Human Capital and Rates of Return: Brilliant Ideas or Ideological Dead Ends?

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Human capital theory and rate of return methodology have long been a dominant framework in comparative and international education and other fields. While there have been criticisms since its inception, it has been ubiquitous and widely accepted as an important mechanism for educational planning, evaluation, and policy making. In this article, I raise fundamental questions about the internal logic of this framework. In particular, I examine the problems with its two strands of empirical work, dealing with the impact of education on income and economic growth, as well as with its conceptual base. In conclusion, I briefly examine some alternatives to using a human capital framework for educational planning, evaluation, and policy making.

For over 50 years, a human capital framework and rate of return methodology approach have held a highly visible and prominent place in educational policy and evaluation. This framework and methodology have been treated as innovative, and even brilliant, ideas that have revolutionized how we think about and understand education. While there have been criticisms since the inception of human capital theory (Shaffer 1961; Vaizey 1962; Blaug 1970), and some continued criticisms by economists (Bennell 1996; Klees 2008b; Tan 2014) and even more by non-economists, this approach to economic analysis of education has had enormous influence in the field of comparative and international education and on education research and policy more generally. As evidence of the importance given to this approach, most recently, a study was commissioned to use this framework to prioritize the many goals that have been proposed by the post-2015 successor to EFA (Education for All) and MDG (Millennium Development Goals) efforts (Psacharopoulos 2014).

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1 Fevre et al. (1999); Livingstone (2012); Samoff (2013); Spring (2015). By “non-economists” I mean non-neoclassical economists. A number of the authors listed would be considered political economists. For more critiques by non-economists, see Foucault (1979); Brown (2001); Cunningham (2004); Gorz (2010); Tikly and Barrett (2011); Stromquist (2012); Vally and Motala (2014).

2 Psacharopoulos and Woodhall (1985); Cohn and Geske (1990); Sweetland (1996); Psacharopoulos and Patrinos (2004); Montenegro and Patrinos (2014); Thomas and Burnett (2016).

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There are good reasons to question the fundamental utility of human capital theory (HCT) and the logic of rates of return (RORs). While there have been some criticisms by economists, as noted above, they are not common, and they do not usually examine the basic internal illogic of this framework. For example, they do not explain why the idea of using HCT/ROR to select post-2015 priorities is not at all sensible (Klees 2014). In this article, I begin by briefly laying out the “brilliant idea” thesis of HCT/ROR proponents. I follow this with a critique of human capital theory and a critique of rate of return methodology. I then offer some alternative perspectives and conclusions.

Brilliant Ideas

In the early 1960s, economists like Gary Becker (1962, 1975) and Theodore Schultz (1961, 1971) developed a new economic theory, human capital theory, which offered a different understanding of labor. Prior to the 1960s, the field of labor economics did not fit with the neoclassical economics framework that understood capitalist market economies in terms of its abstract analytical framework of competition among small consumers and small producers determining supply and demand of goods and services. Labor for neoclassical economics was an anomaly, and labor economists were more like sociologists, studying work and employment through real-world institutions like unions and large corporations and phenomena like strikes, collective bargaining, and unemployment. HCT changed all that by developing a way that labor could be analyzed as if it were like any other commodity, through its supply and demand. The more sociological approach rapidly disappeared from economics.

The “brilliant idea” thesis is captured by the title of a seminal article by economist Mary Jean Bowman in 1966: “The Human Investment Revolution in Economic Thought.” The “revolution” was a rather simple concept—that improved education, health, and other phenomena were investments in human capital, analogous to investments in physical capital, that had payoffs to the individual and to the society. This has led to more than 50 years of research into the nature, circumstances, and extent of that payoff, especially for education investment to what economists call “society as a whole.”

While a human capital framework is ubiquitous and still dominant, at least in policy circles, there appears a certain sensitivity among proponents who rush to defend its importance. The World Bank has been a leader in promoting HCT. In their 1999 Education Sector Strategy, they felt the need

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3 Tan (2014) is somewhat of an exception, but he concludes, contrary to me, that HCT is “still a strong theory” and “here to stay” (456). Nonetheless, Tan’s mainly philosophical critique complements my focus on the internal failings of the framework.

4 When I refer to “economics,” I am referring to the neoclassical school of economics, with its focus on competitive market systems. The more sociological focus did not disappear from all schools of economics, as I discuss in conclusion.
to say that the human capital framework has been “thorough[ly] debated” and accepted, vetted by “Nobel-laureate economists” (World Bank 1999, 6). Similarly, Psacharopoulos and Patrinos (former and current World Bank economists, respectively), in a review of the HCT/ROR literature, assert that “the concept of the rate of return to education is unassailable” (2004, 9).

To the contrary, HCT, neoclassical economic analysis, and related theories like modernization have been challenged for decades in comparative and international education (Arnove et al. 1992; Arnove and Torres 2013). While these challenges raise many very important issues, most of the challenge comes from outside the economics paradigm, has not made many inroads to HCT’s policy dominance, and rarely challenges the underlying framework of human capital. To the contrary, in this article I intend to show that HCT and RORs are fatally flawed in their own terms, as well as briefly look inside and outside the economics framework for alternatives.

There are two principal strands to HCT/ROR research. First and predominant, there have been many efforts to connect human capital formed by education to income, with income seen as a proxy for labor productivity. Second, there have also been efforts, much fewer in number, to look directly at the connection between human capital formed by education and economic growth, usually as measured by GNP. Both strands started in the 1960s and continue to this day. In what follows, I discuss each in turn.

Human Capital, Income, and Productivity

Since the 1960s, we have seen literally hundreds of studies using human capital theory to calculate rates of return to education and offering policy advice based on that linkage, from the earliest work of Becker (1962, 1975) and Schultz (1961, 1971) to the many summaries of such research offered by Psacharopoulos (e.g., Psacharopoulos and Patrinos 2004). Psacharopoulos, during a career at the World Bank that spanned many decades, earned the not entirely complimentary sobriquet of “Mr. Rate of Return” for his zealous promotion of this methodology at the Bank (Jones 2007).

Unfortunately, estimating and making policy based on the education-income connection is theoretically and empirically problematic. A key problem is that economists are not particularly interested in the private individual benefits of earning greater income as the result of educational investment. From a social point of view, economists argue that it is only if education makes

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5 Political economists and other heterodox economists do, at times, challenge the basic HCT framework, as discussed below.

6 Heyneman (2003, 2012), while not directly critiquing HCT or RORs, offers an interesting look at the politics of the use of RORs at the World Bank.

7 Private RORs are of interest to the extent that they give some clues about an individual’s motivation to pursue education, but they offer nothing for the evaluation of educational policy.
one more productive that the impact of education on income has a return to society. Almost all estimates of the social rates of return to human capital investment assume that greater income is an exact proxy for greater productivity. These ROR estimates are fundamentally flawed for at least four reasons: the concept of economic efficiency that underlies them is unsound; earnings do not reflect productivity; even if it did, earnings, at best, is a partial and misleading measure of social benefits; and even if earnings were relevant, our ability to estimate the empirical effect of education on earnings is abysmal. Below, I discuss each in turn.

**Economic Efficiency**

If all human capital theory said was that education was a private individual investment, there would not be many issues. To an economist, a car is an investment, as is a house, an insurance policy, a marriage, and anything else that has payoff—in money or satisfaction—over time. Whether any specific type of education was a good investment would be subject to an individual’s assessment of its costs and benefits, monetary or not, as with any other investment. The fundamental flaw comes about because economics is most concerned with whether a particular human capital activity is a good investment for “society as a whole,” that is, whether it is a good social investment compared to other investments, or, equivalently, to an economist, whether it is an “efficient” investment.

Superficially, it is difficult to object to calls for more efficient educational policies and programs. However, upon closer examination, the idea of efficiency is rooted in quite problematic assumptions about an efficient economic system. The idea of efficiency rests squarely on neoclassical economics theory about a market economy, embedded in an idealized perfectly competitive system in which supply and demand by profit-maximizing small firms and utility (happiness)-maximizing consumers operate with perfect information. There are no big corporations, no patents, no barriers to starting up any business, no unions, no entities with market power. Obviously, perfect competition never holds in practice, yet for a market system to be efficient, these assumptions must hold *completely*. There is no such thing as “close to efficiency.” Neoclassical economics’ own “second-best theory” asks: “If we don’t live in the first-best world of perfect competition but have, let’s say, *one* imperfection (e.g., one monopoly) in an otherwise perfect world, what are the results?” It turns out that second-best theory says that the results of one imperfection ripple through the market system, so the outcome is neither efficient nor necessarily close to efficient (Rakowski 1980; Friedman 1984).

This fatal conceptual flaw is hardly discussed in the economics literature or in economics training. In my PhD studies, one day was devoted to it in four years of coursework! The implication is devastating for belief in the efficiency of a market system. The problem that underlies second-best is that, unlike in
perfect competition, market prices are not “correctly” determined so that they do not serve as a guide to efficient decisions. This means that Adam Smith’s dictum that the invisible hand of supply and demand acts in the social interest is totally false in a real-world economy rife with multiple “imperfections,” that is, deviations from free market theory. From this perspective, the neoclassical economist’s concept of efficiency, which is thoroughly embedded in the concept of perfect competition, is empty in the real world, and therefore calls for improving educational efficiency through ROR analysis or other mechanisms are devoid of meaning. More limited definitions of efficiency may still be useful, such as calling for fewer dropouts or improved learning, but that is quite different from a statement that primary education is a more efficient investment than higher education.

The great feat of neoclassical economics has been to convince people that there is a vantage point, separable from concerns with equity and distribution. This vantage point, defined as efficiency, supposedly allows one to see if the system, or society as a whole, is better off, such that decisions to produce a particular array of goods and services could be made in the interests of everybody, irrespective of how little one had, thus separating efficiency decisions from equity ones. However, if prices are not defined according to the exact dictates of perfect competition, then private profitability tells us nothing about the comparative social advantages and the consequent “efficiency” of producing, let’s say, more yachts for rich people instead of more rice and beans for poor people. Similarly, attempts to look at social profitability or efficiency through rate of return analysis tells us nothing about the comparative social value of more investment in primary education as opposed to higher education.

The analysis above provides the big picture, a picture that most neoclassical economists choose to ignore. No wonder, because it questions the very fundamentals of neoclassical economics and the human capital theory that is embedded in it. In the sections below, we consider how this big picture plays out in some of the details that economists cannot ignore because they so obviously affect their ability to assess human capital investment.

Income and Productivity

As I said earlier, most economic evaluations of education look principally at earnings or income as the benefit of educational investment, and in order to look at social returns or efficiency, assume that earnings or income are accurate measures of productivity. This section raises fundamental questions about assessing HCT because this income-productivity connection is problematic in myriad ways.

Under perfect competition, wages are an exact measure of productivity—actually, not total income, but wages earned from labor. When they can be, economists are fussy about what their framework says. If income includes
nonlabor sources (e.g., investments), economists wish to exclude that because HCT doesn’t theorize anything about the relationship between education and investment income. Thus, when they can, economists calculate social RORs using labor earnings and recognize that the common use of income misstates RORs (Psacharopoulos and Patrinos 2004).

I give this example of income versus labor earnings attempts at precision by economists to highlight that, at one level, they try to take their framework very seriously. But, at another level, as above, the framework completely falls apart because the real world is nothing like perfect competition, and economists can do nothing to resurrect it and they know it. Let me start with screening.

Non-economists have difficulty understanding the considerable attention economists have focused, for decades, on various versions of screening theories. Most non-economists likely believe the commonsense view that schooling has both productivity and screening aspects to it—that is, that schools teach productive job skills, that schools also certify that students have productive skills that the schools themselves had no part in teaching, and that sometimes employers overvalue educational credentials beyond their real relation to productivity.8

Unfortunately, this commonsense view is so destructive of neoclassical economics reasoning that it cannot be accommodated. If even some of the value of schooling in the marketplace has little to do with what schools produce, then wages no longer reflect what economists call marginal productivity, and, even for this one reason alone, economists’ RORs are poor measures of the social value of schooling. Economists have spent a lot of time looking at screening, doing what I see as a theory-data-policy dance to keep its implications at bay, making three arguments: screening could not happen if employers were rational; empirical evidence has not confirmed that screening occurs; and, even if it exists, it matters little (Klees 1991; Brown and Sessions 2004; Tan 2014). But Mark Blaug (1987, viii), one of the preeminent economists of education, is more honest when he describes screening as “the acid that corroded my confidence in human capital theory,” and, if screening is true, “we have been drawing all the wrong conclusions from human capital theory” (1989, 334).

Screening is just the tip of the iceberg. It is simply one of many “imperfections” that mean that wages do not measure productivity and therefore the whole meaning ascribed to RORs is completely false. There are a multitude of reasons that wages and all other prices are not the efficiency measures that neoclassical economists want and need them to be. With second-best theory, even one deviation from the strict rules of perfect competition is a serious problem—prices no longer guide businesses in the social interest, and

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8 Dore (1976); Collins (1979); Klees (1991); Brown and Sessions (2004); Tan (2014).
Profit analogues, like RORs, no longer can guide the public sector to know what is in the social interest. And we do not have just one deviation from the assumptions of perfect competition; we are rife with them: monopolies, oligopolies, large firms, unions, patents, imperfect information, producers and consumers who are not maximizers, tariffs, minimum wage, administered prices, externalities, discrimination, and many more. Prices are the result of a complex set of institutional and market features; they bear no resemblance to the idealized economic model. So income is no proxy for productivity, and even the analysis of costs says nothing useful since higher cost programs could be using less socially valued resources—we simply have no idea of what economists call *true economic value*.

**Income as a Partial Measure of Benefits**

Even if one were to believe (incorrectly) that income or, more accurately, earnings were some approximate measure of productivity, RORs are misleading in that they include very partial measures of educational benefits. This is commonly discussed in the form of economists’ notion of externalities, that is, that education has benefits to other people in addition to the person being educated—to their family, friends, coworkers; better health, lower crime, less welfare; more technologically sophisticated workplace; greater international competitiveness; a common core of values; a literate, democratic society; and more.9 Externalities are difficult to measure, especially in the monetary terms needed so that they can be added to income benefits. But hard to measure or not, estimating them is key to efficient decision making. All of these benefits are just as important to the economic idea of allocating resources efficiently as someone producing more “widgets” (the name economists use for a generic good or service).

Without measuring externalities, we cannot accurately compute the ROR to education. It is possible to argue, as have some neoclassical economists, that, even without measuring externalities, RORs using earnings or income alone are useful for policy by offering a lower bound valuation of educational investment (Psacharopoulos and Patrinos 2004). However, most frequently, RORs have been used to make invidious comparisons between the returns to different levels or types of education. In such cases, not including measures of externality effects in RORs will likely give misleading policy guidance.

For example, past ROR studies have sometimes calculated a return (based solely on earnings) to primary schooling in developing countries averaging about 25 percent and a return to higher education of about 15 percent (Psacharopoulos and Patrinos 2004). These findings were used from the 1980s onward to argue that public investment should focus on primary edu-

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9 Haveman and Wolfe (1984); Wolfe and Haveman (2002); McMahon (2004); Oreopoulos and Savanes (2011).
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cation—leading to decades of government neglect of higher education. However, these studies never included the many external benefits associated with primary and higher education. It could well be that, if these benefits were included, the RORs to primary and higher education could be equivalent or even higher for higher education, as implied by a joint study by UNESCO and the World Bank.\textsuperscript{10}

Traditional economic arguments are based on a limited understanding of what higher education institutions contribute. Rate-of-return studies treat educated people as valuable only through their higher earnings. . . . But educated people clearly have many other effects on society: educated people are well positioned to be economic and social entrepreneurs, having a far-reaching impact on the economic and social well-being of their communities. They are also vital to creating an environment in which economic development is possible. Good governance, strong institutions, and a developed infrastructure are all needed if business is to thrive—and none of these is possible without highly educated people. Finally, rate-of-return analysis entirely misses the impact of university-based research on the economy—a far-reaching social benefit that is at the heart of any argument for developing strong higher education systems. (Task Force on Higher Education and Society 2000, 39)

To the extent that this has been true all along, the economics profession, in general, and the World Bank, in particular, have put forth 30 years of incorrect policy guidance, disadvantaging university education, harming many individuals, and relegating many developing countries to competing in the international marketplace with cheap labor instead of educated workers. Thus, even if earnings were a reasonable proxy for productivity, RORs based on earnings alone are useless for policy purposes since they do not give a complete and accurate picture of social returns and can result in a major misdirection of policy, as they likely did with respect to higher education since the 1980s.

Effect of Education on Earnings

Even if education was a good measure of productivity and even if there were no externalities to consider, RORs are fatally flawed because it is impossible to get an accurate measure of education’s impact on earnings needed to calculate RORs. For many years, economists simply assumed that the association between education and earnings was causal, so that, for example, if a high school graduate earned $20,000 a year and a college graduate $50,000, the whole difference of $30,000 was taken as due to the impact of education. This was obviously nonsensical since there are many other factors that could be causing that difference in earnings such as ability, motivation, and socioeco-
conomic background. To remedy that, economists invented what they called the “alpha coefficient,” which was arbitrarily set at 0.6 to mean that only 60 percent of the gross differences in earnings—in the example above, $18,000—was actually caused by education. It is absolutely amazing that economists got away with what no other field could—to take an out-of-the-air assumption to adjust for the causal effects of all possible covariates. As Psacharopoulos and Patrinos (2004, 9) mention, that assumption has not been “empirically validated,” yet they still treat studies that use it as valid and report their “findings.”

Today, with the greater availability of data on individuals’ earnings and related factors, economists use regression analysis to estimate “earnings functions,” which look at the effect of education on earnings “controlling” for other variables. However, there are good reasons to believe that regression analysis cannot even approximate education’s true impact on earnings. In regression analysis, one begins with three assumptions about the mathematical model being used—that all variables are included, measured correctly, and their functional interrelationships accurately specified. If the assumptions hold true, then regression coefficients are accurate estimators of causal impact. However, in the real world, there are always multiple failures of the assumptions. Regression analysis theory does talk about the failure of one assumption at a time but offers no guidance as to how inaccurate the resulting regression coefficients are under real-world misspecification conditions (Leamer 1983; Wooldridge 2013; Klees 2016).

These three principal conditions necessary for the regression coefficients of an earnings function to be accurate estimators of true causal impact are very far from being fulfilled. First, all relevant variables that may affect earnings can never be included. Our theories literally posit dozens of variables, and which variables are included in a particular regression study is idiosyncratic. Examples of variables that some researchers have considered relevant are: health status, years of schooling, quality of schooling, type of schooling, cognitive ability, race, ethnicity, religion, socioeconomic status, gender, immigration status, marital status, participation in a union, job search, occupation status and differentiation, labor market segment, firm and industry characteristics, and many more. Second, we do not know the “right” way to measure most of these variables. Measurement is ad hoc and varies from study to study. Third, the functional interrelationship between variables is not known. While it is common to use the natural logarithm of income as the dependent variable, even neoclassical economists admit the basis for doing so is very weak and, in actuality, what would be needed is to specify some unknown set of complex simultaneous equations filled with variables subject to complex interactions.11

11 Blaug (1976); Hanushek (1980); Klees and Milton (1993); Klees (2016).
The result of this state of affairs is endless misspecification—by necessity. Each researcher has an almost infinite array of choices in how they specify the earnings function they estimate. Each regression study is never a replication but always different from others in many respects. The upshot is each regression study is idiosyncratic. Since it is relatively easy to get significant coefficients, especially with large data sets, everyone finds some effect of education on earnings, reports it, and sometimes uses it to estimate a ROR. But alternative specifications always yield different results, and so the estimates are notoriously unstable and inconsistent. Hanushek (1980, 240) argued that “estimated rates of return for years of schooling particularly in regression estimates [on earnings], considering other individual differences appear very unstable: changes in sample, changes in time periods, changes in precise model specifications yield enormous changes in estimated rates of return.” The estimated impacts of education on earnings and associated rates of return are basically arbitrary, the result of ad hoc empiricism run rampant.

To add insult to injury, regression analyses usually just yield an estimate of education’s impact for one particular year, or a few years at the most. To calculate a ROR, you need to know education’s impact on lifetime earnings, so, often the arbitrary results of the regression analysis are then projected 30 or 40 years into the future to specify the changing impact of education over an individual’s lifetime. Thus, ROR calculations are constructed by making additional out-of-the-air predictions about how, for example, the relative earnings of primary versus higher educational graduates will change over the next 40 years!

Summary

The four fundamental problems discussed above—the meaninglessness of economists’ concept of efficiency, the fact that earnings do not reflect

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12 Imagine you collected data on the earnings of 100 people selected at random. Imagine delineating the literally dozens of factors that would explain why they had different earnings, only one factor being their educational differences. Despite sophisticated statistical techniques, it is simply impossible to accurately separate out the impact of education from all other factors.

13 The focus here is on earnings functions, but this misspecification critique of regression analysis invalidates many of its applications. Edward Leamer’s (1983) now-classic article “Let’s Take the Con Out of Econometrics” explains the general problem very well: “The econometric art as it is practiced at the computer terminal involves fitting many, perhaps thousands, of statistical models. One or several that the researcher finds pleasing are selected for reporting purposes. . . . This searching for a model is often well intentioned, but there can be no doubt that such a specification search invalidates the traditional theories of inference. The concepts of unbiasedness, consistency, efficiency . . . in fact, all the concepts of traditional theory, utterly lose their meaning by the time an applied researcher pulls from the bramble of computer output the one thorn of a model he likes best, the one he chooses to portray as a rose” (36).

14 This particular problem also invalidates estimates of private RORs since, even if you are only interested in education’s effect on earnings, it is impossible to estimate this accurately. This has led to some strange approaches. Montenegro and Patrinos (2014) use only one control variable (work experience) in their earnings functions in the interests of “comparability.” However, leaving out relevant control variables does not make results comparable; it simply makes them wrong.
productivity, the fact that earnings are at best a partial measure of the benefits of education, and our inability to even get accurate estimates of the effects of education on earnings—taken together imply that the main empirical application of HCT, that is, calculating RORs to education, is fatally flawed.\textsuperscript{15} And these problems do not exhaust the flaws ROR analyses face. The cost analyses in ROR studies are usually ad hoc and simplistic, not using the required detailed analysis of ingredients (Levin and McEwan 2001). RORs, in theory and at best, can only be calculated for very small changes in programs or policies, yet in practice they are used to make sweeping policy recommendations. The most common measure of education is simply years of schooling, too rarely capturing vast differences in the nature and quality of that schooling. Finally, the whole idea of comparing two totally different groups of people is problematic.\textsuperscript{16} Taken together, it becomes difficult to believe that RORs are considered as a basis for, or even as one element in, social policy choice (Psacharopoulos and Woodhall 1985; Klees 2008b).

Human Capital and Economic Growth

While most human capital studies have focused on the connection between education and earnings, as a proxy for productivity, some studies have tried to look more directly at the connection of education and productivity by looking at the effect of education on economic growth, as measured by GNP. Indeed, some of the earliest work on human capital examined the correlation between levels of education or school enrollments in a country and its GNP (Bowman 1966; Blaug 1970). However, correlation is not causation, and these studies were quickly dismissed as neither controlling for other differences between countries nor demonstrating which was cause and which was effect (Blaug 1970).

The most significant early, and still widely quoted, work that tried to take a more sophisticated look at the connection between education and GNP was by Edward Denison (1961, 1967). Denison focused on a particular form of what economists call an “aggregate production function.” Like an earnings function tries to look at all the variables that might affect earnings, production functions look more directly at all the variables that might affect production by looking at the effect of education on economic growth, as measured by GNP. Indeed, some of the earliest work on human capital examined the correlation between levels of education or school enrollments in a country and its GNP (Bowman 1966; Blaug 1970). However, correlation is not causation, and these studies were quickly dismissed as neither controlling for other differences between countries nor demonstrating which was cause and which was effect (Blaug 1970).

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\textsuperscript{15} The other main empirical application of HCT is not discussed here. They are educational production functions, which usually attempt to determine the impact of home, school, and community inputs on some measure of student learning. The regression analysis issues discussed above apply with equal force here, leading to endless and unresolvable debates as to which inputs affect outcomes and to what extent (Klees 2008b).

\textsuperscript{16} To believe that an ROR for primary school can be usefully compared to an ROR for university education, you have to believe that the benefit comparison is meaningful. That is, in even just looking at individual earnings effects we are making simple comparisons of the increased wages and decreased unemployment of a primary school graduate with that of a university graduate. But these benefits accrue to very different people at very different times. There is no reason to think that one is comparable with the other and should serve as a basis for prioritizing. Even within a narrow economic vision, these results are only comparable if we have the overall efficiency that comes from a perfectly competitive economy.
output in a particular industry. An “aggregate” production function, as the name implies, looks at the effect of inputs on total production output, that is, GNP. This approach, in theory, could get around the need to assume earnings reflect productivity by directly looking at the impact of education on output. However, Denison’s famous work did not do this. Instead of estimating an aggregate production function, it assumed one of a particular form and then used education’s association with earnings as the evidence of education’s impact on GNP, thus offering nothing different from the results offered by the problematic education-earnings connection discussed above. Blaug (1970, 100) dismissed all this early research: “In short, we learn from international comparisons [of education and GNP] . . . that we do not learn from international comparisons.”

Attempting to connect education directly to GNP generally fell out of favor until the late 1980s and 1990s when a few works in the area of what was called “new growth theory” signaled a broader vision of education’s contribution (Romer 1986; Lucas 1996; Psacharopoulos and Patrinos 2004). This vision is theoretically interesting in that education is seen not just as contributing to worker productivity but as enhancing growth through a variety of mechanisms and externalities. However, empirically these new directions have proven extremely difficult to model mathematically. Almost every researcher who attempts to estimate these connections therefore uses a different model, and the results are, as one would expect, typically idiosyncratic, unstable, and inconsistent (Psacharopoulos and Patrinos 2004; Stevens and Weale 2004). In 1970, Blaug said the “Mecca of the economics of education lies elsewhere” (100), and I think that holds true today, for reasons similar to the ones I discussed above for education and earnings. Before discussing why the results of looking at the impact of education on GNP are not useful, I look at some of the problems with the focus on GNP.

The Meaning of GNP

The meaning of earnings in some broad social and economic sense is problematic. So is the meaning of GNP as a good measure of productivity or societal well-being. Now, in practice, in the real world, we would like to have some idea of the total value of what is produced, the “size of the pie,” separate from its distribution. In practice, this is what gave rise to economists’ idea of GNP. And you might think that this could be a practical way of getting at efficiency in the sense that if, for example, you could use the same resources at hand, through some rearrangements, to produce a higher GNP, you could say the system is more efficient. But unfortunately you can’t say that in the economic sense of efficiency. Producing a higher GNP means, in effect, more yachts going to some people or more rice and beans to others. Any change in this supposed efficiency measure is always a change in distribution as well, so there is no separate accounting of whether some fictitious idea of “society
as a whole” is better off without somehow evaluating the value of the changing distribution of who gets what.

To confuse the matter more, GNP is an awful measure of the total value produced by an economy, as has been extensively critiqued. For example, GNP doesn’t count household production, the work involved in raising children and running a household, work that falls mainly to women in developed and developing countries. However, it actually counts environmental destruction as adding to GNP, so using up natural resources is positive, as is repairing earthquake damage. But the biggest problem with GNP, as a size-of-the-pie measure, is that once you recognize the illogic of the neoclassical story of perfect competition, prices have no social meaning as arbiters of efficiency, that is, as weights to add up output. Prices exist obviously, but they connote nothing of an invisible hand acting in the social interest. Prices are practical guides to the constraints firms and consumers face at any given moment, but they are arbitrary, formed by supply, demand, market power, and what firms can get away with. They are socially and institutionally determined. Changing prices will change GNP. A larger GNP does not mean that “we” are better off because there is no “we,” no “society as a whole” as economists like to use the term. A larger GNP simply means that a different array of goods and services is produced and distributed to different people. There is nothing more efficient about one outcome versus another, no economically valid way to keep score from a vantage point apart from equity. We may find it convenient to use GNP as a yardstick but must recognize how imperfect it is and that it really has nothing to do with economist notions of efficiency.

Measuring the Effect of Education on GNP

As I said above, the results of the empirical research estimating the effect of education on earnings have been idiosyncratic, unstable, and inconsistent. The same is true for the impact of education on GNP for similar reasons. First, there is no agreement on how to measure the stock or flow of human capital in a country. Various proxies have been used but, as Psacharopoulos and Patrinos (2004, 13–14) admit, such measurement may be the “weakest point” of these studies: “Such data have serious intertemporal and intercountry comparability problems, and there are data gaps often filled with constructed data based on interpolations and extrapolations.”

Second, as Psacharopoulos and Patrinos (2004, 15) also admit: “Countries also differ in many other aspects than those measured by physical and human capital stock” that can affect GNP. Estimates of aggregate production functions have literally used dozens of different variables as inputs, such as climate, latitude, access to waterways, transportation infrastructure, technological de-

17 Waring (1988); Daly (1996); Costanza et al. (2009); Stiglitz et al. (2009).
velopment, investment climate, and cultural and political differences (Stevens and Weale 2004; Hulten and Issakson 2007; Hulten 2009). Empirical studies idiosyncratically choose some of these input variables, from those available in the data set being used, and always omit many others. As Psacharopoulos and Patrinos (2004, 15) again admit: “These omitted variables can lead to margins of error of hundreds of per cent in accounting for differences in the economic growth path between countries.”

Third, it is widely recognized by economists that the linear functional form so commonly used in regression analysis studies is not applicable to aggregate production functions. However, there is considerable debate over what functional form to use, and different functional forms yield different estimates of the impact of education (and of all other inputs) on GNP (Stevens and Weale 2004). There is even a respected school of economics that says that there is no theoretical basis for even believing that an aggregate production function actually exists. Each good and service may have a “production function,” meaning some mathematical regularity in how inputs like land, labor, capital, and technology combine to produce televisions, yachts, insurance policies, hamburgers, and so on. However, since there is no physical process by which aggregate GNP is produced, nor, from this perspective, is there some way to aggregate and measure physical capital, trying to specify an aggregate production function is seen as nonsensical (Cohen and Harcourt 2003). Guerrien and Gun (2015, 100) note that Paul Samuelson, Nobel laureate in economics, pointed out that aggregate production functions wrongly offer “a statistical test of an accounting identity (which is by definition always true).” They argue for the need “to convince everyone to definitively abandon the aggregated production functions, both in theory and practice” (99; see also Felibe and McCombie 2013).

Given these fundamental problems with fulfilling the conditions for regression analysis to yield accurate estimates of causal impact (discussed earlier), it is no wonder that consistent results of the impact of education on GNP are not found. Reviews of this literature report a bewildering array of idiosyncratic methodological choices resulting in a bewildering array of different results (Stevens and Weale 2004). Patrinos and Psacharopoulos (2004, 15) quote Temple and Voth (1998, 1359): “Attempting to impose the framework of an aggregate production function is almost certainly the wrong approach for many developing countries.”

It should be noted that almost all these studies offer only some measure of the quantity of education, not its quality. In a widely quoted recent study, Hanushek and Woessmann (2008) try to remedy this by adding country average PISA test scores as a proxy for the quality of education in a country,

18 Tan (2014, 426) argues that “social, political, institutional, and cultural factors need to be considered when the impact of education” on economic growth is estimated.
concluding that a 1 standard deviation difference in test scores yields a 2 percentage point higher growth rate of GNP per capita. In light of the foregoing problems, I find this claim completely unreasonable and its uncritical reception due to ignorance of the fundamental problems with human capital theory and empirics discussed in this article. Hanushek and Woessmann’s measure of the quantity and quality of education, choice of other inputs to control for, and choice of functional form are all idiosyncratic. They are only one of literally thousands of reasonable alternative specifications of an aggregate production function. Different specifications will yield different results.

Summary

There’s an old saw in economics: “If you torture the data long enough, nature will confess.” In reality, nature never confesses. Similarly to what we saw in the literature on the impact of the quantity of education on earnings, different choices in estimating the impact of education on GNP yield different measures of impact, so their reported results are completely arbitrary and certainly not something policy makers should take seriously. Like measuring the impact of education on earnings, measuring the impact of education on GNP has unfortunately commanded the attention of educators and policy makers for over 50 years, yet, in reality, has been a dead end, providing no reliable or even approximate information to help a sensible allocation of societal resources.

The Conceptual Failure of Human Capital Theory

The analysis above focuses on the emptiness of human capital theory. Its underlying concept of efficiency is bankrupt, and attempts to operationalize it in terms of its impact on earnings and GNP are fundamentally flawed. But the situation is worse than that. Human capital theory has not merely been an empty discourse; it has been a destructive one, for a number of reasons.

Our global society today is faced with what has been called the “triple challenge:” job creation, poverty elimination, and inequality reduction (Vally and Motala 2014). Human capital theory has given us one answer to all three

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19 Hanushek and Woessmann (2008) control for only two of the literally dozens of variables that they could have included, and these two variables reflected neoliberal development ideology (openness to trade and security of property rights). Different controls would, of course, yield very different estimates of the impact of the “quality” of education.

20 Hanushek and Woessmann (2015) then take these invalid estimates and make country-by-country projections decades in the future of what GNP would be if PISA results improved. Their results also have no validity, depending on literally hundreds of assumptions and completely tenuous causal linkages.

21 These three challenges, of course, do not exhaust the significant problems faced around the globe, which include environmental destruction, widespread conflict, and appeal to greed as a motivating force, all of which have significant connections to the neoliberal form of capitalism that so dominates our world system (Klees 2015).
problems: the lack of individual skills.\textsuperscript{22} The skills discourse, tied to a “mismatch” discourse, goes back at least to the 1950s, and probably long before that. In it, education has been blamed for not supplying the skills business needs; that is, education is blamed for the mismatch between what education produces and what business wants. Unemployment, in general, is put at education’s door, more broadly arguing education is not teaching what the economy needs.

HCT turns education into a commodity as if it were like any other, to be examined in terms of its supply and demand, mostly as an investment that makes one more productive.\textsuperscript{23} While this supply-side perspective has some truth to it, it is very partial, at best. That is, abilities like literacy, numeracy, teamwork, problem solving, critical thinking, and so on can have a payoff in the job market, but only in a context where such skills are valued. The more useful and important question is the demand-side one, usually ignored by human capital theorists, regarding how we can create good jobs that require valuable skills. The human capital discourse also generally ignores the value of education outside of work.\textsuperscript{24}

Moreover, HCT’s connection between education and productivity has been the underpinning of the idea that capitalism is a meritocracy and its rewards are more or less deserved. What nonsense! Solving the challenge of poverty, inequality, and jobs has been unproductively directed to a lack of individual skills and education instead of to capitalist and other world system structures whose very logic makes poverty, inequality, and lack of employment inevitable (Wallerstein 1984). The human capital and skills discourses blame individuals for education and development problems: for their lack of “investment” in human capital, for their not attending school, for their dropping out of school, for their not studying the “right” fields, for their lack of entrepreneurship.

The skills discourse that underlies HCT and much of educational policy discussions today is both wrongheaded and destructive. We do not live in anything like a meritocracy, people are not poor because they have few skills, the dearth of decent jobs is not due to a lack of skills, and the horrendous inequality we see today is not because skills are not better distributed. Improving education’s ability to impart skills will not do anything by itself to solve

\textsuperscript{22} As Tan (2014, 432) argues, human capital “offers the comforting illusion that for every complex social and economic problem there is one simple solution”: education. Brown (2001, 10), in the same vein, refers to the “new miracle drug of ‘human’ capitalism.”

\textsuperscript{23} Human capital theory turns human beings into commodities and offers a mechanistic understanding of work. As Brown (2001, 16) elaborates: “The disembodied nature of skill inherent in human capital theory inhibits our understanding of skill formation and the social relations of” production.

\textsuperscript{24} Human capital theory argues that individuals try to maximize their happiness (“utility”), not their income, so it does leave room for considering the impact of education outside of work, as is done in examining education’s externalities (Haveman and Wolfe 1984; Wolfe and Haveman 2002; McMahon 2004; Oreopoulos and Savanes 2011).
the triple challenge. Unemployment, inequality, and poverty are not worker supply problems but are inherent structural problems of capitalism. There are three or more billion unemployed or underemployed people on this planet living on the margins of society without decent jobs, not because they don’t have the right skills but because full employment, decent jobs, and greater equality are neither features nor goals of capitalism. Too often, human capital theory’s fundamental explanation of individual and societal well-being resides in an analysis of the characteristics of individuals, ignoring the real-world properties of systems and structures.

Alternatives to Human Capital Theory

Human capital theory has been especially attractive because it fits so well with the market fundamentalism of our neoliberal era (Klees 2008a). It offers a very convenient vantage point from which to understand and evaluate education. If HCT is truly a dead end, what are alternative ways of conceptualizing and assessing educational policies? This is a very large topic that I cannot do justice to here, so I will only point out three possible alternative directions to human capital that are discussed in the literature and that, partly for the sake of alliteration, I will call: human rights, human capabilities, and human agency. It should be noted that these three alternatives are not mutually exclusive.25

Human Rights

The right to education is enshrined in many international conventions and declarations and has been widely accepted by many, but not all, international agencies and actors (Tomasevski 2003). For example, UNESCO and UNICEF have based their programming on the right to education while economics-oriented institutions like the World Bank have balked at giving the right to education, and, more generally, human rights, anything more than dismissive lip service (Klees 2012; Vally and Spreen 2012). This is no surprise. As Katerina Tomasevski, the first UN High Commissioner for Human Rights (UNHCHR) Special Rapporteur for the Right to Education, points out, the human capital framework turns the human rights argument “on its head” (2003, 22). In a section of her book entitled “Why people are not human capital,” she argued: “From the human rights viewpoint, education is an end in itself rather than merely a means for achieving other ends. . . . Furthermore, the obsession with enhancing economic growth depletes education of

25 Some versions of human rights and human capabilities alternatives could coexist with a human capital perspective as well, although not if human capital is an ideological dead end, as argued here. In this short section, it is not possible to discuss such nuances, nor can I explore the problems associated with each of these alternatives.
most of the purposes it is designed to serve” (33). Instead of economists’ instrumentalist, human capital approach using rates of return to establish investment trade-offs, a human rights approach does not consider these trade-offs as a legitimate basis for policy.

Nonetheless, a human rights approach offers substantial guidelines for education policy. The right to education has been developed into a very detailed “4-A” schema that examines the availability, accessibility, acceptability, and adaptability of education (Tomasevski 2003, 2006; Klees and Thapliyal 2007). The Right to Education Project (www.right-to-education.org), sponsored by Action Aid and building on the work of Tomasevski, offers over 200 indicators to evaluate the progress of governments, as well as a wealth of resources for implementing the right to education. UNICEF has developed concrete guidelines for implementing child-friendly schools that are “essentially . . . rights-based school[s] with characteristics based on the Convention on the Rights of the Child” (Shaeffer 2013, 15). These include eliminating all fees, having qualified, trained, sensitive teachers, small classes, mother tongue instruction, safe environments conducive to learning, listening to the voices of children, and compensatory programs, like school feeding programs, to help counter out-of-school disadvantages. As Robeyns (2006, 75) points out, all this implies that “education is not seen simply as ‘a good thing’ to be pursued if and when there are some funds available, but rather as the right of every child, implying that the government needs to mobilize the resources needed to offer a quality education.” From a global system viewpoint, the goals embodied in EFA, the MDGs, and the new Sustainable Development Goals (SDGs) fit with a human rights framework; however, critics point out that these are not legal obligations—governments cannot be held accountable if they are not realized. Moreover, achieving these goals has a long time horizon, whereas the right to education creates immediate obligations.

Despite this significant progress in developing a human rights approach, Thapliyal et al. (2013, 213) argue: “Rights-based approaches to education policy remain an underresearched topic in the field of comparative education. This neglect is due, in part, to the dominance of human capital logic in mainstream education and development discourse.” Rights-based approaches are threatening to economists. A basic problem for economists is that a rights-based approach doesn’t stop at the right to education. As Thapliyal et al. (2013, 213) point out: “Over the last few decades, international human-rights discourse has steadily expanded from ‘first generation’ civil and political rights to also include social, economic, and cultural rights.” What about a right to health? To food? To shelter? To a sustainable livelihood? To development itself? What if the existence of poverty is seen as a human rights violation? Such a perspective on development contradicts the logic of neoclassical economics and, at the very least, calls for more government intervention than a neoliberal can stomach and may really require more revolutionary economic
transformations. It is no wonder that economists generally refuse to be serious about human rights.

Human Capabilities

A human capabilities approach to understanding and evaluating education and many other issues is a relative newcomer, developed initially by Nobel Prize–winning economist Amartya Sen (1999, 2009; see also Nussbaum 2003). The goal of development, from this perspective, is to expand freedoms that allow people to function better in society. Better “functionings” can include being educated, knowledgeable, well-nourished, healthy, safe, and/or having a good job. Better functionings are achieved by expanding individual “capabilities” that give one the opportunity to function better. Capabilities might include: access to a quality education, clean drinking water, sufficient food supplies, political participation, and friendships. The focus for policy is to ensure essential capabilities that allow individuals the freedom to choose functionings.

Education is seen as an especially important issue in this framework because it is not only important as an end in itself, but better education can be important to many other functionings as well. A focus on economic growth for development is seen as quite limited, and Sen’s work was important in the design of a commonly used alternative to GNP, UNDP’s Human Development Index (Tikly and Barrett 2011). A human capabilities framework does not necessarily reject HCT or a human rights framework but sees itself as generally broader and more inclusive.

Nonetheless, Tikly and Barrett (2011, 8) argue: “Unlike the human capital and human rights approaches, the capability approach is still in its infancy. It also has a limited currency outside of academia.” While some point out the problems with the lack of clarity of this new language and its lack of specificity, others argue that, to the contrary, it is sufficiently developed to use “as an alternative evaluative tool for social cost-benefit analysis, or to design and evaluate [development] policies” (Robeyns 2006, 78; see also Wigley and Akkoyunlu-Wigley 2006). At the very least, a capabilities approach is “seen as a way of framing issues and as a starting point for the evaluation of policy choices,” with an essential requirement being widespread informed public dialogue and debate (Tikly 2013, 14). And its popularity is growing. A World Bank report called it a “paradigm shift in the international development discourse” (Suescun 2007, 4), and UNESCO and UNICEF are exploring uses in education. Applications are being made to a variety of educational issues.

26 Similarly, the right to education is seen as important to the fulfillment of other rights.

27 Sen (1999, 2009); Robeyns (2006); Unterhalter (2007); Brighouse and Unterhalter (2010); Tikly and Barrett (2011); Tikly (2013).
such as literacy (Maddox 2008), ICTs (information and communication technologies; Kleine 2013), and higher education (Lozano et al. 2012).

**Human Agency**

I use the term “human agency” in the sense that political economists use it to refer to the capacity for individual and collective action to challenge oppressive structures like capitalism, patriarchy, racism, ableism, and heterosexism. While political economy perspectives used to focus on class and capitalism, they are now an intersection of contributions from “various neo-Marxist, feminist, postmodern, poststructural, postcolonial, queer, disability, environmental, and other communities” (Apple 2006, 54). While these theories do not offer identical perspectives, there is often a common focus on marginalization. They see the world as composed of systems and structures that reproduce and legitimate existing inequalities. While reproduction is pervasive, there is agreement that there are spaces for progressive actions through exercising individual and collective human agency.

From this perspective, HCT today is seen as embedded in a neoliberal, market fundamentalist regime that reproduces and advances the prevailing social order. Educational policies that promote, for example, vouchers, charters, and other forms of privatization and narrow approaches to testing, accountability, and standards, are seen as furthering inequality and ignoring the realities of unequal power (Apple 2006; Klees 2008a). From this perspective, human rights are generally seen as important, but too often lacking attention to issues of power and structure. The same could be said of a human capabilities approach.

From a political economy perspective, the most promising source for progressive change is through social movements—such as the women’s movement, the civil rights movement, alter-globalization movement, landless movement, Dalit movement, the human rights movement, the children’s rights movement, and others—which bring the power of collective action to confronting the unfairness and irrationality of pervasive marginalization. In terms of education, in Brazil, for example, where I have worked extensively, the Citizen School movement has built a sizable democratic, participatory, Freirean-based education system (Fischman and Gandin 2007). Also in Brazil are the Landless Movement schools, founded by some of the poorest people in the world, often living off agricultural labor, now forming an organized and politically influential social movement with a large system of very participatory,

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28 Carnoy and Levin (1985); Apple (2006, 2013); Adams et al. (2013); Robertson and Dale (2015). See also Andersen and Collins (2002); Jessop (2009); Ball (2012); Novelli et al. (2013).

29 “Political economy” is a contested term used in different senses, by the political Left, Right, and others (Caporaso and Levine 1992).

30 “Human agency” is also a term used in different ways. For example, it is used in the capabilities approach differently from how I use it here (Sen 2009).
democratic, Freirean-based schools (McGowan 2003; Tarlau 2015). These schools teach—and exemplify by their very structure—the role of education in preparing people for a much more participatory and democratic economy and society (Edwards and Klees 2012). So do many examples of alternative critical pedagogy practices from the United States and other countries (Apple and Beane 2007; McLaren and Kincheloe 2007; Picower 2012).

Conclusion

Neoclassical economics is such a fragile house of cards that, as Blaug (1975, 429) said many years ago, economists “fight tooth and nail when faced with an empirical refutation [that challenges] . . . perfect competition . . . for what is threatened is . . . the entire concept of ‘efficiency.’” In the 1980s, I had a series of debates with George Psacharopoulos and still remember his remark when I asked him about some of the criticisms of the very well-known neoclassical economist Lester Thurow: “at the World Bank, we call him ‘Less Thorough.’” Michael Piore (1983, 249), another defector around that time, wrote of the “fury, disdain, resentment, sarcasm, and condescension” with which his ideas on labor markets were greeted by neoclassical colleagues.

Few neoclassical economists are open to critiques or alternatives. One well-respected neoclassical economist who has been open is Mark Blaug. In 1976, in a famous review article, he concluded: “Human capital theory has no genuine rival of equal breadth and rigor” (Blaug 1976, 852). However, after reading and considering screening and political economy arguments, by 1985, Blaug was disillusioned and wrote: “Where are we now in the Economics of Education?” In it, he argued that the “vital parts” of the field lie outside human capital theory (130) and that there is a need for a new economics of education that uses the views of its critics to challenge the old “Neanderthal” version (140). In subsequent years, I asked several prominent neoclassical economists what they thought of this article (published in a top journal). All knew of it, none had read it, and all indicated a resistance to doing so, knowing it departed from the neoclassical orthodoxy. With the neoliberal turn since the 1980s, if anything, the field has gotten even more insular and more resistant to criticism.

For me, the essential problem with neoclassical economics and HCT is captured in a story that Martin Carnoy tells. Milton Friedman was a professor of Martin’s at the University of Chicago. When Friedman came to Stanford University 20 years later, Martin made an appointment to see him, with no real agenda. Friedman, knowing of Martin’s radical proclivities, started talking to him about the “seven sisters” oil companies. While this oligopoly is a clear violation of economists’ notions of a competitive marketplace, Friedman proceeded to offer a detailed argument why they really mirrored a perfectly competitive market. Martin left there astonished, partly because of the
topic Friedman chose and partly because of Friedman’s analysis. In the end, Martin says, he realized that his only chance of refuting Friedman’s argument was if he had stopped him at the very beginning and questioned his starting assumptions. That’s the fundamental problem with neoclassical economics. If you don’t challenge their initial assumptions, neoclassical economists are off to the races, spinning yarns about the fictitious idea of the overall economic efficiency for society as a whole. I think that this is how neoclassical economics turns out so many economists uncritical of the framework. They begin the first few weeks of their doctoral coursework making a set of totally unrealistic assumptions and then spend the next 4 or 5 years assuming them to construct an amazing set of false implications and conclusions. By the time they get their PhD, the assumptions are unquestioned.

What is a neoclassical economist to do if she or he accepts most of my arguments and does not want to affiliate with any of the three alternatives briefly discussed above? It is difficult to remain a neoclassical economist if you have to give up the concept of overall economic efficiency. But you can still ask the equity question “Efficient for whom?” That is: Who pays the costs resulting from a project or policy? Who receives the benefits? You would have to define efficiency concretely in terms of earnings, learning, school completion, and so on. Political economists with a neoclassical bent often do something like this by looking at the equity issues involved in different groups receiving different returns from education, such as men versus women or whites versus blacks (e.g., Carnoy 1997). But you don’t have to become a political economist to leave the neoclassical orthodoxy behind. There is a whole field of institutional economists who are closer to sociologists than to neoclassical economists with their own Association of Evolutionary Economics and the Journal of Economic Issues. And there are other umbrella groups with broader views of economics—like the Association for Heterodox Economists and the International Confederation of Associations for Pluralism in Economics (ICAPE).

And there are the three alternatives discussed in the previous section. While none offer the quantitative specificity of HCT, all three alternative frameworks can provide different ways to understand and evaluate educational policies and practices. All three alternatives are often tied to the struggle for social justice. All three alternatives require participatory democratic

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31 Of course, looking at social rates of returns would not have any meaning if you accept my argument, but economists could and do look at private returns. However, given the problems with regression analysis and with projecting earnings 40 years into the future, even private returns are problematic.

32 They should not be confused with neoinstitutional economics, which is a neoliberal version of neoclassical economics.

33 I do not mean to suggest that these three are the only alternatives to HCT. In particular, all four “human” approaches may be considered of Western/Northern origin. Santos (2014), in his book Epistemologies of the South: Justice against Epistemicide, argues strongly for casting a wider net. The theme of the 2014 CIES annual meeting, the African philosophy of Ubuntu, may be one relevant example.
deliberation and struggle in order to choose concrete paths to follow in particular contexts. But the guidance offered can sometimes be quite specific. For example, based on such alternative frameworks, a number of countries have put clauses in their constitutions specifying the percentage of government budgets to be devoted to particular levels of education. Such policies have been criticized by neoclassical economists and opposed and even overturned due to the actions of international agencies like the World Bank (Klees et al. 2012). They argue that such policies are too blunt an instrument, not taking into account the trade-offs an analysis of benefits and costs could show.

Unfortunately, as detailed in this article, the analyses of trade-offs offered by human capital theory and rate of return methodology are so problematic that they are useless for policy guidance. These frameworks posit a world where quantifiable criteria and empirical analyses can tell you in this year, in this context, whether vocational education is a better investment than academic education or primary education is a better investment than higher education. But “better” is embodied in a convoluted and ultimately empty concept of economic efficiency, and the impacts measured are partial, inaccurate, and misleading. We have no shortcuts in assessing education or other social policies to the messy, participatory, democratic struggle of individuals and groups with different interests that are posited by a focus on human rights, human capabilities, or human agency. While human capital theory may be an intellectually interesting idea, even brilliant to some, it has been destructive of finding sensible paths for educational policy and practice. Embedded these days in a neoliberal market fundamentalism, human capital theory has proven to be an ideological dead end. Fortunately, there are alternatives.

References


KLEES


