



education review // reseñas educativas

editors: gene v glass gustavo e. fischman melissa cast-brede

a multi-lingual journal of book reviews

September 21, 2010

ISSN 1094-5296

Carroll, Stephen J. & Erkut, Emre. (2009). *The Benefits to Taxpayers from Increases in Students' Educational Attainment*. Santa Monica, CA: RAND Corporation.

Pp. xxiv + 118 ISBN 978-0-8330-4742-7

Reviewed by Donna C. Tonini

Teachers College, Columbia University

Much of the recent debate surrounding education in the United States today has centered on the need for elevated standards in schools to foster the skills necessary to succeed in a 21st century workplace. From the “No Child Left Behind” policies of the Bush era to President Obama’s “Race to the Top” program, most government programs today focus on raising both the achievement level of students and the accountability of teachers and schools to reach these objectives. While these are worthwhile educational goals, far less attention has been paid to the societal gains that accrue from merely keeping students in school in the first place. The authors of this recent Rand report contribute to the education literature by conducting a study which provides evidence that the benefits of maintaining school attendance and reducing high school drop-outs far outweigh the costs of schooling. Their

Citation: Tonini, Donna C. (2010 September 21) Review of *The Benefits to Taxpayers from Increases in Students' Educational Attainment* by Carroll, Stephen J. & Erkut, Emre. *Education Review*, 13. Retrieved [Date] from <http://www.edrev.info/reviews/rev973.pdf>

thoughtful and thorough exploration highlights the financial benefits reaped by federal, state and local taxpayers when the educational attainment of secondary and post-secondary students is increased.

Although the book recognizes the important intrinsic and extrinsic benefits that accrue to those students who stay in school and complete their degrees, the real focus is on the benefits to society that result from the increased educational attainment of students. Specifically, the book examines how the completion of high school in addition to other levels of schooling benefits taxpayers over time with regards to tax revenues, social program revenues and expenditures, and the costs of incarceration. The authors look at each of these segments in terms of both their benefits and costs, but they do not entertain the additional costs of the motivational programs that may be necessary to influence at-risk youth to stay in high school and obtain their diplomas. Thus, the net benefits of increased educational attainment only reflect the costs of students spending additional time in school, as the report does not consider any other supplementary programmatic expenditure. Regarding this costing omission, the authors are careful to call attention to the limited scope of their study, admitting it lacks the analytical approach necessary to render it a true cost-benefit analysis. Despite this limitation, however, this volume provides strong evidence in favor of dedicating more educational resources to advancing the educational attainment of students at both the high school level and post-secondary levels.

The research questions focus on how increased educational attainment at multiple levels of secondary and post-secondary education raise both tax payments and contributions to social programs such as Medicare and Social Security. Another objective of the research examines how increasing students' time in school results in reduced public expenditures on programs that provide social support and insurance, as well as decreases in public spending on incarceration. Working with a respectable sample size of 40,300 participants from the United States Survey of Income and Program Participation, the authors employ statistical analysis, using probit to estimate the probability of an

Stephen J. Carroll is a Senior Economist of Education at RAND Corporation, where he focuses on policy issues in civil justice and in education. He is currently the Secretary and CFO of the Council for Aid to Education. His work centers on the challenges facing community colleges in Los Angeles, and the condition of California's K-12 system. He holds a PhD in economics from Johns Hopkins, and an MS and BS from the Illinois Institute of Technology.

Emre Erkut is a Policy Analyst of Education at RAND, where he focuses on corporate governance, regulation and organizational economics. His contributions include work on projects such as the development of a quantitative methods for measuring corporate culture and an analysis of the market for US brokerage services. He holds an MPhil in policy analysis from the RAND Graduate School, an MS in industrial administration from Purdue, and a BS in mechanical engineering from Bosphorus University.

individual paying payroll and other taxes in one part of their model. The second part of their model involves ordinary least squares regression to determine the amount of such payments, based on each individual's independent variables of educational attainment level, age, race/ethnicity, resident status, and other interaction variables. The study utilizes similar approaches to assess an individual's likelihood of utilizing social programs such as welfare and Medicaid, in addition to approximating the level of benefits spent by each segment of the sample population, stratified by race and sex. Finally, the authors use a matrix model to evaluate the likelihood of an individual going to prison, but do not include the modeling structure in the report itself, instead making it available to readers upon request.

The conclusions drawn by the authors are directly derived from the various regressions conducted on tax payments and benefit usage, as well as the matrix analysis on incarceration. The authors find that the more education an individual receives, the greater the likelihood of employment in addition to a higher salary and benefits, which in turn increases the tax payments made by that individual, as well as reduces his or her dependency on government programs, thereby reducing the burden on taxpayers. The greatest savings to taxpayers occurs when an individual receives his or her high school diploma, rather than dropping out in an earlier grade. Although additional benefits accrue to taxpayers from an individual receiving some post-secondary education, and even more from that individual achieving a college degree, the increments in savings are smaller. Cumulatively, however, graduating from college nets the largest gain to taxpayers, with the average college graduate contributing anywhere from \$120,000 to \$192,000 to the tax base, depending upon demographics. The authors had similar results regarding incarceration, finding that the more education a person has, the less likely he or she is to commit a crime, therefore reducing the costs of imprisonment to the public. The authors conclude that the difference in tax payments made and the amount of benefits used by an individual are the result of his or her level of education. Although the authors assume the correlation between tax payments, benefit utilization and education level is causal,

they are also quick to point out that there are other possible factors which influence their relationship as well. Indeed, the models themselves have low R^2 s (the correlation coefficient squared), which indicates a low level of explanatory power, lending credence to the presence of other variables that may influence these relationships. Nonetheless, the evidence the authors present does back up their assertion that higher levels of educational attainment result in increased financial benefits for federal, state and local taxpayers.

Despite the strengths of the study, readers would benefit from a more thorough explanation of some of the assumptions employed within the models, as policymakers must fully understand the parameters of these calculations before generalizing the findings to other potentially applicable situations. For example, as many of these benefits and costs take place in the future, the authors correctly discounted them by using a discount rate to calculate their net present values. However, the study could have been further bolstered if the authors not only explained the rationale behind the three percent discount rate they used, but also employed other discount rates within an additional sensitivity analysis to demonstrate other possible net benefit scenarios. Also, the book would serve policymakers better by taking a more comprehensive approach to the costing methodology used, perhaps by utilizing the ingredients method to provide greater detail on the cost of schooling. In addition, some of the terminology and economic phenomena used should be explained more thoroughly so that all policymakers can access the ideas, such as transfer payments and quadratics. Finally, the introduction alludes to an inclusive summary in chapter eight, yet there is no chapter eight included in the volume, leading readers to believe that they have missed important material.

These shortcomings aside, the authors present a convincing argument that increasing the educational attainment of secondary and post-secondary students will result in significant monetary benefits to all taxpayers. The authors clearly demonstrate through their research and sensitivity

analyses that the benefits of high school diplomas and furthering one's education beyond high school outweigh the costs to society of completing such schooling. Even though there are different cost and benefit patterns across the different races and sexes, the resulting trends all net savings to the taxpayer, with the only variation being the degree to which payments are increased and costs are reduced. This book effectively supports and augments existing research regarding educational attainment, and will serve to justify the addition of programs and policies that motivate students to stay in school, amplifying the benefits to both themselves and society.

About the Reviewer

Donna C. Tonini holds an EdD from Teachers College, Columbia University, where she focused on finance and planning within the International Educational Development program. She researches areas of educational access and quality, secondary education policy and practice, cost-effectiveness analysis, and African education, especially in East Africa. She holds an EdM in International Educational Development from Teachers College and an MBA and BS in Finance from Bentley University, Waltham, MA. Email: dct2103@columbia.edu.

Copyright is retained by the first or sole author,
who grants right of first publication to the *Education Review*.
<http://www.edrev.info>



Editors

Gene V Glass

glass@edrev.info

Gustavo Fischman

fischman@edrev.info

Melissa Cast-Brede

cast-brede@edrev.info
