

معهد أبحاث السياسات الاقتصادية الفلسطيني (ماس)



Palestine Economic Policy Research Institute (MAS)

**العائد على التعليم للذكور والإناث في
الأراضي الفلسطينية المحتلة:
الاتجاهات والمحددات**

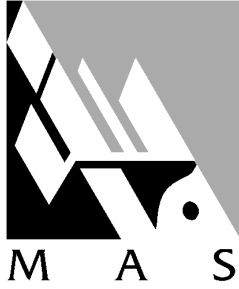
**Return to Schooling for Males and Females
in Palestine: Trends and Determinants**

**يوسف داود
طارق صادق**

**Yousef Daoud
Tareq Sadeq**

2012

2012



Palestine Economic Policy Research Institute

Return to Schooling for Males and Females in Palestine: Trends and Determinants

**Yousef Daoud
Tareq Sadeq**

2012

The Palestine Economic Policy Research Institute (MAS)

Founded in Jerusalem in 1994 as an independent, non-profit institution to contribute to the policy-making process by conducting economic and social policy research. MAS is governed by a Board of Trustees consisting of prominent academics, businessmen and distinguished personalities from Palestine and the Arab Countries.

Mission

MAS is dedicated to producing sound and innovative policy research, relevant to economic and social development in Palestine, with the aim of assisting policy-makers and fostering public participation in the formulation of economic and social policies.

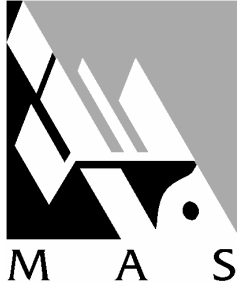
Strategic Objectives

- ♦ Promoting knowledge-based policy formulation by conducting economic and social policy research in accordance with the expressed priorities and needs of decision-makers.
- ♦ Evaluating economic and social policies and their impact at different levels for correction and review of existing policies.
- ♦ Providing a forum for free, open and democratic public debate among all stakeholders on the socio-economic policy-making process.
- ♦ Disseminating up-to-date socio-economic information and research results.
- ♦ Providing technical support and expert advice to PNA bodies, the private sector, and NGOs to enhance their engagement and participation in policy formulation.
- ♦ Strengthening economic and social policy research capabilities and resources in Palestine.

Board of Trustees

Ghania Malhees, Ghassan Khatib (Vice Chairman), Jawad Naji, Jihad Al Wazir, Lana Abu-Hijleh, Luay Shabaneh (Secretary), Magda Salem, Mohammad Mustafa, Nabeel Kassis (Chairman), Nafez Al-Hussieni, Radwan Shaban, Raja Khalidi, Sabri Saidam, Samir Huleileh (Treasurer), Samir Abdullah (Director General).

Copyright © 2012 Palestine Economic Policy Research Institute (MAS)
P.O. Box 19111, Jerusalem and P.O. Box 2426, Ramallah
Tel: ++972-2-2987053/4, Fax: ++972-2-2987055, e-mail: info@mas.ps
Web Site: www.mas.ps



Palestine Economic Policy Research Institute

Return to Schooling for Males and Females in Palestine: Trends and Determinants

**Yousef Daoud
Tareq Sadeq**

2012

Return to Schooling for Males and Females in Palestine: Trends and Determinants

Researchers: Dr. Yousef Daoud
Dr. Tareq Sadeq

Reviewers: Dr. Hosny Zoabi, Lecturer, Tel Aviv University
Dr. Taleb H. Al-Sarie, President, Middle East University, Jordan
Dr. Belal Al Fallah, Researcher and Economic Consultant

Layout: Lina Abdallah

Funding: This study was funded by the Arab Bank for Economic Development in Africa (BADEA) – Islamic Development Bank (IDB) – Al-Aqsa Fund

Palestine Economic Policy Research Institute (MAS)
Jerusalem and Ramallah

ISBN 978-9950-374-22-5

Foreword

The returns on education have been a matter of debate. Some claim that the term 'return' entails viewing education as a cash investment whereas most countries, through their constitutions, entitle to their citizens education as a fundamental right. Much of what a nation seeks from its educational system is not only the individual payoff, but also benefits that are vital to a society's growth. Thus, measuring the return on education should account for two things: impact on per capita income and socioeconomic payoffs.

The relationship between years of schooling and income is little disputed, however, the correlation between more education and income varies from economy to another.

This research is an important contribution to studying the impact of education on per capita income in the Palestinian Territory which is subject to various impediments resulting from the Israeli occupation and its hurdles, as well as the fact that 10% of the workforce in the OPT is still working in the Israeli labor market. The study seeks to measure the return on education and identify the economic variables affecting it.

With the release of this study, I would like to thank the author, Dr. Yousef Dawoud, for adding such valuable research to the field and producing a source for developing policies that would further boost the return on education. The expected policies would assist in setting the needed conditions for building a knowledge-based economy.

Finally, we would like to thank the study's anonymous reviewers and discussants, as well as participants in the workshop, who discussed the results of the study and contributed to enriching the debate and the development of the study's recommendations. Special thanks are extended to the Arab Bank for Development in Africa and the Al-Aqsa Fund for sponsoring this study, which is part of the research program: Research Priorities of the Palestinian National Authority.

D. Samir Abdullah
Director General

Executive Summary

Introduction

The resurgence of interest in education is due to being a key component of human capital at both the individual and societal levels. Individually, education means better job opportunities (in terms of pay, job security, knowledge and other benefits). At the societal level, education is considered one of the most important determinants of GDP in the long run. When an individual decides to enroll in an educational institution, s/he does so, on a cost-benefit basis. Cost involves the total expenditure on education as well as income that could have been generated by those who have not received education. Benefit, on the other hand, is the difference in pay over the working life (the difference between cost and benefit is calculated in present values). Therefore, spending on education is considered as investment in human capital. Thus, private return to schooling is considered as the excess benefit over cost (as a percent of cost) as a result of increasing the period of schooling by one year. Jacob Mincer (1974), Gary Becker (1964) and Schultz (1961) developed the empirical foundations of human capital theory.

Return on education refers to the marginal return of wages with respect to years of schooling; i.e. the average rate of increase in wages for each additional year of education. Part of the interest in the study of private return on education stems from the fact that educated people receive rewarding wages as a result of their increased productivity which is enhanced by the knowledge they have obtained as well as the skills and production technologies they have mastered. This increased level of productivity is combined with a group of social and economic characteristics that positively impact the society as a whole.

This study seeks to estimate the return on education in Palestine, on the one hand, and study the economic variables that play an important role in determining the return on education, on the other.

Over the past few decades, the Palestinian labor market has sustained several shocks. The opening of the Israeli labor markets for Palestinian workers, as well as the increased Palestinian university graduates (in the eighties) lead to a decline in the return. However, once the PNA was established, its institutions would absorb thousands of Palestinian skilled

labors. The outbreak of the Al-Aqsa Intifada and the closure of the labor market in Israel have rehabilitated the return to schooling.

Structure and Methodology of the Study

Chapter II reviews literature and some studies conducted on return on education and its determinants. The study utilizes cross-sectional data for the labor force surveys from 1996 to 2010 prepared by the Palestinian Central Bureau of Statistics. Chapter III outlines some descriptive statistics of wages; unemployment rate; labor force participation rate; and distribution of male and female workers in different sectors by place of residence, place of work and years of schooling. Chapter IV examines the model used in gauging the return to schooling and its estimates for each quarter over the 1996-2010 period using Ordinary Least Squares (OLS) and Heckman's modifications on Mincer's model.

To determine which variables are significant in explaining changes in the return on education, Chapter VI outlines the main conclusions and recommendations. The study uses estimated return on education in the fourth quarter as the dependent variable and it applies the logarithm of the ratio of the average wage of skilled workers to the average wage of unskilled workers.

Study Results

Using Mincer's model, the study found that return to schooling for females is higher than that for males. When Heckman model is employed, the estimates are different from those of the OLS, especially between 2000 and 2005; still, the trends of return to schooling by OLS and Heckman move in the same direction between 1996 and 2010. However, there are still some variations:

- ✧ The return to schooling for males declined in 1996 as a result of the high rate of employment in Israel and the settlements. Since workers in Israel and the settlements are less educated and earn higher wages, the wage gap between the educated and the less educated had been narrowed down.
- ✧ Returns to schooling grew in 1998 despite the increase in female labor supply with more than 12 years of schooling. The impact of the decline in the unemployment rate for educated women who received 13 - 16 years of schooling was greater.

- ✧ Over the period 2000–2002, the return to schooling has increased. The Israeli occupation tightened closure on the West Bank and the Gaza Strip, thus reducing employment in Israel and the settlements. This widened the gap between the educated and the less educated, particularly among males.
- ✧ Over the period 2008–2010, return on female education declined as a result of the high rate of educated female participation in the workforce as well as the high unemployment rate among educated females.
- ✧ The difference between Heckman and OLS estimates is insignificant for males, but it is significant for females because of the low rate of female participation in the workforce.

The results of estimating the determinants of returns to schooling show that the signs all independent variables' coefficients (the ratio of skilled workers to manpower, the ratio of skilled workers to total employment, the ratio of workers in Israel and the settlements to total employment, and the unemployment rate) are consistent with theoretical expectations, except for the ratio of skilled workers to total employment among males. For this category, the sign is expected to be positive because the increased demand for skilled labor increases the return on education. However, this is positive for the partial correlation coefficient, which requires a detailed examination of the regression model.

Unemployment is a statistically significant factor and its sign is positive as expected. Nonetheless, the impact of unemployment on females is higher than on males, since the increase in the unemployment rate by 1% raises the return by 0.026% for males compared with 0.14% for females. Meanwhile, the increase in the unemployment rate by 1% raises the wage gap between skilled and unskilled workers for men and women by 0.6% and 0.9% respectively. Clearly then, unemployment among women tends to reduce the wages of unskilled female workers more so than their male counterparts.

Employment in Israel, on the other hand, tends to affect the schooling return in the same direction for both sexes, but more so for women despite the fact that women's employment in Israel is very low. Indeed, the ratio of females working in Israel to total working women is also low. The rate of female employment in Israel fell gradually, but for men, this rate declined dramatically after the second intifada. This may have contributed to this peculiar result. Further, the percentage of men working in Israel remained relatively constant after the second intifada.

The supply of skilled labor also has a negative effect, but it is not sizable across the board. Contrary to expectations, the effect of demand for skilled workers appears negative, while the value of demand for labor in Israel is negative as expected. However, the relationship between the demand for skilled labor and employment in Israel is strong and inverse. The high proportion of workers in Israel leads to lower returns on education for both men and women, but it affects women more. There is no clear-cut reason for this aspect though the size of female employment in Israel is significantly low.

Recommendations

Building on these key findings, the study provides the following recommendations:

- ✧ Since the return to schooling increases exponentially with educational levels, the Palestinian Authority should give more attention and support to higher education because investment in this sector is more attractive. Most Palestinian higher education institutions are non-governmental, but they are not-for-profit, and they sustain major financial crises. Extending support for this sector would increase the number of educated people in the labor market and consequently increase wages and reduce poverty and unemployment rates.
- ✧ The impact of employment in Israel and the settlements is negative for men and women alike. This highlights the role played by Israeli policies on the Palestinian labor market. Other studies found that closure policies and the reduction of Palestinian employment in Israel increase unemployment in the domestic market and eventually reduce wages. Thus, reducing dependence on employment in Israel is imperative in the long term, which is substantiated through investment in education.
- ✧ Since the demand for skilled female labor is an important factor in determining the return on education for women- and because women's unemployment increases with the level of education, then urging employers to give equal opportunities for men and women will raise the return on education of women.
- ✧ Because education increases the participation of women in the workforce- and since the marginal return on education for women is much higher than for men- it pays to support women's higher education.
- ✧ Focusing on the supply of skilled labor without providing job opportunities may backfire, leading to destructive implications in the long run (especially if this is combined with calls to reduce dependence on employment in Israel).