*Chulalongkorn Journal of Economics 20(3),* December 2008: 183-200

# Determinants of Happiness and Academic Performance of Economics Students

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## Abstract

In this paper, using sample of economics students at Chulalongkorn University, we study the following questions: (i) what are the determinants of happiness and academic performance of these students? (ii) is there any relationship between happiness and academic performance (measured by grade)? We find that the determinants of happiness and grades of different student groups vary. The variables that significantly affect happiness in most sample groups are income, age, academic year and romantic relationship. More income and higher academic years increase happiness. However, an increase in age and more romantic relationship decrease happiness. In addition, we find that the variables that significantly affect grades of students are income and IQ. As expected, IQ positively affects grades. However, high income is bad for grades. Surprisingly, we find that optimism negatively affects grades in some sample groups. This result is opposite to the results reported in Seligman (1990).

**Keywords:** Happiness, Academic Performance, Optimism

## 1. Introduction

Standard economic models start with a well-defined utility function. Economists have long assumed that they know what brings utility and happiness. However, recent happiness research challenges this assumption and shows that there is a lot we do not know about happiness. The happiness research gives surprising insight for economists and policy makers, and contrasts conventional beliefs. For example, happiness studies show that money is not as important to happiness as we thought it was; richest countries are not the happiest countries and some poor countries such as Bhutan are very happy.

In Thailand, few studies on happiness have been done. These happiness studies mainly focus on happiness in the general population. In this paper, we study happiness determinants using samples of economics students from Chulalongkorn University. The potential determinants include standard social and economic variables, grades (as a measurement of academic performance), and cognitive skills such as IQ and optimism. To our knowledge, this is the first paper that studies the relationship of happiness and cognitive skills in Thailand. Moreover, we also study the determinants of academic performance. We investigate the relationship of academic performance (measured by grade point average (GPA)) and happiness. This basic understanding will be helpful in designing education policy.

The organization of this paper is as follows. Section 2 discusses the basic methodology. In Section 3, we discuss the description of data collection and related literature. The estimation results are shown and interpreted in section 4. The last section concludes.

## 2. Methodology

As a common practice in happiness studies, the following regression models are employed in order to find the determinants of happiness and grade of each student:

$$\text{happiness}_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \ldots + \beta_{m-1} X_{m-1i} + \beta_m \text{grade}_i + \varepsilon_i \quad (1)$$

$$\text{grade}_i = \gamma_0 + \gamma_1 X_{1i} + \gamma_2 X_{2i} + \gamma_3 X_{3i} + \gamma_4 X_{4i} + \ldots + \gamma_{k-1} X_{k-1i} + \gamma_k \text{happiness} + \omega_i \quad (2)$$

where $\text{happiness}_i$ is the happiness level of student *i*. $\text{Grade}_i$ is the GPA of student *i*. Both happiness and grade are treated as continuous variables. The variable $X_i$'s are potential determinants for happiness and grade of sample *i*. The details of variable $X_i$'s are in the next section. The terms $\varepsilon_i$ and $\omega_i$ are error terms.

# 3. Data

## 3.1 Sample

Our data was collected using questionnaire surveys.[3,4] We collected data using questionnaire surveys of 100 undergraduate economic students at Chulalongkorn University. The survey was conducted during September to November in 2008. The survey includes 50 observations from the Thai program and 50 others from a international program. The number of the total undergraduate economic students is about 1100. Our sample covers about 10 percent of the entire population. On average, a student took 20 to 40 minutes to complete a questionnaire. The questionnaire is quite complicated, especially for the IQ test. We exclude first year students from our sample because first year students do not yet have a GPA respectively. Figures 1 and 2 show the distribution of gender and academic years in our sample.

**Figure 1** Gender

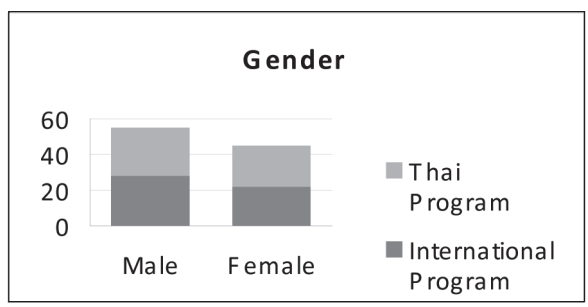
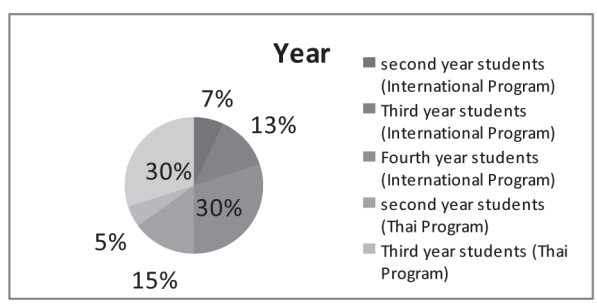



**Figure 2** Year




[3] Although collecting data using questionnaires and surveys is a standard practice in such research, this method admits a well-know problem, which t is subjectivity of the answers.

[4] Readers who are interested in viewing the questionnaires in details may request them from the corresponding author(s).

**Table 1** Average Students' Life Satisfaction (Happiness)

| Category | # | Mean | Std. Dev |
|---|---|---|---|
| International program | 50 | 3.98 | .59 |
| Thai program | 50 | 3.81 | .54 |
| Male | 55 | 3.86 | .60 |
| Female | 45 | 3.94 | .53 |
| All | 100 | 3.89 | .57 |

We designed questionnaires in order to collect the data that existing studies or theories show that might affect the happiness and grade of each student in addition to basic personal information such as age, gender and program (Thai/international). The data collected can be classified in the following categories: happiness, money, family background, grades and academic preference, social factors and cognitive skills.

## 3.2 Related Literature

### 3.2.1 Happiness

In this research, our main happiness variable is measured using questionnaires adopted from Students' Life Satisfaction Scale (SLSS) and Multidimensional Students' Life Satisfaction Scale (MSLSS) proposed by Huebner (1991). These scales are commonly used in education psychology research. While SLSS measures overall life satisfaction, MSLSS measures students' life satisfaction in five dimensions, which are friends, family, school, home environment, and personalization. We use the SLSS as the main proxy of happiness in this paper. Each student had to state how much he or she agrees with six given statements on a 1-6 scale.[5] The overall happiness was measured by the average score from the six questions. Happiness is sufficiently measured (there are 36 possible distinct values of the happiness level) and is treated as a continuous variable in our estimation. The average overall life satisfaction of all participants is 3.89 (out of 6). As seen from Table 1, international program students are happier than students are in the Thai program and females are happier than males.

[5] An example of statements in the survey is "my life is going well."

### 3.2.2 Money

The relationship between money and happiness has long been investigated. For example, see Blanchflower and Oswald (2000), Easterlin (1995, 2001), MacCulloch and Oswald (2001) and Frey and Stutzer (2000). Existing studies show that money does buy happiness and rich people, on average, report higher subjective well-being. However, there is a consensus that the effect of money on happiness is not as strong as commonly believed.

In this category, students are asked to report their income and expenses. In order to make the questionnaire non-intrusive and in order to protect privacy, we did not ask students to report their exact income but instead they were asked to select a monthly income range.[6] As expected, we find that students in the international program are wealthier than those in the Thai program. In order to make the regression results easy to understand and interpret, we use the median of the income range as the proxy of his/her income.[7] In addition to the income range, each student in our sample was asked to report his/her monthly spending. On average a Thai program student spends 5,244 baht a month and an international program student spends 8,502 a month.

### 3.2.3 Family Background

Since the environment can influence personality, people who grow up in different regions think and behave in different ways. We used the dummy variable hometown (0 for Bangkok and 1 for the other provinces) as an explanatory variable. The other variable in this category is the frequency of family meetings each year.

### 3.2.4 Grades, Grade Satisfaction and Academic Preference

There is a vast body of literature on happiness, performance and success in various areas of life. Lyubomirsky, et. al (2005) provides a good review and meta-study on this topic. They conclude that there exists two-way causality relationship between happiness and success. As a proxy of academic performance, we collected the grade point averages (GPA) of each student. Moreover, we also collected the level of grade satisfaction of each student by asking the following question: how happy is he/she with his/her grade on a scale of 1 to 7.

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[6] Lower than 5000 = "1", 5001-10000 = "2", 10001-15000 = "3", 15001-20000 = "4", More than 20000 = "5"

[7] Students in the international program have to pay much higher fees.

**Table 2** Cumulative Grade Point Average

| Category | # | Mean | S.D. | Min | Max |
|---|---|---|---|---|---|
| International program | 50 | 3.1058 | .5339651 | 1.97 | 3.98 |
| Thai program | 50 | 3.0408 | .3929005 | 2.2 | 3.83 |
| Male | 55 | 2.9993 | .4825851 | 1.97 | 3.98 |
| Female | 45 | 3.1638 | .4367977 | 2.44 | 3.91 |
| All | 100 | 3.0733 | .4675383 | 1.97 | 3.98 |

As shown in table 2, the average GPA is 3.07. Female students, on average, have a higher GPA than male students. Students in the International program tend to get higher GPAs than their Thai counterparts. We also listed the area of study which each student prefers. The dummy value 0 is for preferring microeconomics to macroeconomics. The dummy value 1 is for the opposite.

### 3.2.5 Other Social Factors

In this category, there are two variables: the frequency of participating in religious activities and the seriousness of romantic relationship involved.[8] 66 percent of the entire sample participates in religious activities a few times a year.

Various studies have been performed on social factors and happiness. Inglehart (1990), using a survey of 160,000 people, shows that among churchgoers, 85% reported being very satisfied with life, but this number was reduced to 77% among those who never went to church. D'Zurilla and Sheedy (1991) show that romantic relationship helps cope with the pressures. Zimmer-Gimmbeck, Siebenbruner, and Collins (2001) find that dating has some positive effects on emotional health for adolescents. On the contrary, Quatman, Sampson, Robinson, and Watson (2001) find that high school students who date more frequently have low grades.

As shown in table 3, female students take romantic relationships more seriously than males. This may due to the Thai tradition that girls should think carefully before dating someone. Moreover, fourth-year students tend to be more serious about romantic relationships. These students have become adults and think more on marriage in future.

[8] Ranking from 0 (do not have a romantic relationship) to 4 (have a serious romantic relationship).

**Table 3** Seriousness of Romantic Relationship

| | **Male** | **Female** | **4th year** | **2nd and 3rd years** | **All** |
|---|---|---|---|---|---|
| Mean | 1.92727 | 2.6 | 2.55 | 1.75 | 2.23 |

### 3.2.6 Cognitive Skills: Optimism and IQ

Seligman (1990), a founder of the positive psychology movement, found that "the optimist bounces back from defeat … The pessimist gives up and falls into depression. Because of his resilience, the optimist achieves more at work, at school, and on the playing field…" His studies show that optimists are happier and more successful than pessimists in almost every area of life.

According to Seligman (1990), there are three aspects of optimistic and pessimistic thinking. The first aspect is permanence. Pessimists believe that the causes of bad events that happen to them are permanent and the causes of good events are temporary. On the contrary, the optimists think in the opposite way. The second is pervasiveness. Optimists tend to think that bad events are specific but good events are universal. The last aspect is personalization. Pessimists internalize and blame themselves for bad events, and externalize good events. Therefore, they have low self-esteem. Optimists do the reverse and have higher self-esteem.

Following Seligman (1990), we measure optimism by asking students how they would respond in various social situations. The following is a sample question:

You and your boyfriend/girlfriend make up after a fight. You think because...

a) I forgave him/her

b) I'm usually forgiving

If the student chooses b) he/she gets one point for being optimistic on the pervasiveness aspect. On the other hand, choice a) would be worth zero points. Our sample shows that male students are more optimistic than female students are. The minimum and maximum score for optimism is 0 and 9, respectively. Most students in the sample get 4 out of 9. Male students have slightly higher averages in optimism than female students.

Another well-known cognitive skill that potentially affects happiness and grades are IQ. In order to measure the IQ of each student, the IQ test used in the questionnaire is downloaded from http://iqtest.dk. This test was designed and developed by Anders Ditlev Jensen and Mensa Danmark in 2003 and is widely utilized.

**Table 4** IQ

| Category | # Sample | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|
| International program | 50 | 114.6 | 11.94033 | 84 | 140 |
| Thai program | 50 | 110.58 | 12.99779 | 79 | 138 |
| all | 100 | 112.59 | 12.58032 | 79 | 140 |

**Figure 4** Histogram of Thai Program Students' IQ

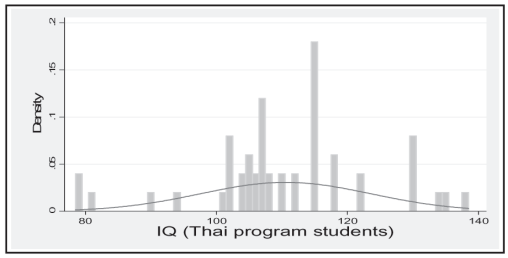
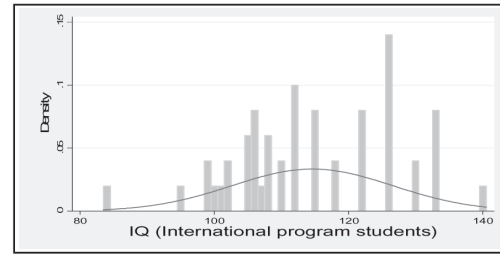



**Figure 5** Histogram of International Program Students' IQ




The strength of this IQ test is that all questions are picture based and language independent. The following is a sample question:

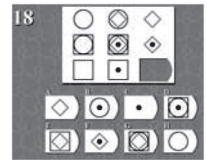



Table 4 shows that there is no large difference in the average IQ of students in the Thai and international programs. The average IQ of samples in the international program and Thai program are 114.6 and 110.58, respectively. Figures 4 and 5 show the histograms of the IQs of students in each program. The figures show that the IQ of students in the international program has a higher variance.

**Table 5** Correlation of Happiness and Satisfaction in 5 Aspects and Grade Satisfaction

| Family | Friend | School | Home Environment | Personalization | Grade Satisfaction |
|---|---|---|---|---|---|
| 0.4087 | 0.3928 | 0.1435 | 0.3969 | 0.4826 | 0.40 |

**Table 6** Correlation of Happiness and Other Explanatory Variables

| Age | Program | Income | # of Family Meeting | #IQ | Expense | Romantic |
|---|---|---|---|---|---|---|
| -0.13 | 0.14 | 0.24 | -0.18 | 0.13 | 0.16 | -0.18 |

**Table 7** Correlation of Grades and Explanatory Variables

| Happiness | Gender | Year | Preferred Area | Grade Satisfaction | Optimism | IQ |
|---|---|---|---|---|---|---|
| 0.08 | 0.18 | -0.12 | 0.20 | 0.60 | -0.18 | 0.25 |

# 4. Results

## 4.1 Correlation

We first look at the correlation of overall happiness (measured by SLSS) and satisfaction in the family, with friends, school, and the home environment and personalization aspects (measured by MSLSS) plus grade satisfaction. Personalization has the highest correlation value. Happiness in schools has the lowest correlation and seems to be the least important among other aspects of life satisfaction. Family, friends and grade satisfaction have virtually the same correlation values within the overall happiness framework. Personalization has the highest correlation and might contribute most to happiness.

Table 6 reports the correlation of happiness and the other variables collected. In this table, we only report correlation with absolute value greater than or equal to 0.13. Older students tend to be less happy. Students in the international program are happier than students in the Thai program. Students who reside in Bangkok on a permanent basis are less happy than other students. Income and expense also have a positive correlation to happiness. Interestingly, frequency of family meetings and happiness have a negative correlation.

Similarly, Table 7 shows key correlations of grades and other variables. The correlation of grades and happiness is 0.08. Female students tend to have higher grades. Lower-year students have higher grades than higher-year students. Students who prefer microeconomics have higher grades. As expected, there is a strong correlation between grades and grade satisfaction. IQ has a positive correlation with grades. Surprisingly, optimism is bad for grades. This result is opposite to Seligman (1991) who finds that optimism promotes success in most professions in the U.S., except lawyers. These different results might be due to the difference in the Thai and American culture.

## 4.2 Happiness Determinants

In this section, we report the regression results of the happiness equations of different sample groups. Our regression strategy is as follows. First, we select a set of 15 explanatory variables whose absolute correlation with happiness are highest as

a starting point.[9] Then we estimate the regression and drop the variables with the highest p-value until we get the equation in which all of the explanatory variables are significant at the 10 percent confidence level. Only the last estimation will be reported in this paper. In order to study how each factor contributes to the happiness of students in each group differently, we estimate the happiness equation using the procedure described above for the following sample groups: the entire sample, the male sample, the female sample, the Thai-program sample, the international-program sample, the sample with GPA <= 3.0 and the sample with GPA > 3.0.

The second column in Table 8 shows the estimation results using the entire sample. The $R^2$ of the regression is 0.183 which is considered normal for the happiness regression. Our explanatory variables can explain 18 percent of variation in happiness across the sample. In this group, the variables that significantly affect happiness are age, year in the program, hometown, income and romantic relationships. As students get older, they tend to be less happy. This result is consistent with the U-shaped relationship of age and happiness reported in existing studies. Students in higher years are happier than students in the lower years since they are more adapted to life in the college. As expected, income is also good for happiness. However, serious romantic relationships is bad for happiness. These college students might be too immature to have serious romantic relationship.

The third and fourth columns in Table 8 show the happiness equation for the male and sample groups. The $R^2$ for the male and female equations are 0.272 and 0.167, respectively. Men are less emotional and their happiness is more predictable than women's happiness. Male happiness can be explained by age, study program and income. Older men are less happy. Male students in the international program are happier than those in the other program. From column 4, the happiness of a female can only be explained through the seriousness of the romantic relationship. Romantic relationships significantly decrease female happiness.

[9] Initially, we use all the variables we have in the questionnaire *except* the satisfaction in the 5 main aspects from MSLSS and grade satisfaction because these variables are likely to be endogenous and create endogeneity problems.

**Table 8** Happiness Regression[a, b, c]

| Variables/ Groups | All | Male | Female | Thai | International | Grade<=3 | Grade>3 |
|---|---|---|---|---|---|---|---|
| Age | -0.180 (0.004) | -0.100 (0.119) | | -0.136 (0.059) | -0.344 (0.000) | | -0.185 (0.002) |
| Gender | | | | 0.323 (0.032) | | | |
| Program | | 0.251 (0.076) | | | | | |
| Year | 0.274 (0.006) | | | 0.397 (0.001) | 0.432 (0.004) | | 0.263 (0.023) |
| Hometown | -0.227 (0.064) | | | -0.765 (0.005) | | | |
| GPA | | | | 0.390 (0.026) | | | |
| Income | 0.139 (0.041) | 0.223 (0.020) | | 0.551 (0.000) | | 0.260 (0.016) | |
| Expense | | | | -0.002 (0.008) | | | |
| Family Meeting | | | | 0.02 (0.012) | -0.01 (0.072) | | |
| Romance | -0.074 (0.062) | | -0.178 (0.005) | -0.143 (0.001) | | | |
| Optimism | | | | 0.149 (0.006) | | 0.108 (0.062) | |
| IQ | | | | 0.009 (0.045) | | | |
| Constant | | 5.332 (0.000) | 4.404 (0.000) | 1.753 (0.227) | 10.153 (0.000) | 2.827 (0.000) | 6.887 (0.000) |
| $R^2$ | 0.183 | 0.272 | 0.167 | 0.552 | 0.247 | 0.245 | 0.093 |
| N | 100 | 55 | 45 | 50 | 50 | 47 | 53 |

*Note*: [a] Numbers in parentheses are p-values

[b] To make our results robust to heteroskedasticity, all p-values are estimated using White's heteroskedasticity robust standard error

[c] Explanatory variable description: happiness = Happiness level of the students; age = age in years; gender =gender dummy: male = 0, female = 1; program = program dummy: Thai = 0, international = 1; family meeting = frequency of family meeting in each month; hometown = hometown dummy: Bangkok = 1, other provinces = 0; romance = the level of seriousness in a romantic relationship; preferred area = dummy variable for preferred area: macroeconomics = 0, microeconomics = 1; year = academic year; income = monthly income; expense = monthly expense

Columns 6 and 7 of Table 8 show the estimation results using samples from students in the Thai and International program, respectively. The $R^2$ of the English program regression is 0.260 which is about a half of the $R^2$ from the Thai program regression. This difference in the $R^2$ indicates that students in the Thai program are quite homogenous, while students in the international program are more diverse. A reason behind this difference is that most of students in the Thai program are from standard Thai high schools while students in the International program are from various sources. Some students are from standard Thai schools while some are from International schools in Thailand. Some students got their high school education abroad. International school systems tend to promote diversity and uniqueness in each student. On the contrary, Thai education systems tend to produce a particular stereotype. For international program students, age, academic year and frequency of family meetings significantly affect their happiness. As in the entire sample regression, age negatively affects happiness but academic year has positive effect on happiness. The frequency of family meetings have negative effects on the happiness of international program students. Students in the international program tend to be more independent and prefer not to be controlled by their family or parents. For students in the Thai program, there are many variables that significantly explain happiness. Academic year, income, grades, optimism and IQ have a positive impact on happiness. Gender and hometown also matter. Female students and students from the countryside in the Thai program are happier. More expense and romantic relationships decrease happiness for Thai program students.

Columns 7 and 8 in Table 7 show the regression results using sample of students whose grades are low (<= 3.00) and high (> 3.00). For the low-grade group, only income and optimism affects their happiness. The relationship of optimism and the happiness of the low-grade group is sensible. For this group, their happiness is not due to success. However, their happiness does result in optimism. For the high-grade group, only age and academic years matter.

## 4.3 Grade Determinants

Table 9 shows the estimation results for grade regression in each sample group. We employ the same estimation strategy as above. The second column shows the estimation results using the entire sample. The only two explanatory variables that significantly affect the grades of students in the sample are: a preferred area of study and IQ. Students who prefer microeconomics to macroeconomics and students with a higher IQ have higher grades.

**Table 9** Grade Regression[a, b]

| Variables/ Groups | All | Male | Female | Thai | International | Grade<=3 | Grade>3 |
|---|---|---|---|---|---|---|---|
| Age | | | -0.117 | | | -0.090 | |
| | | | (0.058) | | | (0.072) | |
| Gender | | | | | 0.264 | 0.122 | |
| | | | | | (0.049) | (0.066) | |
| Program | | | 0.454 | | | -0.125 | 0.239 |
| | | | (0.012) | | | (0.077) | (0.003) |
| Year | | | | | | 0.120 | -0.092 |
| | | | | | | (0.099) | (0.048) |
| Preferred area | 0.203 | | | 0.280 | | | -0.120 |
| | (0.034) | | | (0.005) | | | (0.107) |
| Income | | -0.106 | -0.180 | -0.152 | -0.140 | | -0.139 |
| | | (0.028) | (0.061) | (0.078) | (0.011) | | (0.000) |
| Happiness | | | 0.223 | 0.151 | | | |
| | | | (0.062) | (0.079) | | | |
| Optimism | | | -0.076 | | | | -0.042 |
| | | | (0.081) | | | | (0.054) |
| IQ | 0.009 | | 0.010 | | 0.018 | | 0.011 |
| | (0.003) | | (0.066) | | (0.001) | | (0.000) |
| Constant | 1.963 | 3.223 | 3.974 | 2.633 | 1.315 | 4.118 | 2.794 |
| | (0.000) | (0.000) | (0.009) | (0.000) | (0.020) | (0.000) | (0.000) |
| $R^2$ | 0.102 | 0.046 | 0.386 | 0.238 | 0.192 | 0.209 | 0.384 |
| N | 100 | 55 | 45 | 50 | 50 | 44 | 56 |

See the note below Table 8

The estimation results using male and female samples are shown in Columns 3 and 4 respectively. For males and females, income negatively affects academic performance. An explanation for this negative relationship is that education might not be as important for rich students as it is for poor students. For rich students, even though they do not have good grades, they can still find jobs using their parent's social connection. On the other hand, for poor students, their performance in the job market crucially depends upon grades. Except income, no other variables can explain male grades. Though as shown in the previous table, female happiness is less predictable than male happiness, female grades are more predictable and can be significantly explained by many variables. This result is consistent with the finding that men are

more diverse in professional success than women. Moreover, females with higher IQs have higher grades. Females in the international program tend to have higher grades than those in the Thai program. Happiness is good for female grades. Optimism is bad for grades. This result contrasts with the results reported in Seligman (1990) in that optimism is beneficial to success in most areas of life. The difference between Seligman's finding and ours might be due to the culture difference. The American culture tends to promote optimism. However, the Thai culture, mainly influenced by Buddhism's philosophy called *the middle path,* promotes moderation.

Columns (5 and 6) show the estimation results using samples of students in the Thai and international program sample, respectively. For students in the Thai program, three variables: preferred area, income and happiness significantly affect grades. Preferring microeconomics to macroeconomics is good for grades. Similarly to the results discussed above, income has negative effects on grades for students in this group. For the students in the international program, in addition to the negative income effect on grades, being female and having high IQs are good for grades. Comparing the $R^2$ of the two equations in columns 5 and 6, we find the $R^2$ from the estimate using sample from students in the international program is lower. This result is consistent with the result in Table 8. It indicates that students in the international program are more diverse and less predictable.

The last two columns in this table report the results using samples from students with grades less than or equal to 3 and for grades above 3. For low grade students, age negatively affects grades. On the other hand, academic years positively affect grades. The low grade students in the international program tend to have lower grades than those in the Thai program. For high-grade students, program, academic year, preferred area, income, optimism and IQ significantly affects their grades.

### 4.3 Summary of the Estimation Results

Table 10 summarizes Tables 8 and 9. The first column lists all of the explanatory variables. The last two columns show how each variable affects happiness and grades. Positive signs and negative signs, respectively, show positive and negative effects. For example, from Table 8, age negatively affects happiness in five of the seven estimate equations. These five negative signs indicate a strong negative impact of age on happiness. Similarly, academic year and income each has four positive signs. These signs show a strong and consistent positive relationship between income, academic year and happiness. The three negative signs in the row of romantic relationship show a strong negative relationship between romantic relationship and happiness. The other variables' effect on happiness is quite weak and varies across the

sample groups. Gender, program, grades, optimism and IQ positively affect the happiness of students in some groups. Hometown and expense negatively affects the happiness of students in some groups. The frequency of family meetings may have positive or negative effects on happiness depending on the sample groups. The last column of this table summarizes the effects of each explanatory variable on grades. Income and IQ have negative and positive effects on grades, respectively. The other variables have some positive or negative effects on happiness on some sample groups.

**Table 10** Summary of Results

| **Variables** | **Effect on Happiness** | **Effect on Grade** |
|---|---|---|
| Age | – – – – – | – – |
| Gender (Male = 0, Female = 1) | + | + + |
| Program (Thai = 0, International = 1) | + | + – + |
| Academic Year | + + + + | + – |
| Preferred Area (0 = Macro, 1 = Micro) | | + + – |
| Hometown (Bangkok = 1, Other Provinces = 0) | – – | |
| Grade | + | |
| Income | + + + + | – – – – – |
| Expense | – | |
| Happiness | | ++ |
| Frequency of Family Meeting | + – | |
| Romantic Relationship | – – – | |
| Optimism | + + | – – |
| IQ | + | + + + + |

We are now ready to conclude the relationship between happiness and academic performance. From Table 10, there are three positive signs in the happiness and grade rows. The three positive signs indicate that from all 14 estimation equations in Tables 8 and 9, only three equations show a positive, significant relationship between grades and happiness. For the other 11 equations, the relationship between grades and happiness is not found. In other words, the relationship of happiness and academic performance may not exist, or may be very weak.

## 5. Conclusion

This study use samples of Economics students at Chulalongkorn University to answer the following questions: (i) what are the determinants of happiness and academic performance of these students? (ii) is there any relationship between happiness and academic performance (measured by grade)?[10] We find that the determinants of happiness and grades of different student groups vary. The variables that significantly affect happiness in most sample groups are income, age, academic year and romantic relationships. More income and higher academic years increase happiness. However, an increase in age and more romantic relationship decrease happiness. In addition, we find that the variables that significantly affect grades of students are income and IQ. As expected, IQ positively affects grades; however, high income is negative for grades. This may indicate that rich students are not concerned with grades when compared to their poor counterparts. Surprisingly, we find that optimism negatively affects grades in some sample groups, which is opposite to the results reported in Seligman (1990).

Among all 14 equations estimated, only three equations report a significant relationship between grades and happiness. Therefore, we conclude that there may be either a weak positive relationship or no relationship between happiness and academic performance.

[10] Given our specific sample groups, readers should be careful in applying our conclusion to the general population.

## References

Berger, J.B. (1997). "Students' Sense of Community in Residence Halls, Social Integration, and First-year Persistence," *Journal of College Student Development,* 38, 441-452.

Blanchflower, D. G., & Oswald, A.J. (2000). "The rising well-being of the young." In: Blanchflower, D.G., Freeman, R.B. (Eds.), *Youth Employment and Joblessness in Advanced Countries,* University of Chicago Press and NBER.

Blanchflower, D.G., & Oswald, A.J. (2004). "Well-being overtime in Britain and the USA," *Journal of Public Economics,* 88, 1359-1386.

Campbell, L.A. (2006). *"The Effects of parents' Wealth and Child Achievement in Mathematics and Reading."* Paper presented at the annual meeting of the American Sociological Association, Montreal Convention Center, Montreal, Quebec, Canada.

Chan, G., Miller, P.W., & Tcha, M. (2005) "Happiness in University Education," *International Review of Economics Education,"* 4(1), 20-45.

Dickens, W.T., & Flynn, J.R. (2001). "Heritability Estimates Versus Large Environmental Effects: The IQ Paradox Resolved," *Psychological Review,* 108(2), 346-369.

Di Tella, R., MacCulloch, R., & Oswald, A.J. (2001). "Preferences over Inflation and Unemployment: Evidence from Surveys of Happiness." *American Economic Review,* 91, 335–341.

D'Zurilla, T.J., & Sheedy, C.F. (1991). "Relation between Social Problem-Solving Ability and Subsequent Level of Psychological Stress in College Students." *Journal of Personality and Social Psychology,* 61, 841-846.

Easterlin, R.A. (1995). "Will Raising the Incomes of All Increase the Happiness of All"? *Journal of Economic Behavior and Organization,* 27, 35–47.

Easterlin, R.A. (2001). "Income and Happiness: Towards a Unified Theory," *Economic Journal,* 111, 465–484.

Frey, B.S., & Stutzer, A. (2000). "Happiness, Economy and Institutions," *Economic Journal,* 110, 918–938.

Frey, B.S., & StutZer, A. (2002). "What Can Economists Learn from Happiness Research?," *Journal of Economic Literature,* 40(2), 402-435.

Huebner, E.S. (1991). "Initial development of the Students' Life Satisfaction Scale," *School Psychology International,* 12, 231-243.

Inglehart, R. (1990). *Culture shift in advanced industrial society.* Princeton, NJ: Princeton University Press.

Jensen, A.R. (1973a). *Educability and Group Differences*. New York: Harper and Row.

Jensen, A.R. (1973b). *Educational Differences*. London: Methuen.

Jensen, A.R. (1997). *Adoption Data and Two G-Related Hypotheses* Intelligence, 25(1), 1-6.

Kadane, J.B., McGuire, T.W., Sanday, P.R., & Staelin, R. (1976). "Model of Environmental Effects on the Development of IQ," *Journal of Educational Statistics,* 1(3), 181-231.

Lyubomirsky, S., King, L., & Diener, E. (2005). "The Benefits of Frequent Positive Affect: Does Happiness Lead to Success?" *Psychological Bulletin,* 131(6), 803-855.

Lyubomirsky, S., Sheldon, K.M., & Schkade, D. (2005). "Pursuing Happiness: the Architecture of Sustainable Change," *Review of General Psychology,* 9(2), 111-131.

Oswald, A.J. (1997). "Happiness and Economic Performance," *The Economic Journal,* 107(445), 1815-1831.

Quatman, T., Sampson, K., Robinson, C., & Watson, C.M. (2001). "Academic, Motivational, and Emotional Correlates of Adolescent Dating," *Genetic, Social, and General Psychology Monographs,* 127(2), 211-234.

Quinn, P.D., & Duckworth, A.L. (2007). *"Happiness and academic achievement: Evidence for reciprocal causality."* Poster session presented at the annual meeting of the American Psychological Society, Washington, D.C.

Seligman, M.E.P. (1991). *Learned Optimism,* NewYork: A. A. Knopf.

Staw, B.M., Sutton, R.I., & Pelled, L.H. (1994). "Employee Positive Emotion and Favorable Outcomes at the Workplace," *Organization Science,* 5, 51–71.

Zimmer-Gembeck, M.J., Siebenbruner, J., & Collins, W.A. (2001). "Diverse Aspects of Adolescent Dating." Associations with Psychosocial Functioning from Early to Middle Adolescence," *Journal of Adolescence,* 24, 313-336.