The Costs and Benefits of Education;

Is it Worthwhile?

A Comparison of C. Jencks'
Inequality: A Reassessment of
the Effect of Family and
Schooling in America
with the results of
various economic studies

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For years American liberals have been proponents of
more schooling for all. Most budgeting decisions have
been made on the assumption that the more money the
school has, the better education the students will receive.
It is further believed that the better education a student
receives and the longer he stays in school, the higher
income he will receive. Economic studies undertaken
during the 1950's and 60's have tended to concur with
this approach. Christopher Jencks, a Harvard Professor
of education, does not agree. In his most recent book,
Inequality; A Reassessment of the Effect of Family and
Schooling in America, he states the results of his latest
research. His findings suggest that education is not
nearly as important with respect to determining income
as has been thought in the past.

In Mr. Jencks' study he found that when computing
the difference in income among random individuals and
comparing this to the difference in individuals whose
occupational status, family background, cognitive skills,
and educational attainment are all similar, he finds only
12-15 percent more inequality among those randomly
picked. In his interpretation of this, he deems this as
an insignificant difference, implying that these factors
are not as important as we have so long believed. Mr.
Jencks infers that income may depend on a variety of

different talents that have little, if anything, to do
with those factors. Some possible characteristics
Jencks uses to explain the variance are "the ability
to hit a ball thrown at high speed, the ability to type
a letter quickly and accurately, the ability to persuade
a customer that he wants a larger car than he thought he
wanted, the ability to look a man in the eye without
seeming to stare."[1] Mr. Jencks also states that luck
is an important variable.

From these findings, Jencks draws a rather startling
conclusion. He states that if the objective is to
reduce the inequality of incomes, it will not help sub-
stantially to reduce the inequality of educational
opportunity. This would imply that it is not feasible,
for the sole basis of equalizing income, to equalize the
chance of each individual to go to school as we have been
attempting. He did admit that the differences between
occupations might decline due to the fact that the public
would be less in awe of professionals and managers, and

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[1] Christopher Jencks, Inequality; A Reassessment
of the Effect of Family and Schooling in America.
(New York, New York: Basic Books Inc.,1972), p. 227.

they would be "more skeptical about monopolistic arrangements which now keep elite salaries high."[2] Mr. Jencks states, however, that this is not the critical area of inequality; incomes within occupations show the largest differences.

Previous comprehensive studies by economists fail to agree with Mr. Jencks' findings that education does not significantly effect income. Let us look at some of the factors one must include when attempting to determine the benefits of education. To the individual there are various private costs to be considered, but the society as a whole must also weigh their costs when they attempt to decide if education is worth spending tax dollars on (In 1968 expenditures in the United States on formal education reached about $60 billion[3]). The main private cost, at least for those in secondary schools and colleges, is that of the opportunity cost of foregone earnings. Each individual must weigh the amount of estimated extra earnings and social gratifications he would receive from schooling against the

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[2] Jencks, pp. 224-225.
[3] George C. Keller, "The Cost-and Price- of Education," Nation, 210 (March 2, 1970), p. 242.

amount of income he could receive if employed during this time period. These opportunity costs must be added to the cost of tuition, books, and supplies when attempting to obtain the true expense of schooling. Society, however, must also include the expense of salaries maintenance, and buildings when considering its costs. Society also should remember that when a person is in school he cannot contribute to the output of the economy and, thus, this too is a cost to be considered. When society attempts to measure the benefits of schooling, it must include the fact that besides earning income for himself, the student, as well as those around him, receives many non-economic benefits.[4]

Studies by Gary Becker, W. Lee Hansen, Daniel Rogers, Giora Hanoch, and others all show significant rates of return from high school and college education. Giora Hanoch found that by using 1960 census data, there was an 18 percent rate of return to high school and a 10 percent to college. When these were adjusted due to location and ability, they were reduced to 16 percent

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[4] J.R. Davis, "The Social and Economic Externalities of Education," Economic Factors Affecting the Financing of Education, Edited by R. Johns, I Goffman, K. Alexander, and Dewey Stollar, (Gainesville: National Educational Finance Project, 1970), pp. 59-81.

to high school and 9.6 percent to college.[5] W.Lee

Hansens' returns based on 1949 data were 15.3 percent

to high school and 11.6 percent to college.[6] Let us

look at Mr. Roger's and Mr. Becker's studies in more

detail in order to find how these rates-of-return

are derived.

The most common technique used by ecnomists when

attempting to estimate the benefits of education is

the rate-of-return approach. This method is used to

find the private returns to an individual in order to

decide if the time and money invested in education is

a worthwhile effort.

> The standard method is to observe, for a
> particular year, and for different age
> cohorts, the net earnings differentials
> after tax that are associated with
> various amounts of education received,
> and then to calculate the interval rate
> of return which would equate the present
> value of these expected differentials,
> properly adjusted for income-determining
> factors other than education, to the
> private costs incurred by obtaining
> additional education. Social rates
> of return are derived from the private

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[5] Giora Hanoch, "Personal Earnings and Investment
in Schooling," _Journal of Human Resources_ (Summer,1967),
pp. 310-329.

[6] W. Lee Hansen, "Total and Private Rates of Return
to Investment in Schooling," _Journal of Political
Economy_, 71 (April, 1963), pp. 128-140.

rates by allowing for the total public
and private costs of education, and by
adding in earnings that are taxed away.
In other words, lifetime earnings are
estimated from cross-section data class-
ified by age and we solve for the discount
rate at which the present costs of extra
education would yield the prospective
stream of extra earnings.[7]

This method is by no means fool-proof and it

has many critics. The major discussions on this method

center around six main areas:

(1) education, earnings, endowed ability, in-
dividual motivation, and social class are
all inter correlated and no one has yet
succeeded in satisfactorily isolating
the pure effect of education on earnings;
(2) it is assumed that people are
motivated solely by consideration of
the financial gains of additional school
attendance, thus ignoring both the non-
pecuniary attractions of certain occu-
pations and the consumption benefits
of education; (3) the calculations
depend on the projection of future
trends from cross-section evidence, thus
neglecting historical improvements in
the quality of education as well as
the effect of the secular growth of
education on prospective earnings
differentials; (4) existing earnings
in favour of educated people reflect,
not differences in their contribution
to productive capacity, but rather
long-established social conventions
in an inherently imperfect labour
market; hence, rate-of-return studies

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7 M. Blaug, "The Rate of Return on Investment
in Education," Economics of Education, Edited by
M. Blaug, (Baltimore, Maryland: Penguin Books, Inc.,
1968), pp 216-217.

tell us nothing about the role of educa-
tion in economic growth; (5) the direct
benefits of education are quantitatively
less important than the indirect spill-
over benefits and the latter are not
adequately reflected in a social rate
of return which simply relates income
differentials before tax to the total
resource costs of education; and (6)
social rates of return have ambiguous
policy implications because education-
al authorities have other goals than
that of maximizing the net national
product.[8]

Each of these points are quite valid and the

believers in the rate-of-return analysis have attempted

to adjust for these problems. One of the most in-

depth studies of the benefits of education was done

by Gary Becker. Becker began by looking at people

who had differing levels of educational attainment.

He then calculated the earnings of each group. Becker

adjusted his findings to compensate for several factors.

Because he was using the cross-sectional data, he felt

it necessary to reduce his estimate somewhat due to

the fact that not all persons will live to be 65 and

thus he had to correct his estimates for those who

will die at each age. The rate of unemployment was

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[8] Ibid, p. 222.

also an important factor so Becker adjusted by setting

the unemployment level at zero. This tended to under-

rate the return from education because those unemployed

are more often those who have lower educational attain-

ment levels. Becker also included the fact that

yearly income will rise over a lifetime, and tried

to estimate the change that differing tax rates would

have on individual earnings.[9]

Becker's estimate of the return of college

graduation "for all male whites graduating in 1949

yield a figure of 13 percent."[10] He also found that

the rate of return from those graduating from high

school in 1949 was approximately 20 percent.[11] In

more recent work done by Becker, his estimates,

before adjustment, are 13 percent for a college educa-

tion and 13 percent for high school. Becker then took

these estimates and considered the affects that I.Q.,

father's occupation, and high-school-class rank had

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[9] Martin O'Donoghue, Economic Dimensions in
Education, (Chicago, Illinois: Aldine-Atherton, Inc,,
1971), pp 63-64.

[10] Ibid., p. 65.

[11] Ibid., p. 65.

on his findings. When he included these factors he still
got considerable returns to education. He lowered
his college education returns from 13 percent to 11.5
percent and that of those who graduated from high
school from 13 percent to about 10 percent.[12]

Even with the adjustments just mentioned, not
all persons feel that Becker and his methods are
correct. One of the most outspoken of his critics is
J. Vaizey. Vaizey's main argument is whether indirect
costs should be included when estimating the total cost
or if these should be left out. His main reasons for
believing that they should be left out are: (1) in
most countries there is a minimum age law for working;
(2) in computing national income, foregone earnings
are not included and, hence, should not be included
here; (3) benefits received by students during the
time they are being educated should be included; and
(4) if all students left school and began to look for
work many would go unemployed.[13] In looking at these

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[12] M. Blaug, p. 225.

[13] O'Donoghue, p. 49.

arguments it is rather unclear as to why Mr. Vaizey
stresses them so greatly. If we do not include
indirect costs, the return from education will be even
greater. It is suggested that there is no theoretical
reason but merely a practical policy making one.
"Vaizey's apparent fear is that if indirect costs are
counted it will make the cost calculations for any
educational scheme look very large, and will thus slow
down the pace of educational advance.[14]

Rate-of-return analysis is not the only method
used to estimate the benefits of education to see if
it is worthwhile or not. One of the other techniques
used in studying this is the longitudinal case study
approach. In this method case studies involving certain
individuals are used instead of the cross sectional
method. These persons are studied over a period of
time, whereas in the cross-sectional method we studied
many different persons, at different levels for a
single time period. This method helps to eliminate
many of the problems incurred when using the rate-

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[14] Ibid, p. 54.

of-return analysis, for location and ability are
kept constant. It too, however, has problems in that
it is difficult to research over that long of a
time period, and it is good for a certain period of
history in which wars, depressions, and prosperity all
play an important role.

One study using this approach was by Daniel
Rogers. He used a sample of about 2,000 males that
took an intelligence test in 1935. He then followed
up on thse men to see how their education affected
their earnings. His estimates differ from Becker,
yet he too concludes that the time and money spent
on education are worthwhile. Roger's adjusted figures
are 6.7 percent for high school graduation and 8.9
percent for a college education. Roger's sample is,
however, mainly from one area of the country and
from prep schools, therefore we must be aware of this
possible bias.[15]

Although both of these studies, as well as many
others with yet different techniques show that invest-

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[15] Daniel C. Rogers "Private Rate of Return to
Education in the United States: A Case Study," Yale
Economic Essays, 9 (Spring, 1969), pp. 89-134.

ment in education is a worthwhile expenditure, B.A.
Weisbrod feels there are additional benefits that
should be considered when examining this subject.
"Schooling benefits many persons other than the
student. It benefits the student's future
children, who will receive informal education in the
home; and it benefits neighbors who may be affect-
ed favorably by the social values developed in
children by the schools and even by the quietness
of the neighborhood while the schools are in session.
Schooling benefits employers seeking a trained
labor force; and it benefits society at large by
developing the basis for an informed electorate."[16]

In 1960 public expenditures on education was
over $19 billion.[17] Weisbrod attempts to relate
some of the external benefits individuals other than
the students and society as a whole received as a
result of education that would justify the public's

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[16] B.A. Weisbrod, "External Effects of Investment
in Education," Economics of Education, p. 157.

[17] Ibid., p 171.

responsibility for payment of schooling. Mr. Weisbrod
estimates that, in 1956, of the 3.5 million working
mothers with children from 6 years to 11 years of age,
at least 1 million would not work if their children
were not in school, but at home. If we calculate
these women's earnings as $2,000 each per school
year, then the school's child-care service for
elementary students is valued at $2 billion per year.[18]
Mr. Weisbrod also cites the student's future family
as being a beneficiary of his education. The
informal learning that takes place in the home will
be greater if the parents are well-educated.
Neighbors, too, can benefit, for the students learn
to act in an acceptable manner. It also seems that
the less educated have a difficult time finding
employment and thus, this leads to crime. Employers
and co-workers are also recipients of benefits from the
educated person as he is now more useful and can
increase production with his flexibility. Society
as a whole, too, is able to benefit from education.
We tend to take literacy for granted today, but

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[18] Ibid., p. 173

without education, books, newspapers, and traffic
signs would lose much of their importance. All of
these benefits should be considered when society
is attempting to look at the real reason for public
educational support.[19]

Even with all of this data, we still have not
been able to answer why one set of studies tells us
to stay in school and spend money on schooling, while
the other tells us that schooling is not necessarily
the most importan factor in equalizing income. It
seems that the real conflict occurs in the interpreta-
tion of the results. The findings are similar, al-
though they do not coincide. The most difficult
task of all is in separating educational attainment
from other influencing factors that explain the
differences in income. This seems to be the main
difficulty between Jencks' analysis and those done
by economists. Both are painfully aware that factors
such as parents' income, parents' education and
attitude, and differing levels of intelligence, to
mention a few, are quite influential factors when

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[19] Ibid., pp. 174-175.

measuring income. Yet each have differing opinions
on the amount of influence these factors have.
Mr. Jencks infers that these economic studies have
not sufficiently adjusted for these factors, or
at least their implications on these findings are
not valid.

Mr. Jencks seems to look at the specific individual
instead of just the average person. He feels that
although staying in school for the average student
may be beneficial, this does not necessarily mean
that this is the best policy for each person. "For
working-class whites, blacks, and women, dropping out
seems in many cases to be the most economically
rational decision."[20] He also feels that the
person who has an opportunity for a 'good' job may
be justified in dropping out of school to work. Most
of the economists cited earlier, however, would
disagree with this. They feel that the benefits,
both social and economical and to both the individual
and to society as a whole, far outweigh the costs.

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[20] Jencks, p. 224.

They feel we should attempt to give each person the
most education possible. As stated previously,
however, Mr. Jencks feels this will not eliminate
the real inequality of incomes which is within
the occupational groups.

Should we change our direction toward educa-
tion? Should we quit trying to equalize opportunity?
To many persons the real problem seems not to be whether
education is beneficial or not, but rather how it
is to be paid for. Milton Friedman states that "It
is eminently desirable that every youngster, regard-
less of his or her parents's income, social position,
residence or race, have the opportunity to get higher
schooling- provided he is willing to pay for it
either currently or out of the higher income the
schooling will enable him to earn."[21] Not all persons
agree with Mr. Friedman's belief in the method of pay-
ment of this education, yet most seem to feel the
education itself is important. Paul Woodring of the

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[21] Milton Friedman, " 'Free' Eduation," Newsweek,
69 (February 20, 1967) p. 86.

Saturday Review stated that "if the American dream
of equal opportunity for all is ever to be achieved -
and we are still a long way from achieving it -
a boy or girl from a poor family must have access
to education at all levels which is in no way
inferior to that available to the more affluent."[22]

Both of these men see a definite need for
educational opportunity for all. Jencks, however,
doesn't feel that even with this opportunity incomes
will equalize. We must now examine this idea. In
a society such as ours where decisions are made that
must be acceptable to all, we cannot overlook the
fact that not all people agree that equal incomes
should be our goal. Most persons feel that the
opportunity for this should exist, but that each
person must make the most of this opportunity. Our
society does not seem ready to move toward Mr. Jencks'
ideas at this time.

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[22] Paul Woodring, "Who Should Pay for Higher
Education?" Saturday Review, 50 (May 20, 1967), p. 71.

We cannot overlook the fact that the goals of
the society as a whole and those of Mr. Jencks do
not necessarily coincide when attempting to evaluate
our present system. Mr. Jencks' comments on education
are quite interesting and should not be treated
lightly. It seems, however, that his dismissal of
education's affect on income was in error. The amount
of income is definetely correspondent with the amount
of education one receives. Persons will always disagree
on the extent of this effect, yet we must not forget
that it is influential, for the individual without
education is at a definite disadvantage. We cannot
ignor this fact when we attempt to analyze and reform
our present educational system.

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