

Investment in Social Science Education and Its Worthwhile Wage

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Abstract

Investing in education is a type of capital accumulation in humans. The value of money spent or accumulated in humans from birth to graduation is called human capital. Therefore, being a company employee is like investing in capital equal to the amount of human capital accumulated in that company. Wage or salary earned by a company is also like a return on investment. This research aims to find out what wages we earn each month after graduation and whether it is worth the human capital in us or not. What should be the wage rate worth investing in? This research uses secondary data from the National Statistical Office of Thailand and other related data sources. This research focuses on the study of social sciences in 5 majors of bachelor degrees including Communication arts major, Account major, Law major, Economics major, and Business management major. The findings showed that, in the year 2022, the initial wage rate of new graduates in the five fields of social sciences in Thailand is not worth their human capital invested from birth to graduation. Preliminary suggestions from this research are as follows: The government should implement a policy to improve the quality of education to increase graduate productivity. The higher graduate competencies and skills will result in employers willing to pay wages at a higher rate. The government should implement a policy to encourage new graduates to conduct their own business to raise their income higher than being an employee.

Keywords: Education, Social Science, Investment, Worthwhile Wage

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Introduction

Globalization and borderless competition under today's capitalist system have important influences on management in every sector, whether it be businesses, state enterprises, or even government agencies. Human resource management is more important than in the past because it is generally accepted that organizations can survive in today's changing environment. This is because those organizations have qualified personnel who can drive the various missions of the organization to achieve its goals (Kitti Meelamian, 2016:149) Human resources are the most important management resource because they are the resource that can create value and add value. It can learn and enhance skills in thought and action. It can drive the organization's mission to achieve its objectives. People are similar to human capital from the aforementioned perspective. Therefore, education is an important factor in developing human resources to have better quality or increase the value of human capital. Studying the ideas of economist Adam Smith (1976), he opined that education is an investment. He stated in his book *The Wealth of Nations* that investing in education is a matter of human resource development and causes each person to have different abilities.

Investing in education is like investing in any other project where the returns and costs of the project must be considered. Calculating the economic rate of return on investment in education involves both the economic rate of return that benefits society and the rate of economic return that benefits individuals. The personal rate of return is the return that accrues to the learner based on the cost that the learner must pay for the course and upon completion of the course. Graduates will receive a salary, wages, or other benefits including fame, honor, and respect from society.

Investing in education is an important issue that the research team is interested in studying whether investing in education in the social sciences at the higher level with a bachelor's degree and receiving a salary is currently worth the investment in education. If it's not worth it, we'll offer guidelines on how much salary you'll need to earn to make it worth it or have other options to adapt to survive in the current economic situation.

Literature Review

Becker (1964) researched the measurement of economic returns or increased income (monetary terms). This increase in income reflects increased labor productivity. Investing in education can result in people having more knowledge and skills to earn higher incomes.

George Psacharopoulos (1981) researched *Returns to Education: An Updated International Comparison*. He found that higher levels of education were due to higher investment in education. Therefore, it had a greater effect on increased income. It revealed that investment in education affected the value creation of human capital. However, human capital is one factor that plays an important role in economic development and has an effect on increasing national income. In studying the role of human capital, related theories such as Endogenous Growth Theory are developed from Neoclassical Growth Theory. Robert Solow and Trevor Swan once said that investing in people through investing in education creates value in people with knowledge, abilities, and skills.

Harry Anthony Patrinos and George Psacharopoulos (2004) researched *Returns to Investment in Education: A Further Update* They found that the personal rate of return for bachelor's degree graduates was higher than that of high school graduates by 10.48 percent for males

and 9.50 percent for females. The rate of return for tertiary graduates ranged from 8.0% to 12.8% per year for males. Females had a rate of return between 4.5 and 7.9 percent per year. Higher education also had an impact on long-term economic growth.

Sasiwimon Warunsiri and Robert McNown (2010) researched *The Returns to Education in Thailand: A Pseudo-Panel Approach*. They developed an econometric equation whereby income varies with years of education and age or work experience. The study found that the rate of return on investment in education was approximately 14-16% per year, female workers earned higher than male workers, urban workers earned higher than rural workers, and single workers earned higher incomes than married workers.

Panadda Bunchad (2001) researched the rate of return on investment in education from the perception of Chulalongkorn University graduates and their decision to pursue graduate studies. When comparing the rate of return from realization with the rate of return from other financial investments, graduates have a realized rate of return that is higher than the interest rate from all forms of financial investment, including short-term, medium-term, and long-term government bond investments including depositing money with commercial banks, both savings and fixed deposits. It revealed that graduates perceive education as a high-return investment that is more worthwhile than other financial investments.

Thoedsak Chomtohsuwan (2016) researched a study of the relationship between human capital returns and education: a case study of Thailand. He found that if workers invest in higher education, they will accumulate more total human capital and receive a higher rate of return on human capital. In addition, research studies have found that investing in different fields of study yields different rates of return. Choosing to invest in different subjects comes from many factors such as family, capital, physical condition, intellectual abilities, distance from educational institutions, and access to educational and work information, etc. However, an individual's decision to choose a field of labor may not depend solely on monetary rewards but may also depend on personal tastes and preferences that derive pleasure from passionate work.

Objectives

This research paper aims to study the cost of education in the social sciences of the Thai population and the rate of return that is worth investing in social science education in Thailand.

Methodology

Hypothesis

To estimate the value of human capital, employment earnings, and rates of return on investment, this research makes the following necessary research hypothesis:

- ✓ To determine the consumption patterns of each generation of the population are not significantly different.
- ✓ To determine that each citizen in the same age group has the same basic daily expenses.
- ✓ To determine the population continuing to study from kindergarten until the highest level of education is completed at the bachelor's degree level at the age of 22 years old.

- ✓ To determine the population that starts working after graduation at the age of 23 years old.
- ✓ To define each population working in accordance with their level of education and field of study.
- ✓ To determine those citizens with the same educational qualifications receive the same rewards from work during the first year of work.
- ✓ To determine the year 2022 as the base year for calculation.

Sources

This research collects secondary data from the following sources:

- ✓ Information on the daily spending of the Thai population from the Household Socio-Economic Survey (SES) of the National Statistical Office.
- ✓ Information on work compensation for new graduates from universities, Thai government, and private agencies.
- ✓ Information on tuition fees and expenses related to education from Thai public and private educational institutions.
- ✓ Information from various related research studies.

Analysis

This research divided the sample group into graduates from 5 groups of social science subjects as follows:

- ✓ Communication arts major
- ✓ Law major
- ✓ Economics major
- ✓ Account major
- ✓ Business management major

This research analyzed the value of money from investing in education based on the rate of return on human capital which is calculated by comparing the net return value that graduates from each field of study receive from their first year of work compared to the value of the human capital of graduates from that field of study. According to the following equation:

$$\Omega_k = \left(\frac{\lambda_k}{HC_k} \right) \times 100\%$$

$$\lambda_k = Rsl_k + Rad_k - \delta_i$$

$$HC_k = \sum_{i=0}^{22} [\delta_i + \varepsilon_i + \gamma_i]$$

$$\delta_i = \theta_i \mu_i$$

Whereas Ω is the rate of return on human capital (percentage per year), λ is the net return from work (baht), Rsl is salary (baht), Rad is a bonus (baht), HC is human capital (baht), δ is basic living expenses (baht), θ is the proportion of basic consumption expenses, μ is the total

expenses (baht), ε is the cost of education (baht), γ is the opportunity cost (baht), k is the bachelor degree field, i is the age range (years).

However, the net compensation value is the income after deducting basic living expenses during the working year. The income that graduates from each field of study receive from their first year of work is estimated from two main methods: salary and bonuses.

Human Capital is estimated from a person's various expenses for 22 years, accumulated from the time he was in the womb until he graduated with a bachelor's degree. Expenses consist of 3 main parts: basic living expenses, education expenses, and opportunity costs from choosing to continue education at the high school and bachelor's level without working for 15-22 years.

Results

Results of research on the worthiness of investing in social science education in 5 fields of study for Thai people born in the year 2000. The researcher began studying the sample at the age of 4 years old in a kindergarten for 3 years, continued with a primary school for 6 years, continued with a secondary school for 6 years, and continued with a bachelor degree for 4 years and graduated with a bachelor degree in the year 2021 at the age of 22 years old and began working in the year 2022 at the age of 23 years old. The results of calculating the financial value in each age period use a value equivalent to the value in the year 2022 (Constant price 2022) at the exchange rate of the baht to the United States dollar equal to 35.0316 Baht per USD.

This research found that basic living expenses in each age group are different. It tends to increase continuously with increasing age, from 1,004.43 USD per year to 2,590.90 USD per year at constant prices in the year 2022 and the value is adjusted according to the annual inflation rate in Thailand, which fluctuates between -0.9% and -6.08%, as shown in Figure 1.

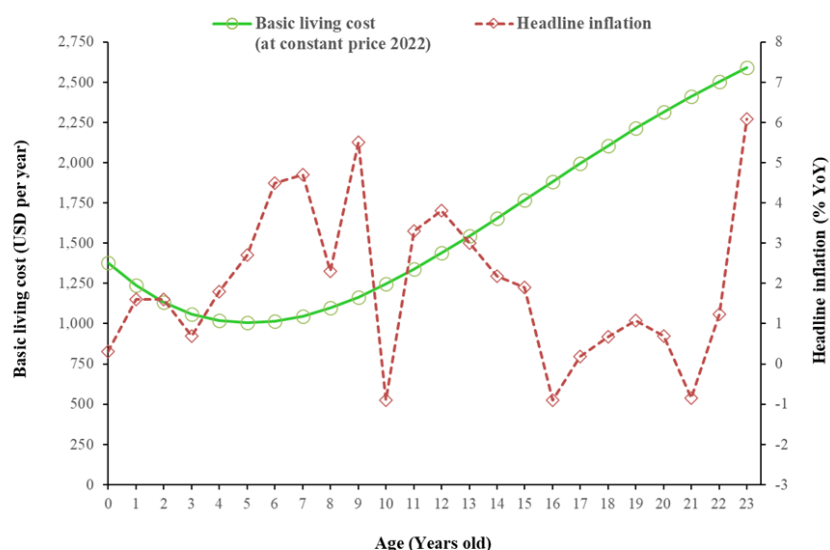


Figure 1: Inflation rates and basic living expenses of the Thai population from 1999 – 2022 (at constant prices in 2022)

The value of investing in education from birth until graduation in 5 social science fields is approximately the same, on average approximately 100,284.57 USD. The field of study with

the highest investment value is Communication arts major with an investment value of 101,066.10 USD, followed by Account major with an investment value of 100,265.31 USD, Law major with an investment value of 100,258.68 USD, Economics major with an investment value of 100,019.93 USD, respectively. Business management major has the lowest investment value: 99,812.85 USD. The average basic living expenses of each occupation is approximately 37.18% of annual income, as shown in Figure 2.

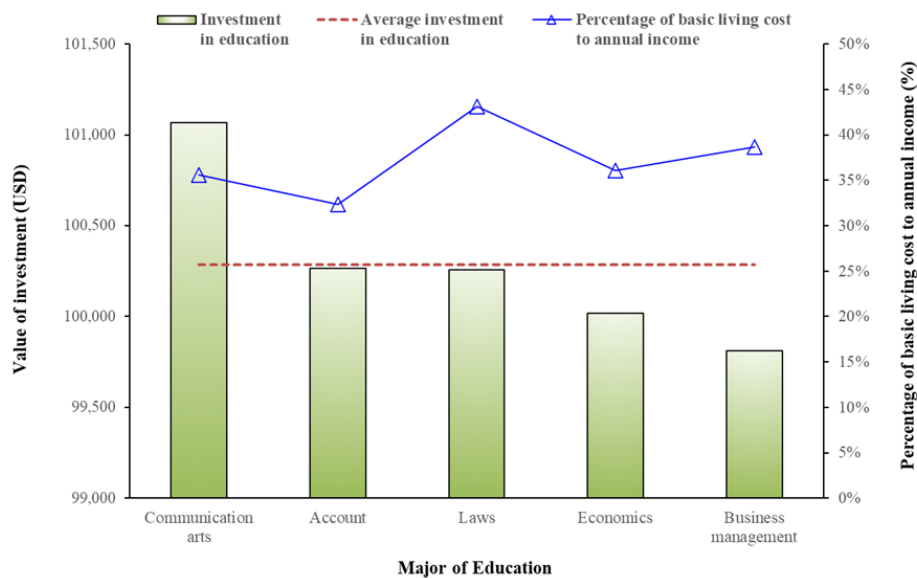


Figure 2: Value of investment in social science education and percentage of basic living expenses to annual income

In summary, during the first year of work, all 5 majors had an average salary of approximately 540.95 USD per month. Account major graduates earn the highest salary at 615.85 USD per month, followed by Communication arts major at 559.45 USD per month, Economics major at 551.74 USD per month, and Business management major at 515.32 USD per month. The Law major has the lowest salary of 462.40 USD per month. Social science careers have extra income and/or bonuses averaging approximately 1 time of the salary per year. The annual income of each occupation is slightly higher than the income from a regular salary. But when subtracting the basic living expenses, the net return from working during the first year decreases significantly.

Investing in social science education has an average first-year financial return of approximately 4.43% per year. The field of study with the highest financial rate of return was Account major at 5.40% per year, followed by Communication arts major at 4.63% per year, Economics major at 4.58% per year, and Business management major at 4.12% per year, respectively. The lowest financial rate of return is Law major at 3.41% per year, as shown in Figure 3. The financial returns from investing in the five social sciences studies above are still low when compared to the returns from better investment options.

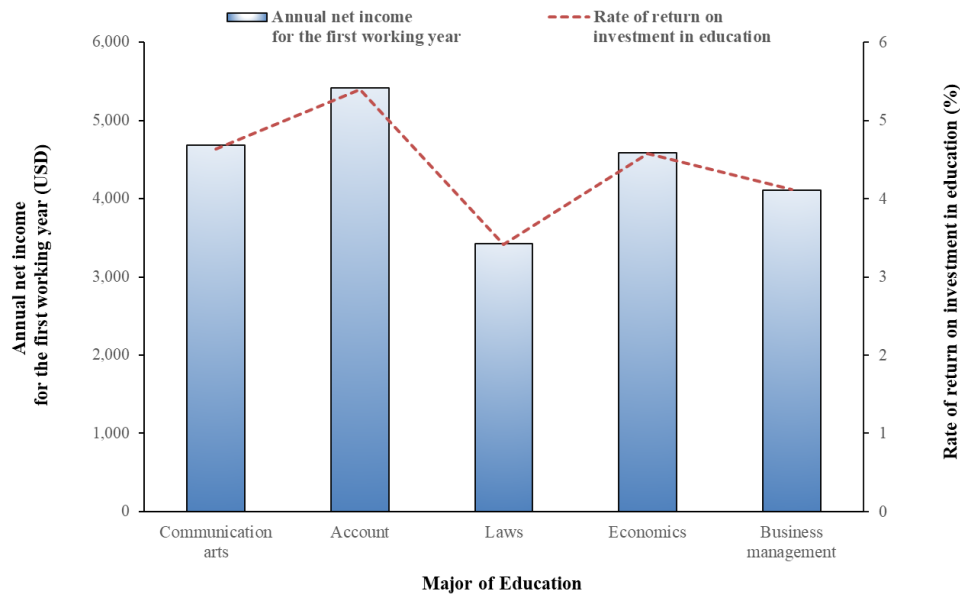


Figure 3: Net compensation and rate of return from the first year of work

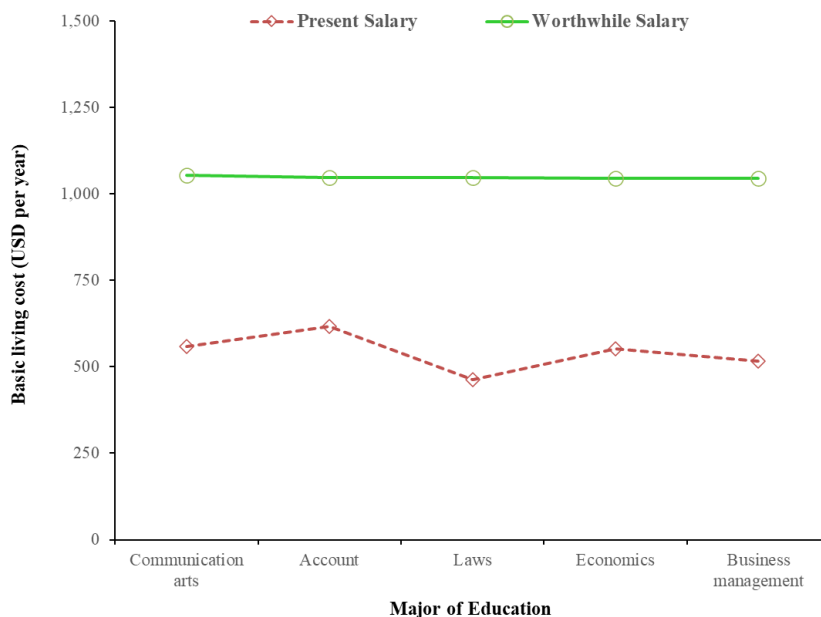


Figure 4: Current salary rates in 2022 with salary rates worth the investment

This research found that investing in S&P500 stocks has an average Minimum Acceptable Rate of Returns (MARR) of approximately 11% per year. If the said rate of return of 11% per year is used as a criterion for the rate of return that is worth investing in social science studies or the appropriate rate of investment, it is found that the appropriate salary for the fields of Communication arts major, Account major, Law major, Economics major, and Business management major are: 1,054.47 USD, 1,047.70 USD, 1,047.64 USD, 1,045.62 USD, and 1,043.87 USD, respectively and averages approximately at 1,047.86 USD. The actual salary rates in 2022 for Communication arts major, Account major, Law major, Economics major, and Business management major occupations in Thailand compared to the appropriate salary rates are still only 46.95%, 55.86%, 47.23%, 41.22%, 50.63% or approximately 48.38%.

Conclusion: Summary and Discussion

This research found that social science careers in 5 majors in Thailand in the year 2022, including Communication arts major, Account major, Law major, Economics major, and Business management major receive an average salary in the first year of employment of approximately 540.95 USD per month, or approximately 4.43% per year. It is still not worth investing in each major with an average investment value of approximately 100,284.57 USD.

When comparing the average salary rate of new graduates in the first year of work in the year 2022 in other countries in Asia, it was found that of Japan is approximately 1,030.13 USD per month and that of Singapore is approximately 2,122.38 USD per month. It can be seen that both countries have higher average salaries than Thailand. The Thai government must have a policy to help graduates receive a higher average salary than the present and a good return on investment in education.

Comparing the investment return rate of 11% per year, the salary worth investing in social science studies in the 5 majors should average approximately 1,047.86 USD per month, which is 48.38% higher than the current average salary.

Consequently, the government should apply policies to improve the quality of education so that graduates graduate with quality and can work with higher salaries. Employers should also be willing to pay employees a higher salary. In cases where graduates are already working as employees, but their salaries are still low, the government should implement policies that encourage new graduates to do start-up businesses.

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