Introduction
Expenditures on education have been treated as an investment flows that build Human Capital. They are one of the most important factors to develop the country. In the four decades that followed the human investment revolution in economic thought, hundreds of estimates have been made on the profitability of investment in education in all parts of the World and for all levels and types of majors in university (Psacharopoulos, 2002).

Today, the higher education is indispensable for development on human capital in every country because high-skill labor force demand increased continuously in every year. Especially, the graduate’s higher education can bring new innovations, however the graduate unemployment is the very important problem for every countries. One of the most important reasons is the excessive graduate production of some majors for labor market.

The rate of return on investment in higher education can be index that reflects the efficiency in value of the investment budget of education

Statistic information from the past found that graduates with a Bachelor of Social Sciences are much more than Bachelor of Science or bachelor of humanities. Consequence, Bachelor of social science graduate confronted with the problem of unemployment (Higher Education Commission, 2010).

Objectives of this study
The purpose of this study is to investigate monetary benefits, costs, private and social rate of returns on investment of bachelor’s degree in social science graduates in Thailand. In addition, this study investigates the important factors to influence the return of the bachelor degree in social science graduates.

The Scope of this Study
The various estimating techniques are illustrated by using bachelor degree’s social science graduates survey data from private organization in the stock exchange of Thailand for designing higher education policy. This paper reports bachelor degree’s graduates estimates of private rate of return in social science majors consist of Economics, Laws, Politics, Business Administration and Educations. This paper also interviews the specialists in social science majors, top management executives and human resource manager in private organization in stock exchange of Thailand for development in social science graduate production strategies.

The results of interviews from specialists in social science majors, top management executives and human resource manager in private organization in stock exchange of Thailand with the analysis concluded the way to improve social science bachelor degree graduate returns consisting of 1) Improve the important skill consists of international language, computer literacy, creativity idea, competitiveness development. 2) The specialists and human resource manager has recommended the graduate to test the knowledge or Certificates Graduate that is recognized by most employers to enhance competitiveness, including English language skills (TOEIC, TOEFL, IELT) or professional knowledge of the Finance (Single License, Derivative License, CFA, CPA) 3) Universities should Guidelines to enhance the recruitment of graduates. The knowledge and training to provide graduates with the skills or certificates that are accepted by most employers to enhance their competitiveness in the labor market.

Keywords: Development Strategies, Higher Education, Rate of Return on Investment

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Methodology

The calculations of the rate of returns on investment from bachelor’s degree in social science graduate use the internal rate of return (IRR). This can be express formally as:

\[
\sum_{t=0}^{\infty} \left( C_h + Y_{h-1} \right) \left( 1 + r \right)^{-t} = \sum_{t=1}^{\delta_8} \left( Y_h - Y_{h-1} \right) \left( 1 + r \right)^{-t}
\]

Where: 
- \( C_h \) = Direct cost for study in bachelor’s degree
- \( Y_{h-1} \) = Opportunity cost of bachelor’s degree in university
- \( Y_h \) = Bachelor’s degree Return from working
- \( r \) = Discount Rate
- \( t \) = Time for studying (t3 to t0) and working (t0 to t38)

In this study, we also study the important factor to influence the return of the bachelor degree in social science graduates by using multiple linear regressions. This can be express as following:

\[
\ln Y = a_0 + a_1 \text{EXP} + a_2 \text{EXPSQ} + a_3 \text{SEX} + a_4 \text{MAR} + a_5 \text{FEDU1} + a_6 \text{FEDU2} + a_7 \text{FEDU3} + a_8 \\
\text{FEDU4} + a_9 \text{FEDU5} + a_{10} \text{HONOR} + a_{11} \text{TRAIN} + a_{12} \text{SIZE1} + a_{13} \text{SIZE2} + a_{14} \text{UNIV} + a_{15} \text{FCTY1} \\
+ a_{16} \text{FCTY2} + a_{17} \text{FCTY3} + a_{18} \text{FCTY4} + \varepsilon_i
\]

Where:
- \( Y \) = Bachelor’s degree Return from working
- \( a_0 \) = Constants
- \( a_i \) = Coefficient of Variable
- \( \text{EXP} \) = Working Experience of Graduate
- \( \text{EXPSQ} \) = Working Experience of Graduate
- \( \text{SEX} \) = Gender of Graduate
- \( \text{MAR} \) = Marriage Status of Graduate
- \( \text{FEDU} \) = Father Education of Graduate
- \( \text{HONOR} \) = Academic Performance of Graduate
- \( \text{TRAIN} \) = Training Program during working in Organization
- \( \text{SIZE} \) = The Size of Private Organization
- \( \text{UNIV} \) = Type of University
- \( \text{FCTY} \) = Major or Faculty of Graduate

The Results

The finding of this study show that the relationship between variable factors consist of working experience (EXP), square of working experience (EXPSQ), gender (SEX), graduate father education (FEDU), academic performance of graduate (HONOR), training program during working in organization (TRAIN), the size of private organization (SIZE), type of university (UNIV) and major or faculty of graduate (FCTY) have significant level to bachelor degree graduate Return from working (Ln Y). While the relationship between marriage status (MAR) have no significant level to bachelor degree graduate Return from working (R Square = 0.897, Adjusted R Square = 0.895).

(see all tables and figures in the last page)

The finding of this study shows that the average private and social costs of government universities are higher than private universities. Average private and social cost of government universities bachelor degree graduates are 115,902 baht per year, while those of private universities bachelor degree graduates are 175,903 baht per year.

In case of university, Chulalongkorn University receives the highest income, followed by graduates from Thammasart University, Kasetsart University, Srinakarinwirot University, Rangsit University and Dhurakij Pundit University. In case of social science major, the major of Business administration receive the highest income, followed by major of Economics, Laws, Politics and Education.
knowledge or Certificates Graduate that is recognized by most employers to enhance competitiveness, including English language skills (TOEIC, TOEFL, IELT) or professional knowledge of the Finance (Single License, Derivative License, CFA, CPA) 3) Universities should Guidelines to enhance the recruitment of graduates. The knowledge and training to provide graduates with the skills or certificates that are accepted by most employers to enhance their competitiveness in the labor market.

References


Table 1: The Result of Multiple Linear Regression from Social Science Bachelor Degree Graduate

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-stat</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP</td>
<td>0.941</td>
<td>4.990*</td>
<td>0.000*</td>
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<tr>
<td>EXPSQ</td>
<td>-0.032</td>
<td>-2.582*</td>
<td>0.000*</td>
</tr>
<tr>
<td>SEX</td>
<td>0.883</td>
<td>5.111*</td>
<td>0.000*</td>
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<tr>
<td>MAR</td>
<td>-0.009</td>
<td>-0.415</td>
<td>0.678</td>
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<tr>
<td>FEDU1</td>
<td>0.676</td>
<td>2.703*</td>
<td>0.000*</td>
</tr>
<tr>
<td>FEDU2</td>
<td>0.746</td>
<td>3.167*</td>
<td>0.000*</td>
</tr>
<tr>
<td>FEDU3</td>
<td>0.831</td>
<td>3.542*</td>
<td>0.000*</td>
</tr>
<tr>
<td>HONOR</td>
<td>0.815</td>
<td>2.313*</td>
<td>0.000*</td>
</tr>
<tr>
<td>TRAIN</td>
<td>0.691</td>
<td>4.881*</td>
<td>0.000*</td>
</tr>
<tr>
<td>SIZE1</td>
<td>0.644</td>
<td>2.595*</td>
<td>0.000*</td>
</tr>
<tr>
<td>SIZE2</td>
<td>0.814</td>
<td>3.764*</td>
<td>0.000*</td>
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<tr>
<td>UNIV</td>
<td>0.661</td>
<td>2.777*</td>
<td>0.006*</td>
</tr>
<tr>
<td>FCTY1</td>
<td>0.673</td>
<td>2.197*</td>
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<tr>
<td>FCTY2</td>
<td>0.519</td>
<td>2.056*</td>
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<tr>
<td>FCTY3</td>
<td>0.911</td>
<td>3.468*</td>
<td>0.000*</td>
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<td>FCTY4</td>
<td>0.786</td>
<td>2.584*</td>
<td>0.000*</td>
</tr>
</tbody>
</table>

R = 0.947  \quad R \text{ Square} = 0.897 \quad \text{Adjusted } R \text{ Square} = 0.895

Table 2: Private Internal Rate of Return for Social Science Bachelor Degree Graduates in 5 Majors from Government and Private University

<table>
<thead>
<tr>
<th>University</th>
<th>Politics</th>
<th>Education</th>
<th>Laws</th>
<th>Economics</th>
<th>Business Administration</th>
</tr>
</thead>
<tbody>
<tr>
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<td>18.36</td>
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<td>-</td>
<td>22.51</td>
<td>28.58</td>
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<td>Kasetsart University</td>
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<td>-</td>
<td>26.05</td>
<td>27.37</td>
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<tr>
<td>Srinakarinwirot University</td>
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<td>18.28</td>
<td>-</td>
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<td>25.89</td>
</tr>
<tr>
<td>Rangsit University</td>
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<td>16.26</td>
<td>20.66</td>
<td>23.27</td>
<td>23.85</td>
</tr>
<tr>
<td>Dhurakij Pundit University</td>
<td>16.88</td>
<td>-</td>
<td>20.57</td>
<td>22.89</td>
<td>23.03</td>
</tr>
</tbody>
</table>

Table 3: Social Internal Rate of Return for Social Science Bachelor Degree Graduates in 5 Majors from Government and Private University

<table>
<thead>
<tr>
<th>University</th>
<th>Politics</th>
<th>Education</th>
<th>Laws</th>
<th>Economics</th>
<th>Business Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chulalongkorn University</td>
<td>18.65</td>
<td>17.08</td>
<td>20.28</td>
<td>26.33</td>
<td>27.12</td>
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<td>Thammasart University</td>
<td>18.01</td>
<td>-</td>
<td>20.27</td>
<td>25.50</td>
<td>26.82</td>
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<tr>
<td>Kasetsart University</td>
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<td>16.64</td>
<td>-</td>
<td>23.55</td>
<td>24.34</td>
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<tr>
<td>Srinakarinwirot University</td>
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<td>16.69</td>
<td>-</td>
<td>22.83</td>
<td>23.21</td>
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<tr>
<td>Rangsit University</td>
<td>-</td>
<td>13.52</td>
<td>18.12</td>
<td>20.27</td>
<td>20.38</td>
</tr>
<tr>
<td>Dhurakij Pundit University</td>
<td>15.00</td>
<td>-</td>
<td>18.40</td>
<td>19.94</td>
<td>20.16</td>
</tr>
</tbody>
</table>
Figure 1: Social Cost of Bachelor Degree Graduate in Government and Private University After Educational Wastage