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## DISCUSSION: THE DISTRIBUTION OF THE COSTS AND BENEFITS OF PUBLIC SCHOOLING

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David Holland has provided a basic contribution to the expanding literature concerned with the distributional effects of expenditures on education. He has ventured into the relatively untouched realm of measuring the distributional impact of tax costs and expenditure benefits of public elementary, secondary and higher education. Our fundamental ignorance of the equity issues involved in public education, coupled with the economic and social importance of its eventual product, provide ample justification for continued research in this field.

Even though a valuable literature review occupies a significant proportion of Holland's paper, I will limit my comments to that portion of the paper that is original. Reviewing briefly, Holland's goal is to determine the distribution by income class of net benefits resulting from education. To do this, he compares the average per family tax costs for the provision of education with the average per family expenditures made. The difference between the two is the net subsidy received. Holland's basic conclusion is that the net subsidies from lower (as opposed to higher) education are regressive.<sup>1</sup>

My comments begin with a brief review of earlier work in the broad area of the economics of education. The earliest literature emphasizes the role of education in economic growth. In the most famous study of this era, Denison [4, p. 73] found "that education contributed 42 percent of the 1.60 percentage point growth rate in product per person employed." Subsequent studies by Schultz and others [1, 7, 9, 10] reformulated the problem, viewing education as a process of capital formation. The principal economic problem during this era concerned

the efficiency with which available resources were allocated among alternative investment activities.

For the past decade or so, most studies in this area have refined our techniques for evaluating the efficiency with which society (and the individuals within it) invests in schooling. In general, the benefits from investments in human capital have been measured as the present value of differential future lifetime earnings. In spite of significant analytical progress, many conceptual problems remain in this body of literature. In the first place, there is still a problem of identifying the costs and benefits that accrue to society and those that pertain to individual investment decisions. Obviously the two are not mutually exclusive. A further complication develops when we attempt to assign the full benefits of education to the student without regard to the benefits received by parents and peers. A tentative hypothesis might suggest that the benefits children receive from their education relative to the benefits received by parents varies directly with the level of the schooling.

It has been difficult to correct our estimates for innate differences in student capacity, the effect of peer association, teacher quality, and other factors that might affect the eventual benefit received by the student [3]. Efforts to correct for these differences have not been widely accepted [2]. Finally, it is somewhat heroic to project the benefits that will be received by a student cohort at some future point in time based on present earnings differentials of an older cohort. Indeed, it is the inherent supply and demand conditions that are being developed within the student cohort that will affect earnings

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<sup>1</sup>A word of warning is in order with respect to the use of the terms "regressive" and "progressive." While Holland's use of "regressive" to describe net subsidies that are "pro-poor" is conceptually impeccable, I find it to be quite uncomfortable. It is somehow difficult to support a "regressive" policy even if it is consistent with my biases.

differentials in the future. A measure of investment efficiency in this sense has not been developed.

In their 1969 article, Hansen and Weisbrod [5] extended the inquiry beyond consideration of the efficiency in human capital investments to the realm of the distributional impacts of investments or expenditures on higher education. Holland has continued this line of research by extending the analysis to lower education in Oklahoma. While the results of these distributional studies are interesting, their lack of conceptual conformity to previous studies must be emphasized in order to avoid possible misinterpretations.

In the first place, expenditure benefits—the concept of returns used by Holland—is inconsistent with the nature of the good being treated. For a social good (such as lower education), it is not the use of that good by income class that must be examined within a policy framework; but instead, it is the availability of lower education that is critical.<sup>2</sup> Presumably, the availability benefits of schooling are proportional so long as educational quality does not vary by income class. Within this framework, the interesting policy questions are those of urban-rural distribution of net benefits, inter-district net benefit variability, etc. [11].

A second problem with Holland's measure of expenditure benefits is that it avoids the important intergenerational problems associated with investments in education. Implicitly he assumes that all benefits and costs of lower education are absorbed by the family. This treatment brings us full circle from the concept of education as an investment process in which there is no consumption value to the student. The approach taken by Grubb (he measured benefits as the present value of discounted differential lifetime earnings) finds and provides a certain conceptual compatibility with previous studies.

A third and final remark should be made with regard to the comparison of expenditure benefits with tax costs for a given year by the income classes of that year. In the field of education, atemporal distributional studies may provide misleading results. One must wonder if it is valid to discuss the distributional aspects of an investment process that usually spans twelve years relative to the income of the parents in a single year. For instance, many children receive a significant portion of their lower education while their parents are graduate

students—the poorest of the poor as measured by current taxable income. Perhaps more meaningful results would be forthcoming if the present value of lifetime tax payments of the parents (or students) were compared with expected lifetime earnings by lifetime earnings classes.

In summary, expenditure benefits as an empirical measure of educational benefits must be seriously questioned. Certainly, additional refinements are necessary before any substantive distributional conclusions can be sustained. Adjustments for the quality of education is suggested as a first priority. There remains the question of whether or not investments in lower education are efficient within this empirical context. It would seem that some consideration of efficiency within an empirical context is a precondition for a meaningful evaluation of distributional effects [6].

Finally, a rewording of the paper would be helpful. I find "expenditure benefits" to be a value-charged phrase. "Net tax incidence" might better describe the underlying empirical foundations of Holland's work. There seems to be a certain inclination to consider tax payments as a "cost" and adjusted per family expenditures as a "benefit." Unless possessed of remarkable will, the reader is thrown into the conceptual alley of analyzing the results within a cost-benefit framework. While this is not the author's intention, it is certainly the reader's proclivity to do so.

I think it essential to discuss the policy implications of this paper. However, this task will be put aside until such time as we agree as to what distribution of net tax incidence is optimal. Until that time, Holland has initiated an interesting line of research. He should be commended on the development of a procedure that allows a first approximation to the complexities of the distributional impact of investments in education. Nonetheless, much remains to be done. Hopefully, these comments will suggest some new avenues of research that can complement and/or supplement these first steps into the distributional void.

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<sup>2</sup>Lower education (or at least elementary education) is a social good in the sense that within the law it must be consumed in equal amounts by all. The implied social preference function does not necessarily lead to an efficient allocation of resources from a private point of view. Whether or not this is the case depends on the structure of tax payments relative to the income elasticity of social wants. [8, chap. 1]

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