

# Implications of Higher Education on Earnings: An Empirical Analysis of Skills and Competence

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## ABSTRACT

One of the central topics in the research of higher education is the degree of match between education and work as measured by earnings. Traditional literature has shown the correlation between the duration of studies and earnings in the work life. The authors' present study aims to enlarge this scope by evaluating the impact of competence and skills learned in the university with that of the skills demanded in the work life in an empirical study. In this paper, the authors have collected elementary data from the Finnish university graduates with a respectively high response rate. Consequently, using the data of these university graduates they aim to demonstrate the mismatch between the demand for academic knowledge and the professional demand in the work life and draw policy implications on the findings. The authors will also show how these phenomena affect higher education and earnings through the analysis of skills and competence. New research opportunities are opened in the survey evidence on skills learned at the university.

## KEYWORDS

Educational Economics, Employability, Employment, Labor Market, Rate of Return, Skills and Competence

## INTRODUCTION

One's decision on higher education mainly originate from the expectation of its value in the work life, as expressed by earnings (Dunifon & Greg, 1998). However, the decision to enter higher education is its value to subsequent career and, in particular, earnings, which might be the case for business and management students but does not explain why students continue to study arts or humanities when the returns to education are significantly lower. Consequently, it is acknowledged that the instrumental view of higher education is not pervasive (Borghans, 2005). While the skills demanded in the work life may be also attained through occupational trainings, most graduates would prefer to actualize the value of higher education directly in the labor market via financial returns. However, the match between education and work is not always clear. If mismatch between education and work exist, then there is an opportunity cost associated with the phenomena of over- and under-education. The mismatch of the field of study and the field of work also generate additional costs. Subsequently, our present study aims to evaluate these mismatches in terms of skills and competences including

their implications on earnings. We are also interested in knowing whether a university degree is a prerequisite to a better stance in the job market.

The more recent focus on overeducation and overskilling in the literature creates important challenges to the traditional human capital theory interpretation of the link between education and earnings (Xia et al., 2012). The goal of this paper is to estimate the returns to a university degree and obtain survey evidence on skills learned at the university in Finland. It is acknowledged that the university system in Finland differs significantly from the education system in USA or UK, where educational economics have been studied extensively. While the effect of higher education on work life has been studied by many, research on skills and competences including their relations with earnings in Finland is rather limited and the potential to do so is high.

The role of higher education in the Finnish economy and the relationship to the labor market has been previously studied by researchers such as Shumilova et al. (2012); Xia et al. (2012); Xia and Liitiäinen (2014). A study on the common global trends of higher education were conducted to emphasize the key impact of higher education on economic development in an international setting (Baum, 2014). This study aims to address the relationship between a University based education preparation for work as measured by earnings. We will present research findings to show that there is a mismatch between University education and the skills and competencies demanded in the professional workplace. While the relationship of a college education for graduates to potential employment is of high importance, in this study we aim to differentiate between academic knowledge and workplace demand, as reflected by earnings. That is, this research details the relationship between higher education and skills demands focusing more narrowly on skills, competences and earnings.

We have organized our paper as follows. We will first establish the background of our study. The data and methods sections will classify the research approach of this paper. The results section will evaluate our assumptions on higher education. Finally, the conclusion and discussion section will summarize our results and discuss their implications.

## BACKGROUND

The theory of human capital has derived its meanings from the early research work done by Marshall (1890), Mincer (1958), Schultz (1961), Becker (1975) and later complemented by the researchers such as Carneiro, Hansen and Heckman (2003); Berkhout et al. (2010). Specifically, Mincer has built the basics for the earnings function in which the productivity of an individual is measured through financial means in terms of earnings. In Mincer's earnings function the time period of education has a direct effect on earnings. Extension of the Mincer's earnings function included factors that measures the impacts of skills learned during studies, working experience during and after studies as well as the match of education and work. (Grogger and Eide, 1995; Hartog, 2000) Earnings function can be used as in empirical studies to observe the behavior of different determinants of wages. Regression of wage on a vector of independent variables, depending on choice, reveals the development of earnings based on the controlled settings.

According to Betts (1996) earnings is one of the most important factors in choosing higher education over work. In order to balance the investment to education with that of its returns, the graduates need to actualize the value of education and apply the knowledge learned in the universities to that of the skills needed in the work life. Traditional literature has established a correlation between higher education and the skills demanded in the job market. In addition, many researchers, such as Sicherman and Galor (1990); Alba-Ramirez and San Segundo (1994); Blundell et al. (2000); Psacharopoulos and Patrinos (2004), have also established the link between higher education and

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