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THE ROLE OF SOCIO-DEMOGRAPHIC FACTORS ON SELF-RATED HAPPINESS: THE CASE OF MALAYSIA

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ABSTRACT

This study examines the role of socio-demographic determinants on individual's level of happiness. Primary survey data on Penang, Malaysia is used for analysis. Based on the findings, being married and Malay are associated with higher probability of feeling very happy or happy. Nevertheless, individuals who suffer from chronic diseases are more likely to have unhappy or very unhappy feelings. The rest of the factors such as income, education, age, gender, and employment status are found to have insignificant effects on happiness. Several policy implications can be recommended based on the outcomes.

Keywords: Education; Health; Happiness; Income; Malaysia; Well-being
JEL Classification Codes: D60

1. INTRODUCTION

Since earlier decades, pursuit of happiness or well-being is deemed as an end goal of every human being, and it is also a crucial objective of every society. To date, countries are particularly focus on increasing their overall productivity which could in turn lead to higher economic growth. As a result, income and the standard of living of every individual would be rising. Ironically, these would not guarantee to generate more happiness to the society. In fact, Oswald (1997) emphasised that people in general are not very interested in country's economic performance; no one would really concern about the changes in inflation rate, unemployment rate, exchange rate and so forth. In other words, people would not necessary feel happier even when a country unemployment rate or inflation rate reduced. Therefore, improving economic performance per se may not be effective in creating more happiness to the people. Instead, government should design policies that effectively contribute to more happiness.

Since happiness is of interest of every human being in the world, to date, researchers from various disciplines started to explore the determinants of happiness. As from the view of psychologists, happiness is considered as a stochastic phenomenon and it is primarily determined by genetic (Lykken and Tellegen, 1996; Lykken, 1999; Lykken and Csikszentmihalyi, 2001). On the contrary, other studies argued that an individual's happiness is not majorly affected by genetic itself, while environmental factors do have significant

impacts on happiness as well (Roysamb et al., 2003; Johnson and Krueger, 2006). In the similar vein, Norrish and Vella-Brodrick (2008) also found that the level of happiness that lies amongst the individuals can actually be augmented through appropriate measurements and interventions such as improving in physical and mental health. As a result, it is apparent that individual's happiness level is able to be changed over time.

Over the past, majority of the empirical studies on the determinants of happiness have been given attention to the Western countries (e.g. Clark and Oswald, 1994; Oswald, 1997; Theodossiou, 1998; Winkelmann and Winkelmann, 1998; Gredtham and Johannesson, 2001; Subramanian et al., 2005), while only a trace amount of studies are on Asia with the exception of Japan (e.g. Tokuda and Inoguchi, 2008; Oshio and Kobayashi, 2010). To the best of our knowledge, there are still absences of in-depth studies on happiness in Asia's developing countries such as Malaysia. This study attempts to fill this void. As shown in the recent report, the commit suicide cases in Malaysia have reached a critical stage where there were approximately 60 people committed suicide per month in year 2010 (Wong, 2011). In fact, the main factor that causes people to commit suicide is majorly due to their extreme unhappy feeling (Koivumaa-Honkanen et al., 2003; Bray and Gunnell, 2006). Therefore, it is utmost important to empirically analyse the role of socio-demographic characteristics on the level of happiness amongst the Malaysian. Unlike other researches, this study takes into account the influences of different ethnic backgrounds, provided that Malaysia is well-known for its multi-ethnic population (Malays, Chinese, Indians and others). Obviously, the findings of this study are important for policymakers to promote happier society, and subsequently reduce the rate of suicide in Malaysia.

The balance of this paper is structured as follows. Section 2 summarises the findings from past empirical literatures. The method that used for this research is described in Section 3. Section 4 and Section 5 are mainly focus on discussing the empirical results and concluding remarks, respectively.

2. REVIEW OF EMPIRICAL LITERATURE

Review to the literatures, the effect of income on happiness was mix. Some previous empirical studies found the positive association between income and happiness (e.g. Oswald, 1997; Gredtham and Johannesson, 2001; Subramanian et al., 2005; Tokuda and Inoguchi, 2008). Whereas, Kahneman et al. (2006) emphasised that moderate increase in individual income could lead to more happiness but when it reached a certain high income level, those positive relationships would be disappeared. Likewise, Clark and Oswald (1994), Theodossiou (1998) and Winkelmann and Winkelmann (1998) pointed out that there was no significant relationship between income and happiness. Hence, they support the conventional wisdom of "money cannot buy happiness".

In terms of educational attainment, the positive relationship between years of education and happiness were often found in the previous studies (e.g. Oswald, 1997; Gredtham and Johannesson, 2001; Subramanian et al., 2005; Tokuda and Inoguchi, 2008). However, as demonstrated in the studies of Campbell et al. (1976) and Diener et al. (1993), when the effect of income variable was controlled, the relationship between education and social well-being became insignificant. This was due to the effect on social well-being was attributed to income but not education alone. Similarly, Clark and Oswald (1996), Theodossiou (1998) and Helliwell (2003) also found insignificant relationship between education and happiness.

As pointed out in the study of Tokuda and Inoguchi (2008), marital status was one of the main contributors to happiness. Being married would often feel happier than the single,

divorcé and widow(er) (Morawetz et al., 1977; Oswald, 1997; Gredtham and Johannesson, 2001; Clark and Oswald, 2002; Subramanian et al., 2005). This outcome was further supported by Peiro (2006) which analysed the effect of socio-economic conditions on happiness in 15 different countries (i.e. Argentina, Australia, Chile, China, Finland, Spain and so forth).

Apart from that, individual's health status was traced to have a positive effect on happiness. Most of the previous studies indicated that individuals who perceived their own health as poor had a higher likelihood to feel unhappy (Clark and Oswald, 1994; Theodossiou, 1998; Winkelmann and Winkelmann, 1998; Gredtham and Johannesson, 2001; Subramanian et al., 2005; Tokuda and Inoguchi, 2008). This was due to poor health posed as interference to one's goals and thus causing an adverse impact on happiness. However, Diener et al. (1993) argued that the correlation between poor health and happiness was very weak, given the explanation that individuals could adapt to their changes of health status overtime.

Next, the influence of age on happiness was found to be ambiguous. Diener et al. (1993) pointed out that age was not significant in determining happiness because of individuals would adjust their aims and goals as they grew older. On the other hand, Gredtham and Johannesson (2001) claimed that the relationship between age and happiness was in U-shape, where individuals tended to feel happier in their very young age (18-34 years) and old age (≥ 60 years) compared to when they were in their mid-age (35-64 years). This U-shape relationship was further supported by Frey and Stutzer (2002) and Peiro (2006). In contrast to the U-shape relationship, Tokuda and Inoguchi (2008) found that the age and happiness is negative relationship, implying that older individuals were more likely to be in the stage of unhappy compared to their younger counterparts.

In the study of happiness, gender was deemed as a minor determinant (Easterlin, 2003). Based on Gredtham and Johannesson (2001), Frey and Stutzer (2002) and Subramanian et al. (2005), being males were associated with lower likelihood of feeling happier than the females. This was owing to females were more willing to share their emotions with others compared to males (Nolen-Hoeksema and Rusting, 1999). In contrast, studies such as Clark and Oswald (1994) and Theodossiou (1998) found the opposite result where males were more likely to feel happier relative to females. In this respect, Umberson et al. (1996) added that females tend to face more distress on social relationships that can lead to unhappy feeling, thus they are less happy compared to males.

In accordance to the findings of Clark and Oswald (1994), Gerlach and Stephan (1996), Winkelmann and Winkelmann (1998) and Gredtham and Johannesson (2001), being unemployed was highly correlated with unhappiness. However, Peiro (2006) found no significant influence of employment status on happiness.

3. DATA AND METHODOLOGY

3.1 Data source

Survey data collected in the present study were based on convenient sampling survey method. The survey was conducted in the areas of Penang Island in Malaysia (including mainland) such as shopping malls, offices, cafes and residential areas. Questionnaires were distributed according to Penang's ethnic and gender structure, and the period of collecting data was from August to October, 2010. Bi-language questionnaires (*Bahasa Malaysia* and English) were distributed to the respondents to facilitate surveys with different ethnic background. The reason Penang was chosen to be studied is mainly because of Penang was recorded as a state in Malaysia that had very high suicide rate (138 cases) over the past three years (2007-2009) (Bhupinder et al., 2010).

In the survey, respondents were asked “In general, how happy do you feel these days?” Provided the choices of “Very happy”, “Happy”, “Unhappy” and “Very unhappy”. Respondents were then asked to self-complete the questionnaires along with some explanations given by the interviewers. Details of respondents’ socio-demographic backgrounds were recorded during the data collection. A total of 415 respondents were surveyed, but after rejected those with incomplete information, the remaining 398 (96%) were retained for final analysis via Stata statistical software.

3.2 *Econometric specification*

For dependent variable, the choices which provided for self-rated happiness are broken down to generate a binary outcome as 1 for very happy or happy and 0 for unhappy or very unhappy. According to Greene (2007), logit model fits the study, given that it can be used to predict the probabilities that lie in the unit interval. In general, the logit model is written as follow:

$$\text{Log} \left[\frac{P}{(1 - P)} \right] = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n + \varepsilon \quad (1)$$

where, P = the probability that a respondent feels very happy or happy; X = independent variables which are expected to affect the happiness; β = coefficients for the independent variables; ε = error term; and $P/(1 - P)$ = the odds that the respondent feels very happy or happy.

3.3 *Definition of variables*

Given the lack of in-depth empirical studies on happiness in Malaysia, thus the selected independent variables for the current model are based on the previous studies done in other countries. Details of the variables are summarised in Table 1. Respondent’s age is included as continuous variable in the current model. For gender, 1 represents male and 0 represents female. Ethnicity is entered into the regression as Malay, Chinese and Indian/others (reference group).¹ Marital status is taken into account as 1 for individual who is married and 0 for individual who is single, divorcé or widow(er). Respondent who is currently being employed is referred as 1, whereas being student, homemaker or retiree is denoted as 0. Monthly individual income is divided into four categories: low [\leq RM 999 (\leq USD 322.26) (base group)], lower-middle [RM 1000 – RM 2999 (USD 322.58 – USD 967.42)], upper-middle [RM 3000 – RM 5999 (USD 967.74 – USD 1935.16)] and high [\geq RM 6000 (\geq USD 1935.48)].² Respondent’s education background is inserted based on his/her highest academic qualification such as primary (\leq 6 years of study) (reference group), some high school (7 – 10 years of study), completed high school (11 years of study), college (12 – 13 years of study) and bachelor degree (\geq 14 years of study). Owing to respondent’s self-rated health status may not be that reliable, thus presence of chronic disease is used as a proxy for examining respondent’s health background, where 1 indicates those who self-reported has chronic disease (e.g. hypertension, diabetes, stroke, cancer, kidney disease, etc.) and 0 otherwise.

¹ Ethnic Indians and those of other ethnicities are combined to represent the ethnic minority in Malaysia, given their minority status in Malaysia.

² USD 1.00 = RM 3.10 (approximately as of 24th September 2010)

Table 1: Definition of variables in the statistical model

| Variable name | Definition |
|-------------------------------|---|
| <i>Dependent variable:</i> | |
| Happiness | Being very happy or happy (1 = yes, 0 = no) |
| <i>Independent variables:</i> | |
| Age | Age in years |
| Male | Being male (1 = yes, 0 = no) |
| Malay | Being Malay (1 = yes, 0 = no) |
| Chinese | Being Chinese (1 = yes, 0 = no) |
| Indian/others* | Being Indian/other (1 = yes, 0 = no) |
| Married | Being married (1 = yes, 0 = no) |
| Employed | Being employed (1 = yes, 0 =no) |
| Low* | Monthly individual income: RM 0 – RM 999 (1 = yes, 0 = no) |
| Lower-middle | Monthly individual income: RM 1000 – RM 2999 (1 = yes, 0 = no) |
| Upper-middle | Monthly individual income: RM 3000 – RM 5999 (1 = yes, 0 = no) |
| High | Monthly individual income: RM 6000 and above (1 = yes, 0 = no) |
| Primary* | Primary school or less as highest level of education (1 = yes, 0 = no) |
| Some-high | Some high school as highest level of education (1 = yes, 0 = no) |
| High-school | Completed high school as highest level of education (1 = yes, 0 = no) |
| College | Some college as highest level of education (1 = yes, 0 = no) |
| Bachelor | Bachelor degree or higher as highest level of education (1 = yes, 0 = no) |
| Chronic | Presence of chronic disease (1 = yes, 0 = no) |

Note: * refers to reference group

4. EMPIRICAL RESULTS

4.1 *Characteristic of survey respondents*

Descriptive statistic of variables in the statistical model is demonstrated in Table 2. Of the total sample, 366 (92%) respondents self-reported that they feel very happy or happy, and only 32 (8%) respondents feel unhappy or very unhappy.

After the ethnicities breakdown from the total sample, there are 38%, 41% and 21% of Malays, Chinese and Indians/others respondents, respectively. Statistically, this ethnic composition closely follows the ethnic structure in the state of Penang, Malaysia, given that the state comprises of 41.6% Malays, 40.9% Chinese and 17.5% Indians/others (SERI, 2010). Likewise, 44% of respondents in the sample are males compared to 49.3% of male population in the state. Obviously, the sample of the present study is able to represent the population of Penang.

The average age of the respondents is around 36 years old. In terms of marital status and employment status, half of the respondents (50%) are married, and 78% are being employed. Approximately 18% of the respondents reported have chronic disease. As for monthly individual income, there are 32% of respondents in the low income group, 45% in

lower-middle, 19% in upper-middle and only trace amount (4%) are in high income cohort. For educational attainment, 5% of the overall respondents who reported primary school or less as their highest academic qualification, while 9% have some high school qualification, 22% have completed high school, 18% have attended colleges, and 47% have at least bachelor degree.

Table 2: Descriptive statistic of variables in the statistical models

| Variables | Those who feel very happy/happy (n1 = 366) | | Those who feel unhappy/very unhappy (n2 = 32) | | Total sample (N = 398) | |
|---------------|---|-----------|--|-----------|---------------------------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| Age | 36.63 | 13.52 | 35.78 | 14.58 | 36.56 | 13.59 |
| Male | 0.44 | 0.50 | 0.47 | 0.51 | 0.44 | 0.50 |
| Malay | 0.39 | 0.49 | 0.25 | 0.44 | 0.38 | 0.49 |
| Chinese | 0.40 | 0.49 | 0.47 | 0.51 | 0.41 | 0.49 |
| Indian/others | 0.20 | 0.40 | 0.28 | 0.46 | 0.21 | 0.41 |
| Married | 0.51 | 0.50 | 0.34 | 0.48 | 0.50 | 0.50 |
| Employed | 0.78 | 0.42 | 0.78 | 0.42 | 0.78 | 0.42 |
| Low | 0.32 | 0.47 | 0.34 | 0.48 | 0.32 | 0.47 |
| Lower-middle | 0.45 | 0.50 | 0.41 | 0.50 | 0.45 | 0.50 |
| Upper-middle | 0.19 | 0.39 | 0.19 | 0.40 | 0.19 | 0.39 |
| High | 0.04 | 0.20 | 0.06 | 0.25 | 0.04 | 0.20 |
| Primary | 0.05 | 0.22 | 0.03 | 0.18 | 0.05 | 0.21 |
| Some-high | 0.09 | 0.29 | 0.06 | 0.25 | 0.09 | 0.28 |
| High-school | 0.21 | 0.41 | 0.28 | 0.46 | 0.22 | 0.41 |
| College | 0.18 | 0.38 | 0.13 | 0.34 | 0.18 | 0.38 |
| Bachelor | 0.47 | 0.50 | 0.50 | 0.51 | 0.47 | 0.50 |
| Chronic | 0.17 | 0.37 | 0.28 | 0.46 | 0.18 | 0.38 |

4.2 Marginal effects of variables

The results for logit analysis of happiness are presented in Table 3. The estimated coefficients (β) and standard errors of the regression are listed in the first and second column, respectively. Third column indicates the Z-statistic, and followed by the odds ratio of each of the independent variables in fourth column. The marginal effect on changes of the probability of rating very happy or happy is demonstrated in fifth column. To facilitate better understanding on the estimation results, this study focuses on marginal effects instead of the estimated logit coefficients because it has no direct interpretations.

Out of the included socio-demographic explanatory variables, only ethnicity (Malays), married and self-reported chronic disease are statistically significance in explaining happiness. In other words, most explanatory variables are not significant determinants for happiness. The result corroborates with Clark and Oswald (1994), Theodossiou (1998) and Winkelmann and Winkelmann (1998), and suggests that individuals' monthly incomes are not statistically

significant in affecting happiness. This follows the conventional wisdom of money cannot buy happiness. Hence, being rich would not necessary feel happier than the poor, vice versa.

Table 3: The results for logit analysis of happiness

| Variables | Estimated Coefficient (β) | Std. Err. | Z-statistics | Odds Ratio | Marginal effect |
|--------------|-----------------------------------|-----------|--------------|------------|-----------------|
| Cons | 1.8829 | 1.7414 | 1.0800 | – | – |
| Age | 0.0119 | 0.0219 | 0.5400 | 1.012013 | 0.0007 |
| Male | 0.0668 | 0.4048 | 0.1600 | 1.069056 | 0.0041 |
| Malay | 1.0616 | 0.5581 | 1.9000* | 2.890984 | 0.0608 |
| Chinese | 0.2781 | 0.4775 | 0.5800 | 1.320650 | 0.0169 |
| Married | 0.8772 | 0.4647 | 1.8900* | 2.404109 | 0.0555 |
| Employed | –0.2657 | 0.7983 | –0.3300 | 0.766635 | –0.0155 |
| Lower-middle | 0.3655 | 0.6889 | 0.5300 | 1.441272 | 0.0224 |
| Upper-middle | –0.0298 | 0.8487 | –0.0400 | 0.970677 | –0.0019 |
| High | –0.5439 | 1.2253 | –0.4400 | 0.580456 | –0.0420 |
| Some-high | –0.3616 | 1.3436 | –0.2700 | 0.696574 | –0.0256 |
| High-school | –0.9994 | 1.1834 | –0.8400 | 0.368084 | –0.0807 |
| College | –0.1338 | 1.3063 | –0.1000 | 0.874751 | –0.0086 |
| Bachelor | –0.3483 | 1.2851 | –0.2700 | 0.705905 | –0.0219 |
| Chronic | –0.8808 | 0.4761 | –1.8500* | 0.414460 | –0.0709 |

Note: Asterisks *** indicate significance at the 1% level, ** at the 5% level, and * at the 10% level.

For education, study found that there is no significant relationship between individuals' academic background and their level of happiness. Such outcome is consistent with the findings of Clark and Oswald (1996), Theodossiou (1998) and Helliwell (2003) where education does not influence happiness. Two plausible explanations are discussed. First, highly educated individuals tend to face more stresses in works because higher expectations are on them. As a result, higher education level does not necessary lead to more happiness. Second, education and income are complementary because higher educated individuals tend to have higher income. Therefore, it is reasonable to obtain insignificant effect of education on happiness since the income variable is held constant.

Our empirical results indicate that individuals who are married have 5.55% higher probability of perceiving themselves to be very happy or happy compared to their unmarried counterparts. This is in line with the previous findings that married individuals tend to have happier feeling than the singles (Gredtham and Johannesson, 2001; Clark and Oswald, 2002; Subramanian et al., 2005; Peiro, 2006). It is reasoned that individuals who are married often receive social and economic supports from their spouses (Diener et al., 1993). Therefore, being married brings more happiness.

In terms of individual's health background, self-reported chronic disease is found negatively affect happiness. Holding other factors constant, individuals who have chronic disease are 7.09% less likely to rate themselves very happy or happy compared to those who are from healthy background. This effect is somewhat collaborates with the findings of

Gredtham and Johannesson (2001), Subramanian et al. (2005) and Tokuda and Inoguchi (2008) that individuals who rate their health as poor are prone to have unhappy feelings.

Out of three ethnic backgrounds, Malays are found to have 6.08% higher propensity of perceiving themselves to be very happy or happy compared to the Indians/others. One possible explanation for this outcome is Malays are enjoying ethnic majority status in Malaysia that could augment their well-being. The result is fairly similar to the finding of Subramanian et al. (2005) which shows that ethnic majority tend to have happier feeling than the minority.

Surprisingly, the result shows no significant relationship between employment status and happiness. This is fairly consistent with the study of Peiro (2006), and concludes that there are no differences in the likelihood of being very happy or happy between the employed and unemployed. With regard to age, the result shows no significant relationship with happiness. This is in agreement with the finding of Diener et al. (1993) and suggests that individuals would adapt to their changes of life as they grow older. Hence, it is apparent that increase of age will not cause any significant impacts on happiness. Lastly, the remaining least important variable, gender is traced to have no statistically significant correlation with happiness. This finding concludes that there is no different perception on happiness between males and females.

5. CONCLUDING REMARKS

The study reveals that happiness is not affected by income and education. Others socio-demographic factors such as employment status, age and gender also found to have no significant effect on the level of happiness. While individual's health background, ethnic background and marital status do show significant impacts on happiness.

There are several implications from the results. First, given that more money does not bring more happiness, government is recommended to create the policies that can directly improve individual's happiness instead of impose heavy subsidisation for individuals' cost of living. For instance, government can plan to officialise more public holidays for the labours, so that people can have more time to enjoy leisure activities, hence increase the level of happiness.

Second, high education level does not associate with more happiness. As such, programmes that focus on generating better education system alone may not be very efficient in bringing more happiness to the community. Successful plans shall not ignore the methods of reducing the stresses of those highly educated individuals, provided the fact that higher educated individuals are prone to suffer from job stresses.

Third, it is reasoning that policymakers to provide more social supports to the community via organising more social activities such as sports and recreational programmes that can build friendship networks and increase community well-being. This implication is based on the current finding that individuals who receive more social support (e.g. married individuals) are more inclined to have happier feeling than those who do not.

Fourth, it is apparent that health is one of the crucial determining factors for happiness. Hence, government is urged to encourage and motivate people to engage in healthy lifestyle such as exercise regularly and avoid drinking and smoking behaviour. For instance, government can think of creating more health awareness programmes to the community through language-based media (e.g. newspapers, magazines, Television programmes and radio channels). In addition, government should also encourage people to undergo medical examination via highlighting its importance and benefits because diseases are always better to be prevented than to be cured.

Finally, as mentioned in the study, one of the possible reasons that the ethnic majority (Malays) are having happier feeling than the minorities (Indians/others) is the unequal privilege matters. Given such incidences, government should consider to reform the benefits that provided to the community where all the races are supposed to have equal privileges.

Several limitations are noted in the present study due to budget and time constraints, first, sample size that employed for analysis is somewhat limited, thus may not be able to represent the country as a whole. Second, individual's lifestyle behavioural factors such as smokes, drinks and physical exercise are excluded in the model. It is therefore, suggested future researches should have larger sample size collected from various regions along with taking into account the influences of individual's lifestyle characteristics.

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