asia and 2.473 (ranked 5) in Southeast Asia.

4 Discussions

One of the key findings from our analysis of the Asia Barometer Survey is that people living in high income countries do not necessarily have higher level of life satisfaction than those living in poorer countries. The income variable is ranked 4th or 5th in importance in explaining life satisfaction in the different regions in Asia. Be that as it may, within each region in Asia, the rich generally have higher life satisfaction than the poor, and this is consistent with some past studies in Western countries (Appleton and Song 2008; Clark and Oswald 1994; Blanchflower and Oswald 2004; Peiro 2006; Dolan et al. 2008). However, income and life satisfaction in Asia does not have a curvilinear relationship, as in advanced countries which experience diminishing marginal utility of income– happiness peak at certain income level (Inglehart and Klingemann 1999). Income also does not have an inverted U-shaped relation with a maximum subsistence level (Frey and Stutzer 2002; Stevenson and Wolfers 2008). In other words, the income level in Asia has not reached its' maximum level to experience the inverted U-shaped curve. In most Asian countries, the income effect is more pronounced between poor income group and middle income group rather than middle income group and high income group. Higher income will increase the life satisfaction for the poor much more than for the middle income group, and this is true for all regions except Central and West Asia where the increment of life satisfaction is slightly higher from the shift of the middle income group to high income group. A famous poet and play writer in 15th century, Christopher Marlowe once said "Money can't buy love, but it improves your bargaining position". Income may not be the most important determinant for life satisfaction in Asia but it does matter for the poor income group where the need of money is essential for their survival. Poverty eradication is one of the main goals of Millennium Development Goals and the objective of International Conference on Population and Development, endorsed by all nations of the world. Recognizing the need to lift the citizens out of poverty, many Asian countries have embarked on poverty eradication programmes.

Our finding shows that marriage has a positive effect on life satisfaction. The married people are happier than the single in all the four regions and this is consistent with findings of past studies from the West (Clark and Oswald 1994; Peiro 2006; Dolan et al. 2008), However, it is worth pointing out that marital status is of much more important predicator of happiness in Asia than in the West, as it is ranked top in three of the regions and second in East Asia. Family is an important institution in Asia. The bonding or the unity of the family members contributes significantly to improving the life satisfaction and happiness of an individual. There is also the expectation from the family that when a person reaches a certain age, he or she has to be married, so as not to cause any stress from their family and society. However, due attention should be given to those who are separated, divorced or widowed as they fare the worst in life satisfaction. For the widowed, the grief of the loss of the partner will affect their life satisfaction. It may be hypothesized that a failed marriage experienced by a divorce will have a negative effect on life satisfaction. With the demise of universal marriage, more and more people are staying out of marriage. It will be interesting to see how the trend towards non-marriage will have an impact on life satisfaction for the future generation.

Government plays an important role as much as standard of living in determining the life satisfaction of the people in Asia. These two factors are ranked either second or third in importance in explaining life satisfaction. Good governance enhances life satisfaction especially when inequality issue is reduced (Kim and Kim 2012; Ott 2011). Good governance is the second important determinant of life satisfaction for people in Southeast

Asia and South Asia, and is the third important determinant of life satisfaction in Central and West Asia, and fourth to East Asia. In this study, life satisfaction is also found to be directly related to standard of living. Standard of living is the most important determinant for life satisfaction in East Asia, and the second most important determinant for Central and West Asia, third in South Asia, and fourth in Southeast Asia.

The U-shaped relationship between age and life satisfaction in the West (Clark and Oswald 1994; Blanchflower and Oswald 2004; Peiro 2006; Dolan et al. 2008) is insignificant in Asian regions except for Central and West Asia which displayed a same U-shape effect. When people are getting older, their life satisfaction decreases, only to improve after age 60. Older people are happier despite their reduced health and physical ability; as they survived the unhappy time in the ageing process of adaptation to older life (Sotgiu et al. 2011).

Higher education will enable individuals to get a better job to improve their life satisfaction through the higher income associated with higher paying jobs (Cuñado and de Gracia 2012). Education was found to have a direct impact on life satisfaction in Asia and this corroborates with findings from the West (Cuñado and de Gracia 2012; Chen 2012; Dolan et al. 2008). People with high level of education have the highest life satisfaction especially in East Asia, South Asia and Southeast Asia. Higher educated people tend to have higher opportunity to earn higher income and higher income is positively associated with happiness, subjective well-being and life satisfaction (Schimmel 2009). However, Binder and Coad (2011) found that too much of education could reduce subjective well-being or happiness, as in the case of South Asia. Poverty is more prevalent in South Asian countries, and it has posed as a barrier to education as families tend to be preoccupied in pursuing e their subsistence needs. However, in East Asia where a number of countries are much more developed than those in other regions, higher education increases life satisfaction.

Gender differential on life satisfaction varies from country to country, but the differentials tend to be rather insignificant in most Asian and Western countries (Graham 2004; Dolan et al. 2008). However, Central and West Asia is an exception, as the males have higher life satisfaction than the females, reflecting gender inequality in this region.

5 Conclusion

For a long time, it has been assumed a higher GDP is essential or sufficient to bring about life satisfaction. This analysis shows that there are other more significant determinants of life satisfaction in Asia. Even though the findings show that the set of factors that affect life satisfaction in Asia is similar to that in the West, the relative significance differs, partly because of the different level of development, and partly due to socio-cultural factors. A wrong or ineffective policy is a waste of resources and does not help in improving life satisfaction of the people in Asia. Asians prioritize marriage and role of government as well as standard of living in improving their life satisfaction. As the global community is planning development agenda beyond 2014 (post ICPD-International Conference on Population and Development) and MDGs (Millennium Development Goals), policies to improve the life satisfaction of the people should be designed to address pertinent aspects that are important in individual countries, apart from achieving higher GDP. Family development programmes and anti-corruption efforts should be given high priority in national development.

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