

**ANALYZING RETURNS ON CONVENTIONAL AND
NON-CONVENTIONAL TERTIARY EDUCATION
IN MALAYSIA**

NANTHAKUMAR LOGANATHAN

**DOCTOR OF PHILOSOPHY
UNIVERSITI PUTRA MALAYSIA**

2010

1100080189

Perpustakaan Sultanah Nur Zahirah
Universiti Malaysia Terengganu (UMT)



tesis

LB 2824.M3 N3 2010



1100080189

Analyzing returns on conventional non-conventional tertiary education in Malaysia / Nathakumar Loganathan.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH
UNIVERSITI MALAYSIA TERENGGANU (UMT)
21030 KUALA TERENGGANU

| | | |
|--|------------------------|--|
| | 1100080189 | |
| | REGISTERED 30 JUL 2011 | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Lihat sebelah

HAK MILIK
PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

**ANALYZING RETURNS ON CONVENTIONAL NON-CONVENTIONAL
TERTIARY EDUCATION IN MALAYSIA**

By

NANTHAKUMAR LOGANATHAN

**Thesis Submitted to the School of Graduate Studies, University Putra Malaysia,
in Fulfilment of the Requirements for the Degree of Philosophy**

October 2010

0810300011

DEDICATION

This study is dedicated to my beloved mother, father, brother and my younger sister. I would also like to dedicate this study to all researchers in line of labor and educational economics in Malaysia.

NANTI HAKUMAR LOGANATHAN

October 2013

Chair, Kuala Lumpur, Malaysia

Faculty of Economics and Management

This study is a part of the research project titled "The Impact of Education on the Labor Market: A Study on the Effectiveness of Vocational Training Programs in Malaysia". The project is funded by the Ministry of Education (MOE) and the Ministry of Finance (MOF). The study aims to evaluate the effectiveness of vocational training programs in Malaysia and to identify the factors that influence the success of these programs. The study is divided into two main parts: a literature review and an empirical analysis. The literature review discusses the theoretical framework of the study and the empirical analysis. The empirical analysis is divided into two parts: a descriptive analysis and a regression analysis. The descriptive analysis provides a detailed description of the data and the variables used in the study. The regression analysis estimates the impact of vocational training on the labor market. The study finds that vocational training has a positive impact on the labor market, particularly for individuals with lower levels of education. The study also finds that the impact of vocational training is larger for individuals who are employed in the private sector. The study concludes that vocational training is an effective way to improve the skills of the labor force and to increase the productivity of the economy. The study also provides some policy recommendations for the government and the private sector. The study is a valuable contribution to the literature on the impact of education on the labor market.

Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

**ANALYZING RETURNS ON CONVENTIONAL AND
NON-CONVENTIONAL TERTIARY EDUCATION IN MALAYSIA**

By

NANTHAKUMAR LOGANATHAN

October 2010

Chair: Zaleha Mohd Noor, PhD

Faculty: Faculty of Economics and Management

It is widely accepted that education investment plays an important role in economic development in many countries. However, little evidence exists between returns to conventional education (CE) and non-conventional education (NCE). CE comprises full-time education program while NCE comprises part-time, distance learning and executive's educational program. The main objective of this study is to estimate the returns to investment for CE and NCE graduates according to gender and occupational sectors. Also, we intend to determine whether different types of education program causes wage differentials in the labor market. The educational investment profitability analysis is calculated using the cost and benefit analysis. Meanwhile, determination of earnings differential is estimated through regression analysis using interaction effects. Hence, in this study, the samples for age-earnings profiles are limited to individual's annual earnings. This study uses average annual earnings increments base on government employee's scheme; and earnings increment frequencies documented by the Malaysian Employers Federation (MEF)

surveys on salary and fringe benefits to predict the expected lifetime earnings for CE and NCE graduates in order to make prediction on the future age-earnings profiles. The data for this study is drawn from comprehensive random and systematic sampling techniques on CE and NCE graduates in Malaysian's labor market.

This study brings to fore several interesting findings. Firstly, the age-earnings profiles indicate that workers who join the labor market at younger age tend to receive higher earnings profile. Secondly, compared to CE graduates, the NCE graduates receive higher private rate of return. Thirdly, analysis using interaction effects indicate that there is gender and occupational earnings discrimination. Fourthly, additional years of retirement age does not show any changes on private rates of return; and all of the simulation analysis indicate flat returns after the compulsory retirement age. Finally, this study also predicts the human capital demand curve for CE and NCE graduates. The demand curve for human capital is negatively sloped, implying that the law of diminishing returns appears for CE and NCE graduates. Overall, the results of this study clearly indicate that NCE is a profitable investment and it worth encouraging adult's workers in Malaysia to pursue informal lifelong learning. Besides that, there is a need to address the gender and occupational sector earnings discrimination. Finally, extension of retirement age should not be granted as it will not bring any significant impact on earnings and return for CE and NCE graduates.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**ANALISIS PULANGAN PENDIDIKAN TERTIARI KONVENSIONAL
DAN BUKAN KONVENSIONAL MALAYSIA**

Oleh

NANTHAKUMAR LOGANATHAN

Oktober 2010

Pengerusi: Zaleha Mohd Noor, PhD

Fakulti: Fakulti Ekonomi dan Pengurusan

Pelaburan pendidikan memainkan peranan penting dalam pembangunan ekonomi, namun kajian pulangan pelaburan pendidikan konvensional (CE) yang melibatkan program pembelajaran sepenuh masa dan pendidikan bukan konvensional (NCE) yang melibatkan program pembelajaran secara separuh masa, pendidikan jarak jauh serta program eksekutif kurang diberi perhatian. Objektif utama kajian ini adalah bertujuan untuk mengukur kadar pulangan pelaburan pendidikan graduan konvensional dan bukan konvensional berasaskan gender dan sektor pekerjaan; dan mengenal pasti sejauh mana bentuk program pengajian mempengaruhi perbezaan perolehan dalam pasaran buruh. Keberuntungan pelaburan pendidikan dinilai menggunakan analisis kos dan faedah. Manakala, perbezaan perolehan pula diukur menggunakan kaedah regresi dengan menggunakan pendekatan interaksi. Pelaksanaan kajian ini dibatasi dengan kekangan data usia-perolehan individu. Justeru, kajian ini menggunakan kaedah unjuran profil usia-perolehan menggunakan purata peningkatan perolehan yang diperolehi melalui skim perolehan kerajaan dan

menggunakan frekuensi kenaikan perolehan yang di dokumentasi oleh Kesatuan Majikan Malaysia (MEF) berasaskan soal selidik upah dan faedah perolehan. Data kajian ini diperoleh daripada pensampelan komprehensif menggunakan kaedah rawak dan sistematik terhadap graduan CE dan NCE di pasaran buruh.

Hasil kajian ini memberikan keputusan yang agak menarik. Pertama, profil usia-perolehan menunjukkan bahawa pekerja yang berusia mula berupaya memperoleh tahap profil perolehan yang tinggi. Kedua, jika dibandingkan graduan CE, graduan NCE memperoleh kadar pulangan persendirian yang lebih tinggi. Ketiga, analisis kesan interaksi menunjukkan kewujudan diskriminasi perolehan berasaskan gender dan jenis pekerjaan. Keempat, tambahan tempoh usia perolehan tidak memaparkan sebarang kesan terhadap kadar pulangan persendirian dan ke semua analisis simulasi memberikan kadar pulangan yang mendatar selepas tempoh usia persaraan wajib. Terakhir, kajian ini juga telah membentuk keluk modal manusia bagi graduan CE dan NCE. Keluk modal manusia yang bercerun negatif jelas menunjukkan kesan hukum pulangan berkurangan di kalangan graduan CE dan NCE. Secara keseluruhan, hasil keputusan kajian ini jelas menunjukkan pelaburan dalam NCE merupakan pelaburan yang menguntungkan dan berupaya menggalakkan pekerja dewasa di Malaysia melanjutkan pengajian informal sepanjang hayat. Selain itu, tumpuan khusus terhadap diskriminasi perolehan berasaskan gender dan pekerjaan juga harus diberi tumpuan. Terakhir, lanjutan tempoh persaraan tidak seharusnya diberi perhatian kerana ia tidak berupaya memberikan kesan signifikan terhadap perolehan dan pulangan pelaburan kepada graduan CE mahupun NCE.