The Rates of Return of Private Investments on Second Chance Schools of Greek Life Long Learning

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Abstract

The paper examines the rate of return of private investments on Second Chance Schools (SCS). Additional estimates the rates of return, by gender. The paper uses the Mincerian earnings function and the data has been collected through primary research throughout the country. Empirical analysis reveals that the rate of return of private investment on SCS is 3.99%. According to the findings, the investment on SCS is beneficial for the graduates.

Key words: Rate of Return, Human Capital, Lifelong Learning, Second Chance Schools

Περίληψη

Η εργασία εξετάζει την αποδοτικότητα των ιδιωτικών επενδύσεων στα Σχολεία Δεύτερης Ευκαιρίας (Σ.Δ.Ε.). Επιπλέον εκτιμώνται οι αποδοτικότητες ανά φύλο. Η εργασία χρησιμοποιεί τη συνάρτηση Mincer και τα δεδομένα έχουν συλλεχθεί με πρωτογενή έρευνα σε όλη τη χώρα. Σύμφωνα με τα αποτελέσματα της εμπειρικής ανάλυσης το ποσοστό της αποδοτικότητας των ιδιωτικών επενδύσεων στα Σ.Δ.Ε. είναι 3,99%. Με βάση αυτά τα ευρήματα, η επένδυση στα Σ.Δ.Ε. είναι επωφελής για τους αποφοίτους.

Λέξεις κλειδιά: Αποδοτικότητα, Ανθρώπινο κεφάλαιο, Δια Βίου Μάθηση, Σχολεία Δεύτερης Ευκαιρίας

1. Introduction

According to the human capital literature (Schultz, 1961; Becker, 1964; Mincer, 1974) education and training are the main channels of producing, accumulating and diffusing human capital. Based on the human capital theory, (Schultz, 1961; Becker 1964) education and training enhance productivity and lead to higher earnings-wages.

The paper estimates the rates of return of graduates of Second Chance Schools (SCSs). The Second Chance Schools are a key component of the EU's lifelong learning policy and a key structure of the Greek Lifelong Learning system. The Second Chance Schools belong to the lifelong learning system and at the same time they are part of formal education. The graduates of SCSs receive bachelor of compulsory secondary education.

Data used come from a primary survey which was conducted throughout the country in 2019.

Our paper contributes to the literature by adding estimates from an educational field which is a priority for the European Union and Greece.

The European Commission is taking action to improve the lifelong learning and the employability. Greece which is member of the European Union and the Eurogroup, after a decade of economic crisis, has managed to stabilize its economy, to produce primary surpluses and has aim the development of lifelong learning.

The rest of paper is organized as follows: In section 2 presents a brief review of the Second Chance Schools, in Section 3, we summarize the main points of the literature, in Section 4 shows the sampling and data and in section 5, we report the empirical analysis. Finally, in section 6, we provide some concluding comments.

2. A Brief Review of Second Chance Schools

Lifelong Learning is very important for both the economic and social development of any country. It includes all forms of learning activities during a person's life, aimed at acquiring or developing knowledge, skills and abilities, which contribute to the formation of a complete personality, to the professional integration and development of the individual, to social cohesion, to the development of ability to actively participate in society and in social, economic and cultural development. It uses all the forms of learning (formal education, non-formal and informal learning).

Second Chance Schools (SCSs) are part of the European Union's Lifelong Learning policy and are a flexible and innovative educational program, which aims to eliminate the social exclusion of people who do not have the necessary qualifications and skills to manage the modern needs of the market work and integrate smoothly into social, economic and professional life.

Purpose of SCSs is the overall development of learners and their participation in economic, social and cultural development, as well as their effective participation in the workplace. While the respective objectives are: a) the completion of compulsory education for citizens aged 18 and over, b) the reconnection of trainees with the education and training systems, c) the acquisition of modern knowledge, skills and attitudes that will help them in social-economic integration and advancement, d) empowering the self-esteem of trainees and e) contributing to their inclusion or improving their position in the workplace.

To achieve the above purpose, three basic principles are adopted, which determine the identity of the SCSs program: a) the educational tools used to achieve the main purpose are flexible, so as to support each student in his effort, b) the needs of the trainees are approached as in whole and not in part. For learners to succeed in their attempts, they must be supported in dealing with difficulties in many areas, such as health, family, workplace, immediate social environment and c) the composition and variety of educational needs require multi-skilled educational and scientific potential, which can respond to the complexity of the tasks assigned to it.

Within the framework of these principles, SCSs.: a) looking for cooperation and partnership with all relevant social agencies to raise awareness of the social groups to which the schools are addressed, b) follow pedagogical approaches that focus on

individual needs, the interests and abilities of learners, c) emphasize the acquisition of basic knowledge and skills, d) cultivate social skills and help learners to form positive attitudes, as active citizens and members of society, at local, national, European and global level, e)form a flexible curriculum, in order to make use of all the social fields in which there is knowledge and accumulated experience (areas of work, social gathering, artistic creation, cultural events, etc.) and f)cooperate with each other and develop joint actions.

Today there are 78 SCSs in the 13 regions of the country, of which 12 operate in reservation stores, as well as 23 departments.

3. A brief literature review

Human capital theory argues that education and training augment individual productivity by enhancing the cognitive, behavioural and manual capacities, and thereby wages and earnings (Mincer, 1974; Becker, 1975). For the evaluation of efficiency of investments in education and vocational education and training, there have been numerous studies, international and country-specific, which estimate the rates of return. The paper presents some of those employed the Mincer method (Gomez-Castellanos and Psacharopoulos, 1990; Grootaert, 1990; Psacharopoulos and Alam, 1991; Psacharopoulos and Velez, 1994; Psacharopoulos, Velez and Patrinos, 1994; Bennett, Glennerster and Nevisons, 1995; Stanovnik, 1997; Siphambe, 2000; Campos and Jolliffe, 2003; Sakellariou, 2003; Moenjak and Worswick, 2003; Okuwa, 2004; Kahyarara and Teal, 2008; Leigh, 2008; Yakusheva, 2010).

In the case of Greece (Psacharopoulos, 1982; Lampropoulos and Psacharopoulos, 1990; Magoula and Psacharopoulos, 1999; Tsamadias, 2001, 2002, 2004; Prodromidis and Prodromidis, 2007; Tsamadias and Chanis, 2013; Chanis and Tsamadias, 2022).

4. Empirical Analysis

4.1 Data and Sources

The current survey, which was conducted throughout the country in the second semester of 2019, has employed annual earnings in the year 2018 of the hired labour of the graduates of Second Chance Schools (SCSs) and the Primary Education (P.E.) graduates (control group). The questionnaires were addressed to the SCSs and the P.E. graduates who had not received any additional education or training and were employed as full-time workers. Productivity bonuses have been included in the annual earnings, while earnings from the overtime work have not been included. Self-employed SCSs and P.E. graduates have not been included, since it becomes too complicated when one attempts to separate the self-employment income from the income coming from other factors in the production process. Part-time employees have also been excluded. The number of data is 376.

The sample has been stratified with a proportional distribution. The stratified sampling not only provides increased accuracy, but also allows separate estimates for each stratum. The proportional distribution is the most commonly used method of sampling

by strata. This procedure is followed in the absence of information on the homogeneity of the strata to ensure a representative sample (Zairis, 1991).

The Table 1 shows the data per gender and level of education.

Table 1: The Data

Level of Education	Male	Female	All
SCSs Graduates	80	64	144
P.E. Graduates	114	118	232
All	194	182	376

Source: Calculatons of Researchers

4.2. Models

The paper applies the Mincerian method for the estimation of rate of return to private investment, using the primary data. We estimate the rate of return of graduates of Second Chance Schools. The basic function is estimated by using the gross earnings, the actual experience and by gender.

The private rate of return has been estimated by using the formula:

$$LnY_i = a + b \cdot S_i + c \cdot EX_i + d \cdot EX_i^2 + u_i$$

Where: Y_i is the gross annual earnings of individual i, S_i is the years of study of individual i, EX_i is the experience (number of years) of individual i, a is the constant, u_i is the disturbance term and b, c, d are the regression coefficients.
To further fine-tune the test, we have fitted the above function separately to males and females.

4.3 Results and Discussion

Table 2 presents the estimations of rate of return to private investments on Second Chance Schools.

Table 2: Estimations of Rates of Returns

Independent Variables	All	Males	Females
	Dependent Variable (LnYn)		
a (Constant)	8,1741** (89,15)	8,419** (67,67)	8,011** (61,55)
S	0,0399** (3,64)	0,0351** (2,44)	0,0403** (2,53)
EX	0,0701** (10,45)	0,0421** (4,59)	0,0913** (9,63)
EX²	-0,0005** (-2,11)	-0,000239** (-0,76)	-0,00094** (-2,57)

R^2	0,6923	0,6712	0,7274
Adj. R^2	0,6898	0,665	0,7228
F	278,96	129,31	158,32
Signif	0,0000	0,0000	0,0000
N	376	194	182

Source: Calculations of Researchers
Notes: ** statistically significant at 5%, Numbers in parentheses show the t-statistic values

The signs of the coefficients conform to the human capital theory. The explanatory power of the model (R^2 - adjusted) is fluctuated from 66.5-72.0% and is consistent with previous research. The R^2 – adjusted values are considered to be also satisfactory, given the fact that the data are cross-sectional. The t-statistic is satisfactory.

The above findings suggest that the rate of return of graduates of Second Chance Schools is 3.99%. Particularly by gender, the rate of return of females is higher than that of males. The above results are in accordance with the human capital theory.

For the evaluation of the profitability of the private investment in Second Chance Schools, we compare the rate of return on the investment to the ten-year bond interest rate. The volatility of the ten-year bond interest rates in general and especially during the period under review, is high. The average value of the interest rate during the year of reference, 2018, is 4.185%.

The rate of return of the private investment in the Second Chance Schools was estimated at a level of 3.99%. That is, slightly lower than the ten-year bond yield. Taking into account the non-financial benefits of education in Second Chance Schools (psychic income, socialization, other individual activities such as in better health care, in the most efficient organization and management of the household, in the cultivation of environmental consciousness, in increasing of the possibility of participation in the labor market), the private investment in Second Chance Schools, especially for women, is beneficial.

6. Concluding Remarks

This study estimates the rates of return of private investment on Second Chance Schools, which are a basic structure of the Greek Lifelong Learning. The paper uses data from the year 2018 and applying the Mincer method. The results are satisfactory. It should be noticed that the calculated rates of return have been underestimated, since the non-monetary benefits, externalities and spillovers of the SCSs have not been taken into account. Moreover, the residual value of the human capital after leaving the labour market has not been included in the calculations. In addition, the SCS graduates are more likely to participate in the labour market than the Primary Education graduates. Therefore, the investment of individuals to the Second Chance Schools is profitable. Finally, we note that, according to the empirical findings, the rate of return of investment of females is higher than that of males.

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