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การศึกษาลักษณะทางเศรษฐกิจที่มีผลต่อผลการเรียนของนักศึกษา

The Impact of Economic Background on Students' Learning

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ABSTRACT

This study attempted to explore whether or not family income, as well as family's spending on education, contribute largely to the accomplishment of a college student. In addition, this paper attempted an empirical exploration of the factors contributing to their successes. The data used were primary data as of December 31, 2014 collected from students enrolled at the Department of Accountancy at Thammasat University, Thailand. To analyze, descriptive data were presented and followed by the regression result.

The major findings are that family incomes as well as other economic backgrounds do not statistically have any impacts on the achievement of the student in terms of GPA. On the other hand, student's effort is shown to be significant to the student's achievement. Another factor beneficial to the higher GPA is the student's GPA from their priors study while a dummy for students living in dormitory is negatively relted to GPA. The results from the study offer resounding evidence, which confirm the previous finding (Chittawan Chanagul. 2015) that economic background does not matter when it comes into learning once a student enters a program with similar admission scores. In other words, when students' learning competency does not vary, an economic background of the family plays a tiny role in the success of a student. Early development, to be more particular, is key to academic success.

Keywords: Education, Academic Result, Effort, Expenditure

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาความสัมพันธ์ระหว่างลักษณะทางเศรษฐกิจและผลการเรียนของนักศึกษา นอกจากนี้ ยังมีจุดมุ่งหมายเพื่อศึกษาปัจจัยที่มีผลต่อผลสัมฤทธิ์ทางการศึกษา สำหรับข้อมูลที่ใช้ในการศึกษาเป็นข้อมูลปฐมภูมิ ประชากรเป้าหมายในการศึกษา คือ นักศึกษาคณะบัญชี มหาวิทยาลัยธรรมศาสตร์ ในการวิจัยใช้แบบสอบถามเป็นเครื่องมือในการศึกษา โดยจำแนกเป็น ข้อมูลทางด้านการใช้จ่าย ความอุตสาหะ ปัจจัยแวดล้อมทางเศรษฐกิจและสังคม ภูมิหลังทางการศึกษา รวมถึงเกรดเฉลี่ยปัจจุบัน ในการวิเคราะห์ข้อมูลใช้การวิเคราะห์สมการถดถอยพหุคูณด้วยวิธีกำลังสองน้อยที่สุด

ผลการศึกษาพบว่า ลักษณะทางเศรษฐกิจของครอบครัว อาทิ รายได้เฉลี่ยต่อเดือนหรือจำนวนเงินที่นิสิตใช้จ่ายในแต่ละเดือนไม่มีความสำคัญกับผลการเรียนของนักศึกษาอย่างมีนัยสำคัญ สำหรับปัจจัยที่มีความสัมพันธ์กับระดับเกรดเฉลี่ยปัจจุบันของนักศึกษา ได้แก่ ปัจจัยพฤติกรรมด้านการเรียนของนักศึกษาโดยเฉลี่ย นอกจากนี้ ระดับเกรดเฉลี่ยในระดับมัธยมศึกษาตอนปลายมีความสัมพันธ์ในทิศทางเดียวกันกับระดับเกรดเฉลี่ยปัจจุบัน สำหรับตัวแปรการพักอาศัยในหอพักซึ่งเป็นตัวแปรหุ่น อธิบายได้ว่า นักศึกษาที่อาศัยอยู่ในหอพักจะมีผลการเรียนต่ำกว่านักศึกษาที่อาศัยอยู่กับผู้ปกครอง

ผลการศึกษาดังกล่าวเป็นไปในทิศทางเดียวกับงานวิจัยที่ผ่านมา (Chittawan Chanagul. 2015) ซึ่งบ่งชี้นัยสำคัญเกี่ยวกับลักษณะทางเศรษฐกิจของครอบครัวว่ามิได้มีอิทธิพลต่อผลสำเร็จทางการศึกษาในกรณีที่ผู้เรียนสามารถสอบเข้าศึกษาหลักสูตรในสถาบันการศึกษาที่มีคะแนนการสอบเข้าที่ใกล้เคียงกัน กล่าวคือ เมื่อผู้เรียนมีศักยภาพทางการเรียนใกล้เคียงกัน ระดับรายได้ ระดับการใช้จ่าย ระดับการศึกษาของผู้ปกครอง รวมถึงลักษณะทางเศรษฐกิจอื่นๆ หาได้มีความสำคัญต่อผลการเรียนของผู้เรียนแต่อย่างใด ในทางกลับกัน ความวิริยะอุตสาหะในการเรียนเป็นปัจจัยสำคัญที่ส่งผลในเชิงบวกต่อผลสัมฤทธิ์ทางการศึกษาของผู้เรียน

คำสำคัญ: การศึกษา ผลการเรียน ความวิริยะอุตสาหะ การใช้จ่าย

Introduction and Research Question

Education is indispensable for population quality in both intellectual and emotional terms. To acquire education, investment cost is inevitable. Thus, investment in human capital should increase human competence, but recent findings contradict this assumption. While public expenditure on education was about twenty percent of total public expenditure from 1993 to 2015 (see Table 1), the performance of education in Thailand was among the lowest. According to data on ASEAN education rankings provided by World Economic Forum (WEF), while Singapore and Malaysia earn first and second places of the best education, Thailand is last. Likewise, results made available by Organization for Economic Co-operation and Development (OECD) shows that competitiveness of Thai students in Math, Reading and Science is ranked 50 from 65 participating countries. Therefore, as public spending on education has gained much attention in recent researches, this paper is going to explore whether or not family income, as well as family's spending on education, contributes largely to the accomplishment of college students. In addition, this paper will examine factors that may determine college students' successes. There is one important point to mention before proceeding that as standard in grading does vary from one institution to another, there is a limitation on testing the result using the data from various institutions.

Framework and related theories

The importance of the role of education in generating human capital – capital produced by investing in knowledge began with Schultz's article in 1961. According to the basic assumption of theory of human capital, investing in health and schooling will create population quality (Schultz. 1961). To be more specific, investing in education may produce three major effects on individuals; intellectual capital, social capital, and emotional capital (Gratton and Sumantra. 2003). Education has major positive externalities. Educated workers, not only earn higher wages, but they can bring new technologies, methods, and information to the consideration of others. Next, increased education reduces the level of inequality and class distinction. Social problems as well as corruption are likely to be reduced as people are more educated. Therefore, investment on education; public and private investment should be a major factor to an individual's quality of life.

Educational achievement in individual is not limited to only investment on education, but the environment surrounding each student, particularly economic background, is another main factor contributing to ones' successes. According to Prescott, parental guidance, in addition to family income, location of family, parental education, and relationship between parents and their children, contributes largely to quality of individual (Prescott. 1961). For example, parents with higher degrees would motivate their child to put more effort on the study as they believe that acquiring more education would bring more successes in terms of income and social status. Families living in the metropolitan cities are essential for one to attain more knowledge as it is usually the center of information.

The key to an individual's achievement in present learning is a strong foundation (Benjamin. 1976). Talents, prior training, and practice from schools lead to better result when pursue higher education. Locations of institution may be able to show higher achievement in students as well, as major institutions and universities are, more often than not, located in the larger cities especially in developing countries. Another variable is private schools that may bring different results in students when compared to public schools.

Lastly, self-determination and effort on studying are essential to success in learning (Good. 1973). To be more specific, attitude, behavior towards learning, hours spent for self-study each day, subject preparation before class, and location of learner in class, can contribute largely to subject's understanding of students.

Research methodology

From theoretical viewpoints in the previous section, the impact on a student's success in learning is based on four traits; expenditure on education, economic background, educational background, and their own effort. In order to find out determinants beneficial to students' learning, an empirical analysis using primary data as of December 31, 2014 is used. This information was collected from students enrolled in undergraduate programs from the Faculty of Accountancy at Thammasat University, Rangsit Campus in Thailand.

Model

To test the hypothesis, the following regression equation is adopted.

$GPA = \beta_0 + \beta_1 INCOME + \beta_2 EDU + \beta_3 MS + \beta_4 NR + \beta_5 DOMICILE + \beta_6 EXPENDITURE + \beta_7 GPAhigh + \beta_8 EFFORT + \beta_9 LCShigh + \beta_{10} GENDER + \beta_{11} Dormitory + \varepsilon$

The dependent variable is Grade Point Average (GPA). INCOME is monthly average family income. EXPENDITURE is the indicator for revenue in which students are provided financially by their family each month while EFFORT is the behavior of each student towards their study. Other control variables which the literature has found to affect the success of students' learning are as follows:

A dummy for parental marital status; MS. A student whose parents are living together is coded 1.

A dummy for family living in Bangkok area; DOMICILE, where those living in Bangkok is coded 1.

A dummy for high school located in Bangkok area; LCShigh. A student is coded 1 if his/her high school is located in Bangkok area.

A dummy for Gender; GENDER. A male student is coded 1.

A dummy for parental education; EDU. A student that has been raised by parents with bachelor degrees is coded 1.

NR is the number of siblings including a student surveyed.

GPAhigh is last year's Grade Point Average in high school.

A dummy for student living in dormitory; DORM. A student is coded 1 if he/she lives in dormitory

Data

Table 2 presents general information of data used in the analysis. The sample data consists of 145 students enrolled in the programs. The majority of the respondents are from third and fourth year students, which represents 25.52 and 51.03 percent of total questionnaire collected, respectively.

Summary of the Results and Discussion

The results in Table 3 show that GPA of students is significantly driven by their effort and their academic performance in the prior study. That is, for every additional unit of effort as well as high school's GPA one can expect GPA of the present study to increase by an average of 0.088 and 0.494, respectively. The Dormitory dummy appears to be the only significant control variables. Students living in dormitory tend to have lower GPA than those who live with their parents by 0.182 point. The findings show that family incomes as well as other economic backgrounds do not statistically have impact on the achievement of the students in terms of GPA. On the other hand, the results drawn from the study suggest that factors beneficial to the higher GPA of day program are the student's GPA from their prior study as well as their own effort. Thus, it is important for educators to work on developing favorable conditions for students to achieve their goals. Moreover, as a family spends their income on a child, this may not go in parallel with the student's achievement in school. Public spending on education may play a more crucial role in reducing inequality.

Suggestions for Future Research

In conclusion, the results from the study offer resounding evidence, which confirms the previous finding (Chittawan Chanagul. 2015) that economic background does not matter when it comes to learning once a student enters a program with similar admission scores. In other words, when students' learning competency does not vary, an economic background

of the family plays a tiny role in the success of a student. Early development, to be more particular, is key to academic success. Last, when the standard in grading does not vary from any given institution, there should not be any restrictions on collecting information from any institutions. Therefore, future research could be done using data from different faculties or universities with a variety of admission scores in order to see if they will provide similar outcomes.

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Table 1: Public expenditure on education and total public expenditure

Fiscal Year	Total public expenditure (Thai Baht)	Public expenditure on education (Thai Baht)	Percentage of public expenditure on education to total expenditure
1993	560,000.00	85,664.50	15.30
1994	625,000.00	108,069.70	17.29
1995	715,000.00	121,973.10	17.06
1996	843,200.00	135,309.00	16.05
1997	925,000.00	167,560.40	18.11
1998	830,000.00	202,864.00	24.44
1999	825,000.00	201,707.60	24.45
2000	860,000.00	207,316.50	24.11
2001	910,000.00	220,620.80	24.24
2002	1,023,000.00	221,591.50	21.66
2003	999,900.00	222,989.80	22.30
2004	1,163,500.00	235,444.40	20.24
2005	1,250,000.00	251,233.60	20.10
2006	1,360,000.00	262,721.80	19.32
2007	1,566,200.00	295,622.80	18.88
2008	1,660,000.00	355,241.10	21.40
2009	1,951,700.00	419,233.20	21.48
2010	1,700,000.00	379,124.80	22.30
2011	2,169,967.50	422,239.90	19.46
2012	2,380,000.00	445,527.50	18.72
2013	2,400,000.00	493,892.00	20.58
2014	2,525,000.00	518,519.10	20.54
2015	2,575,000.00	531,044.80	20.62

Source: The Bureau of the Budget

Table 2 : Description of the data

		Day program	
		Numbers of respondents (NR)	Percentage of NR to number of TR*
Gender	Male	41	28.28
	Female	104	71.72
GPA	GPA<2.00	0	0
	2.00≦GPA≦2.50	5	3.45
	2.51≦GPA≦3.00	31	21.38
	3.01≦GPA≦3.50	64	44.14
	3.51≦GPA≦4.00	38	26.21
	NA	7	4.83
Expenditure (Baht)	Expenditure<1,0000	0	
	1,000≦Expenditure≦4,000	9	6.21
	4,001≦Expenditure≦7,000	59	40.69
	7,001≦Expenditure≦10,000	58	40.00
	10,001≦Expenditure≦13,000	7	4.83
	13,001≦Expenditure≦16,000	6	4.14
	Expenditure>16,000	4	2.76
	NA	2	1.38
Expenditure for tutoring	1,000≦Tutor exp≦5,000	11	7.59
	5,001≦Tutor exp≦10,000	5	3.45
	Tutor exp>10,000	3	2.07
	NA	6	4.14
	No Tutoring	120	82.76
Expenditure for dorm	Dorrn exp<2500	20	13.79
	2,500≦Dorrn exp≦5,000	52	35.86
	5,001≦Dorrn exp≦7,500	17	11.72
	7,501≦Dorrn exp≦10,000	10	6.90
	Dorrn exp>10,000	2	1.38
	NA	6	4.14
	Not staying in dorm	38	26.21
Parental Age	Age<40	0	0.00
	40≦Age≦45	5	3.45
	46≦Age≦50	20	13.79
	51≦Age≦55	61	42.07
	56≦Age≦60	46	31.72
	61≦Age≦65	13	8.97
	Age>65	0	0.00

		Day program	
		Numbers of respondents (NR)	Percentage of NR to number of TR*
Parental Education	Primary school	10	6.90
	Secondary school	5	3.45
	High school	16	11.03
	Vocational	9	6.21
	Undergraduate	75	51.72
	Graduate	25	17.24
	Higher than Graduate	5	3.45
MS	Married	127	87.59
	Divorced/Widowed/Others	18	12.41
Domicile	Bangkok area	80	55.17
	Others	65	44.83
Income (Baht)	Income<10,000	0	0.00
	10,000≦Income≦30,000	12	8.28
	30,001≦Income≦50,000	37	25.52
	50,001≦Income≦70,000	19	13.10
	70,001≦Income≦90,000	12	8.28
	90,001≦Income≦110,000	28	19.31
	Income>110,000	32	22.07
	NA	5	3.45
NR	1	20	13.79
	2	78	53.79
	3	38	26.21
	NR>3	9	6.21
GPAhigh	GPA<2.00	0	0.00
	2.00≦GPA≦2.50	0	0.00
	2.51≦GPA≦3.00	4	2.76
	3.01≦GPA≦3.50	25	17.24
	3.51≦GPA≦4.00	115	79.31
	NA	1	0.69
LCShigh	Bangkok area	96	66.21
	Others	49	33.79

* TR denotes total respondents.

Table 3: OLS regression results

Variable	Coefficient	t-Statistic	Prob.
C	1.017023	1.958063	0.0526
Gender	-0.075571	-1.288331	0.2002
Income	3.67E-05	0.114470	0.9091
EDU	0.080066	1.487316	0.1396
MS	0.129575	1.570163	0.1191
NR	0.037673	1.124978	0.2629
Domicile	0.000931	0.011178	0.9911
Expenditure	-0.000892	-0.130335	0.8965
GPAhigh	0.494189***	3.996977	0.0001
Effort	0.087675*	1.885235	0.0619
LCShigh	0.089548	0.996707	0.3209
DORM	-0.181786***	-2.888832	0.0046
R^2 = 0.3021		Adjusted-R^2 = 0.2311	
Durbin-Watson = 1.7904		F-Statistic =4.2565 (prob = 0.0000)	