

OUGHT AIN'T IS: MIDNIGHT THOUGHTS ON EDUCATION

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ABSTRACT:

Arguably nothing is more important to long-run improvement in human well being than a high quality basic education for every child. Promoting the achievement of this goal requires a serviceable *positive* model of education policies—a coherent causal explanation of why governments actually do what they do. This paper is part of a series of three papers that creates a theoretical framework for educational policy in developing countries. Here I show that “normative as positive” (NAP)—explaining that the policies actually chosen were chosen *because* they maximize an individualized social welfare function—fails as a useful general positive model of schooling. While NAP can perhaps accommodate the fact of *some* direct production of schooling by *some* governments, the reality is that (nearly) *all* governments *produce* education and that, by and large, this is their *only* support to education. Moreover, NAP fails not just in the large but also the small: there are six additional common facts about educational policies inconsistent with NAP.

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INTRODUCTION¹

Economists have a bright daytime myth they tell about education and, being economists, they tell the story as a logical argument:

Premise: Education is good because it raises people's productivity in many (if not all) activities.

Premise: But education is more than good, it is extra good—education has positive externalities.

[*Extra Premise(s), added as needed*]: There are: (1) other market failures in education, (2) market failures in markets that affect education (e.g. human capital cannot be collateral in credit markets), and (3) possible normative reasons for government intervention (education reduces inequality, some minimal level of education is a “merit” good).

Normative Theorem: Because of these market failures there exists a set of public sector interventions that are (potentially) Pareto improving.

Factual Observation: Governments do produce schooling.

Conclusion: The *reason* governments produce schooling is not *because* it is good, but because it is extra good (e.g. remedies a market failure or improves equity)².

Welfare economics is devised to answer the question “what is the policy that would (at least potentially) maximize social welfare?” One can also imagine a benign technocrat who takes as his/her objective the maximization of a suitably well-specified social welfare function. Since the normative is positive at the individual level (e.g. that consumers maximize their utility is a positive theory of individual behavior) one is tempted to extend “normative as positive” to policy choices: if a government G is actually doing policy P, it is because policy P is the social welfare maximizing choice.

But the bright daytime myth and models in which governments do the right things for the (economically) right reasons cannot survive the common sense midnight truth: “ought ain't is.” The welfare economists' *rationales* for public sector intervention should not be confused with *reasons*—a causal model of government behavior.

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² Lest anyone think I am attacking a straw man, here is a typical quote from the World Bank's web site on education: *Governments around the world recognize the importance of education for economic and social development and invest large shares of their budgets to education. The reasons for state intervention in the financing of education can be summarized as: High returns, Equity, Externalities, Information asymmetries, Market failure.*

The first section formally specifies the “normative as positive” (NAP) model. The second section explains the three problems that direct production of schooling by governments poses: *any*, *all*, *only*. While NAP can only with difficulty explain any direct production of schooling by governments, in fact *all* governments produce schooling and production is frequently the *only* support to education. The third section shows six additional common features of education policy in developing countries that are inconsistent with NAP. The conclusion more than concludes, it points the way to a serviceable positive model of education policy that is developed in the companion papers (Pritchett, 2001 a, b)³.

1. NORMATIVE AS POSITIVE

As a causal model “normative as positive” explains that policy P is chosen because it maximizes a social welfare function (a suitable aggregation of citizen preferences) over the feasible policy choices (that is, subject to all the constraints the decision maker faces) within a maintained economic model. The next four sub-sections specify those elements of NAP: citizen preferences, aggregation into social welfare, feasible policies and constraints, and the economic model.

1.1. PREFERENCES OF CITIZENS

The utility of each of the C citizens depends on: consumption of all non-education goods taken as an aggregate over goods and time, their child’s school, and the schools chosen by their fellow citizens. The utility of the c^{th} citizen with consumption of non-education goods X^c , whose child attends the j^{th} school while the C-1 other citizens attend the (vector of) schools j^c , can be written as:

$$U^c(X^c, j^c, j^{-c}) \tag{1}$$

In defining utility from schooling, I assume that schools convey both skills (reading, writing, creative thinking) and beliefs and values and attitudes (punctuality, tolerance, cooperation). A school is formally defined as a set of skill objectives (an N_A dimensional vector), set of belief/value objectives (dimension N_B) and a pedagogical approach to convey those skills and beliefs (dimension N_T)⁴ so that each school j is specified as an

³ Two companion papers build a more useful model. Pritchett (2001a) demonstrates that direct production is explained by (a) the joint production of skills and beliefs in formal schooling and (b) the unobservability of beliefs. In a principal-agent model with these two features if the principal’s motivation is the inculcation of belief, the principal will choose direct control of schooling (“force account” production) over any arms-length contract (e.g. vouchers). Building from that explanation of direct production, Pritchett (2001b) creates a political economy framework that is capable of generating plausible positive models that can explain everything NAP cannot--that all governments produce, that direct production is generally the only form of support, the six empirical facts that are puzzles for NAP--and more. This new positive model can be used to devise strategies to more effectively promote more and higher quality basic education.

⁴ I assume all schools are “feasible” such that the pedagogical approach is consistent with production of the skills and beliefs and that this is common knowledge.

dimensional vector. Each citizen's utility from schooling depends on the discrepancies between their ideal and actual schools. Each parent/citizen has a different metric ($\|\cdot\|^{A,B,T}$) that maps from deviations in each of the sub-vectors of schooling into a single cardinal number, that represents for each citizen c , the welfare loss from their child being in school j versus their optimal school in that dimension (some parents might care only about mathematics, others only creativity, others only religious doctrine). The function f maps from these three sub-components to a single (positive) number.

$$j^c = -f^c \left(\begin{array}{c} \left\| A^{c^*} - A^j \right\|_c^A \\ \left\| B^{c^*} - B^j \right\|_c^B \\ \left\| T^{c^*} - T^j \right\|_c^T \end{array} \right) \quad (2)$$

The third component of each citizen's utility is the *direct* effect of ideological choices that *other citizens/parents* make for *their* children. I assume that each citizen c cares about the *skills* of other citizens' children only insofar as there are externalities that affect citizen c 's consumption. But with beliefs there are two possible effects: one possibility is that beliefs acquired by others may affect c 's consumption by affecting productivity (Gradstein and Justman, 2000) and the second that citizen c *directly* cares about other citizens beliefs. The typical citizen c might not like having other people's children taught that c 's own ethnicity/religion/political beliefs/gender/nationality is inferior or stupid or evil—whether or not these beliefs directly affects c 's consumption. Exactly how each citizen might care about others beliefs is complex and there is no presumption that the function is linear or symmetric as some citizens may be indifferent (tolerant) in a broad range and yet care strongly when beliefs cross a certain threshold of ideological difference while others may object strongly to even small deviations in certain directions. For simplicity we'll assume that each citizen c has a different optimal belief for all others (B^{c^*}) and has some metric ($\|\cdot\|$) over the $N_{B^c} \times (C-1)$ stacked vector of ideologies received when children attend schools j^{-c} (where the notation “- c ” indicates a $C-1$ dimensional vector which excludes c).

$$j^{-c} = \left\| \begin{array}{c} B^{c^*} - B^{j^1} \\ B^{c^*} - B^{j^{c-1}} \\ B^{c^*} - B^{j^{c+1}} \\ B^{c^*} - B^{j^c} \end{array} \right\|_c \quad (3)$$

1.2. AGGREGATE SOCIAL WELFARE

The social welfare function aggregates citizen utility. I impose the common constraint that the social welfare aggregation is “inequality averse”. I also impose the common, but often implicit, assumption that the social welfare aggregation is “individualistic.” This imposes that *only* the utility of citizens from their own consumption of goods and schooling is considered in the technocrat’s aggregation of well-being. That is, if citizen c ’s neighbor Mr. $c+1$ plays jazz on his stereo sufficiently loudly that c can hear it, this is part of c ’s consumption vector and that does enter the technocrat’s utility function. But utility from *existence values* are ruled out: citizen c may dislike it if Mr. $c+1$ plays jazz (or worships Satan, or tells racist jokes, or watches pornography or is homophobic) at all, *ever*, even in the privacy of $c+1$ ’s home⁵. The assumption is ubiquitous but usually made implicitly by dropping this element from the specification for individual utility. There is a long tradition of liberal individualism (in the nineteenth century sense) that rules out as inappropriate for policy consideration, all such inter-personal existence values (e.g. envy, prudery, religious intolerance, jealousy, sadism). Since, in the context of education, the inter-personal concern about beliefs may well be empirically important, I want to emphasize that this is included in individual welfare but sharply distinguish between policies that can be justified within the standard NAP approach using an “individualized social welfare” (ISW) function and those that invoke direct consideration of inter-personal concern about beliefs.

$$ISW = SW(U^1(X^1, j^1, j^{-1}), \dots, U^c(X^c, j^c, j^{-c})),$$

Individualistic

$$\frac{\partial SW}{\partial U_1^c} \geq 0, \frac{\partial SW}{\partial U_2^c} \geq 0, \frac{\partial SW}{\partial U_3^c} = 0 \quad \forall c \quad (4)$$

Inequality averse

$$\frac{\partial^2 SW}{\partial U_1^c} \leq 0, \frac{\partial^2 SW}{\partial U_2^c} \leq 0$$

1.3. POLICY CHOICE SET AND CONSTRAINTS

Policy choices have two elements: the range of policy instruments being considered and the constraints on those instruments.

Instruments. Normative welfare economics often deals in existence proofs—demonstrating that there exists an intervention that improves welfare over the “no intervention” equilibrium. However NAP must be stronger. If the causal explanation of “why policy P?” is that “P was optimal,” then policy P should not just be better than the alternative of “nothing” but should be the *best feasible* policy. So if market failures lead to an inefficiently low

⁵ This same distinction is made in the discussion of environmental externalities between *use* values—that I value a clean environment because I may use it someday and *existence* values—that I value the very existence of some unspoiled environment even if I personally never see it.

level of education with “no intervention”, then there are a variety of possible instruments to raise the level: mandates, entitlements, universal subsidies, targeted subsidies, subsidies to providers, direct production, etc. The feasible policy set is limited by implementation constraints but these should be modeled explicitly either as limitations on the feasible instrument or as constraints on the instrument.

$P \in \mathcal{P}\{\text{set of all feasible instruments}\}$

Constraints. The policy chosen must satisfy a variety of constraints. For instance, any policy that involves positive public expenditures should satisfy the budget constraint—so that expenditures are matched to mobilized revenues. These constraints can also impose feasibility constraints on various instruments: for instance targeted subsidies may be a possible instrument but the efficiency of targeting might be limited by the public sector’s ability to observe household outcomes (e.g. current income might not be observable).

These two elements are obviously intertwined: if an instrument is included in the choice set, the relevant constraints need to be imposed and if the constraints imply that a certain instrument will never be chosen, this can be incorporated by eliminating the instrument from the feasible set.

P satisfies $C = \{\text{policy instrument constraints}\}$

1.4. ECONOMIC MODEL

In the normative version of welfare economics policy statements are conditional on the postulated economic model: “if there are externalities that in equilibrium are not internalized in the behavior of any actor, then there is a possible (potential) Pareto improving action.” However, the positive model requires the additional premise about the actor who chooses policies (whom I call, for lack of a better term, the “technocrat”) that he actually *believes* the economic model. Therefore in NAP not only is it important whether there are rationales for public sector intervention but a technocrat must believe in the economic model which generates those rationales and translate this belief into policy choices.

The economic model is the mapping between possible policy action, the resulting choices by the individual citizens (as consumers and producers), and the resulting (equilibrium) outcomes—the income/consumption for each citizen and schooling outcomes for each of the C citizens. This dependency of policy outcomes on the maintained model is denoted by indexing the outcomes by model:

$$(X, j^c, j^{-c}) = X_M^c(P), j_M^c(P), j_M^{-c}(P)$$

There is obviously a great deal packed into the assumption of a model M —behavioral functions of producers and consumers, market clearing mechanisms, production functions, etc. The standard welfare theorems often specify a general equilibrium model (specifications of production functions, utility functions, behavior of consumers, market clearing) under which no Pareto improving policies exist.

A rationale for public sector intervention usually takes the form of some assumption about externalities or other market failure. While this is general, one common example is that governments choose to subsidize schooling *because* there are externalities to skills (of some type—perhaps literacy).

1.5. SUMMARY OF NAP

NAP implies the answer to “why did the government do P ?” is “because P was P_{ISW}^* the optimal feasible policy to maximize ISW under model M , subject to the constraints”.

Normative as Positive (NAP)

$$P_{ISW}^*(C, M) = \underset{P}{\arg \max} \quad ISW(U^1(X_M^1(P), j_M^1(P), j_M^{-1}(P)), \dots, U^C(X_M^C(P), j_M^C(P), j_M^{-C}(P)))$$

subject to Constraint set C and $M^{Technocrat} = M$

2. THE “ANY”, “ALL”, AND “ONLY” PROBLEMS WITH DIRECT PRODUCTION AND NAP

Before moving to the assessment of the empirical usefulness of NAP I want to make two, related points. First, unless you were educated in a public school in a developing country, forget about your personal experience. In discussing this paper with many people the common objection is: “but in the USA/UK/France...” This is intended to be a model of educational policy in countries where universal basic education is a problem—developing countries. I am not trying to model the behavior of the local school board in Boise Idaho⁶. I am trying to understand educational policy in countries of my professional experience. Does NAP explain educational policy in authoritarian (Banda’s Malawi, Nyere’s Tanzania, Paraguay under Stroessner, Egypt under Nasser/Sadat/Mubarak, Morocco under the king) and democratic (Uttar Pradesh, Jamaica, Argentina) developing country settings?

Second, I am not attempting to disprove NAP as a logical possibility but I do suggest that NAP is not an acceptable “workhorse” model. I cannot prove that NAP *never* is correct but I argue it is such an empirically implausible model that it should not be the basic or default general model. Anyone looking for a mathematical proof or empirical “evidence”

⁶ This is not a metaphorical use of “Boise” or “Idaho”—I actually attended public schools (Monroe, South, Borah) in Boise Idaho.

in the form of a single coefficient in a regression will be disappointed with the heuristic, “weight of the evidence” approach below.

Government’s direct production of schooling is the biggest empirical problem with NAP. The standard NAP has never explained any direct production of schooling by the public sector as the *optimal* policy compared⁷. But while perhaps with sufficient cleverness one could handle the “any” problem so that some governments somewhere might produce some schooling of some types; in reality, nearly *all* governments directly produce schooling of *all* types and often produce nearly *all* schooling of some types. Moreover, in many of those countries, direct production of schooling is the *only* support for education (especially for basic education).

The heuristics of why direct production (and particularly “production only”) is problematic, begins with four simple propositions:⁸

TEP1: People’s well-being is more reliably advanced by allowing them to choose among more options than either by limiting their options or someone else choosing for them.

TEP2: Productive efficiency—both static (current cost minimization) and dynamic (innovation)—is encouraged by free entry and exit of producers and competition among alternative providers.

TEP3: There are costs of generating resources for the public sector to use, hence—all else equal—any given public objective should be accomplished with the minimal degree of public expenditure.

TEP4: The optimal solution requires matching the instrument to the objective.

These four propositions illustrate intuitively why government direct production is a difficult puzzle. The typical policy in which the *only* form of government support for basic education is making available government *produced* schooling so that education is subsidized if citizens choose a public school and not otherwise, violates all four: citizen’s choice is limited (TEP1), government producers do not face level playing field competition (TEP2), public resource costs are high (TEP3), and the instrument is very broad (TEP4).

I address the problem of the link between market failures and policy instruments with the example of externalities to basic education. I use this as the example because this is the area in which there seems to be both the strongest agreement that public sector action is justified and because reaching “universal primary/basic education” is a popular cause for

⁷ By the “standard” model, I refer to NAP focused on skills. I address recent papers which introduce beliefs below.

⁸ I would argue that most trained economists are sympathetic to these propositions and might even believe them to be generally true—by which I mean these propositions can be stated technically and proved as theorems under certain conditions and economists tend to believe that the conditions are empirically quite widely applicable—though there will be exceptions to each.

advocacy. But while I address only externalities to basic education in depth, the structure of the argument and the empirical difficulties are similar for other normative “rationales.”

Assume the technocrat believes there are externalities to basic education (M^{ETB}). These externalities imply the socially optimal amount of basic education is larger than the private demand. This creates a normative rationale for *some* public sector intervention but NAP does not predict direct production. There are two questions. Is direct production the optimal instrument? Do externalities justify the magnitude of cost of direct production as the appropriate magnitude of the subsidy?

2.1. EXTERNALITIES TO EDUCATION AND DIRECT PRODUCTION AS AN INSTRUMENT

The intuitively obvious policy to address externalities to basic education (M^{ETB}) is a *mandate* that every child must receive at least some minimal standard of education (specified either in terms of passing a minimal number of years, attending until a certain age, or achieving some performance test—say, literacy). This is the economists intuitive optimal because it (a) maintains consumer choice of provider (TEP1), (b) allows for competition in production (TEP2), (c) uses few tax resources (TEP3) as there are expenditures only in enforcement, and (d) the instrument is can be directly matched to the externality—if the externality is to a particular set of skills (e.g. literacy) then mandate the acquisition of those skills while leaving the remainder of the content of schooling subject to citizen choice.

While externalities to basic education justify *something* versus *nothing* they do not obviously justify government production over alternative policies—so now the game begins in earnest. Something can be added to the technocrat’s model to change the optimal policy choice: perhaps certain households “cannot afford” the mandated minimal standard. This creates a new model: M^{ETB} , Some Can’t Afford. This added assumption perhaps justifies some public spending on education but even with this added assumption production is still not obviously the optimal policy—why not a mandate with targeted transfers only to those households that “cannot afford” schooling? This retains the advantage of TEP1 (choice) and TEP2 (competition) while the targeting of the transfer implies that costly tax resources are not used to subsidize (a) those whose private demand already exceeds the mandate level or (b) those who “can” afford the mandate level; so it is superior on TEP3 (cost).

One could then perhaps assume the constraint that the government cannot observe relevant household outcomes for targeting (e.g. current income). This makes for a new model in which some people cannot afford the mandated level and in which there is a constraint on policy that the government cannot target ($M^{\text{Technocrat}} = M^{\text{Basic, Some Can't Afford}}$, “Cannot target” $\in C$). Perhaps with this new feature, the optimal policy could be a universal transfer for schooling expenditures of sufficient magnitude so that even the poorest could afford the minimal standard—but for economists a “demand side subsidy” is still presumptively superior as it still allows consumers to choose their schools

(TEP1), allows for competition (TEP2), and reduces public resource use (in the absence of cost recovery—see below)—still no direct production.

And on it goes. Though no one ever has, perhaps a sufficiently clever economist *could* work backwards from the observed policy of production and construct a model $M^{\text{Technocrat}} = M^{\text{Assumptions justify production}}$ of the world and constraints C—invoking externalities here, credit market constraints there, and limitations of feasible government instruments over there—until *some* direct production was the optimal choice— $P^{\text{Any Production}} = P^*_{ISW}(M^{\text{Assumptions justify production}}, C)$ ⁹. If the economics literature ever reached this point (which it has not), then it would have arrived to where NAP was a *conceivably* adequate explanation of *some* government production of schooling—the “any” problem would be at least addressed.

But this solution, even to the “any” problem (why *some* governments produces *some* schooling), faces the problem that old Mr. Occam might stop by for a visit, bringing his sharp razor. Adding all the assumptions necessary to justify production only makes NAP a *possible* model—but whether NAP is an intuitive or attractive model depends on whether there is a much simpler model with equal or better explanatory power. In Pritchett (2001b), I develop a better alternative model.

Even if NAP solves the “any” problem somewhere it would have to deal with the “all” problem. Think of any list of developing countries: Bolivia, El Salvador, Haiti, Morocco, Egypt, Kenya, Malawi, Cote d’Ivoire, Nepal, Pakistan, Malaysia, Vietnam, Zaire. In *all* of these countries the government has produced schooling and at *all* levels—from primary to tertiary. None of the countries listed (and only a handful of developing countries) have been continuously democratic over the period in which public schooling has expanded massively.

Applying NAP to explain *educational* policy making is inconsistent with basic economics in two ways. First, a disinterested social welfare maximizer is a useful imaginary device for normative analysis—but as a positive description of the behavior of any real agent it is obviously inconsistent with the rest of the economics, which assumes self-interested maximization by all other agents. Second, empirically there is the problem that no one attempts to explain the entire range of actual developing country government actions as an attempt to maximize social welfare. Government production of education has existed and expanded rapidly even in many situations in which the actions of the government are otherwise corrupt, inhumane, and despicable and in many more situations in which governments were otherwise simply incompetent or indifferent. To resolve these inconsistencies there are two choices. Either NAP has limited policy applicability or limited country applicability.

⁹ Readers of science fiction will recognize Douglas Adams description of a software which instead of feeding in data and assumptions and getting a solution the user feeds in the desired solution and the software tell you what the required data and assumptions must be.

One possibility is that there are two positive models of government policy making—one, if the policy content is education (or perhaps other “good sectors like health (Birdsall and James, 1990)) and one for everything else. This is obviously *ad hoc* and unattractive. The best hope for NAP is to limit country applicability and to argue in *some* settings where political processes and institutions work in such a way that policy making can be modeled *as if* a technocrat were maximizing social welfare. However, in this case the “all” problem is dodged, not solved, so there has to be another positive model that explains why governments produce schooling in all the other cases in which politics and institutions don’t bind the technocrat. NAP is possibly the empirically relevant model for very few countries.

Finally, even if NAP could deal with “any” and “all” and be a plausible model of why all governments directly produce some schooling (even at all levels) it would still have the serious problem that direct production is commonly the only government support to education. Even if for some reason the optimal is for the government to produce *some* schooling (e.g. in outlying or poor areas where the private supply would be limited), this still gives no reason for the government not to also provide support to other providers. The policy that best reflects government commitment to universality of something people want is an *entitlement*. An entitlement to education would be a commitment by the government to provide a public school place or, where one was not available, reimburse for the average cost of a school place. As a means of achieving universal basic enrollment, a technocrat choosing the policy of production *only*—without a commitment to reimburse when production is private where government production is not available—is puzzling.

2.2. EXTERNALITIES TO EDUCATION AND THE MAGNITUDE OF GOVERNMENT SUPPORT

Then there is the second problem with direct production, particularly as public production usually does not involve significant cost recovery as support to basic education most often takes the form of providing a school place at zero or low enrollment cost. Is the degree of subsidy implicit in production, the optimal magnitude of a subsidy to basic education?

People with more schooling tend to earn more: an upward sloping earnings-education profile is, after the Engle curve, perhaps the most widely replicated empirical relationship in economics. While this is a vast and complex literature “Mincer regressions” typically generate estimates of wage increases of 6-14 percent per year of schooling¹⁰. Suppose that free provision of directly produced schooling implies the public subsidy is half the total (money plus opportunity cost) of basic schooling. For this to be the opti-

¹⁰ Interestingly, Alan Krueger, one of the leading economists of education, characterizes the voluminous literature on estimating the return to education (focused on the USA) as ending with the finding that the return is “between that of the bond market and the stock market.” (speech, November 2001). This is a nice way to put it since it summarizes well the literature, puts it in context of other possible investments, and because it is obvious that the private returns to stocks and bonds are both irrelevant to policy decisions in NAP.

mal subsidy, the externality (the excess of the social over the private return) would need to be of similar magnitude—6-10 percent per year of schooling¹¹. A social return this big, and as universal as government subsidization of basic education, should be very easy to find. However, while many examples are given of possible externalities (e.g. network effects of universal literacy, impact on neighbor's adoption behavior of innovations in farming, family planning, promotion of democracy and/or political stability, spillover effects in knowledge production), empirical work estimating the magnitude of such externalities is (a) very rare, and (b) what evidence does suggest the magnitude of external effects is small relative to private benefits.

Where is the evidence? The evidence that externalities are large relative to private benefits is thin. In a review article about why government produces education Poterba (1996) points that “There is virtually no evidence on the empirical magnitudes of many of the key parameters needed to guide policy in these areas” (pg 278) and points as a future research agenda in 1996—“because externalities are invoked to justify intervention...there is a pressing need to document the magnitude of the externalities, particularly those associated with the consumption of education” (pg 301). Recent evidence may have altered this assessment slightly (see below) but if NAP is a causal explanation of government production then the evidence about externalities should have been the *cause* of educational policies—which means that the evidence should have been available early enough to explain the enormous expansion in enrollments in developing countries that began in the 1960s and 1970s. The fact that was not available in 1996 suggests it cannot have been the cause.

Let me be clearer. I am not arguing there is no evidence about the beneficial impacts of schooling—there is abundant evidence about the market and non-market beneficial impacts of education for the person who receives it—there is no question that higher education leads to higher wages, better health, and especially for women, healthier children. Moreover, there is also evidence that countries with higher levels of education tend to have higher output. But finding that there are private impacts of schooling or even some impact of schooling in some form in a growth regression is mildly interesting but not policy relevant unless it can demonstrate that the aggregate effect is larger than would be expected from the aggregation of the individual effects.

¹¹ One of the most confused episodes in the intellectual history of development economics is the misuse of the tables of “social” rates of return published in a series of review articles by Psacharopoulos (1994, updating versions beginning in the 1980s) in which the difference between *investment* and *consumption* was confused with the existence of a *rational* for public sector intervention (which can be justified for either production or consumption). That is, the World Bank's Articles of Agreement specify that the World Bank should only finance *productive* investments and not consumption. As the World Bank wanted to lend for education and countries wanted to borrow, there was a question of whether education could be justified as within the scope of a “productive” investment. So there were a series of review articles showing that education was “productive.” Moreover, to show that this investment had a return even accounting for the cost borne by the public sector, these private rates of return were adjusted for public expenditures to get a “social” rate of return. Obviously since nothing was added to the private return to reflect putative externalities and costs were deducted, the social returns were consistently less than the private returns. These tables showing a higher private than social return were then used over and over to justify continued *public sector* investment in the production of schooling—which is of course analytically completely backwards, as the rationale for public sector intervention justifies actions in which the social return is *higher* than the private return.

Are externalities to schooling large relative to private benefits? In the few cases where there is evidence, the estimates are that the social returns are only slightly higher than the private returns. The obvious way to look for externalities (the impact of households on other households) is in aggregated data since, with an externality, the aggregate impact should be larger than the aggregation of the individual impacts. Pritchett (2003) shows that within a consistent micro-macro specification the impact on economic growth of growth in educational capital appears to have been significantly less than what would have been expected given the aggregation of the micro returns. While this is perhaps extreme, no researcher in the cross-national growth literature has shown returns to education that are statistically or empirically significantly higher than would be expected from aggregation of micro-returns¹².

There are similar findings within regions of countries. A recent study uses data within the USA to examine externalities and concludes there is no statistically significant evidence of externalities and their point estimate is that the “external” effect is perhaps 1 percentage point while private returns are 7 percent (Acemoglu and Angrist, 1999). One, now frequently cited, study does show the existence of some spillover effects of education in India. In this same study, the returns to education in the first place were quite low in the areas that were not “technologically progressive” and the study never quantifies the magnitude of benefits as a proportion of the private returns (Foster and Rosenzweig, 1995, 1996)¹³. Rosenzweig (1999) uses the same disaggregated data in India to demonstrate that aggregate data can be misleading in suggesting externalities where they are in fact not present.

The empirical evidence about the magnitude of externalities to education is too thin, too recent, and suggests effects too small to argue that NAP can explain the existing implicit subsidies via the policy of direct production (only)¹⁴.

¹² In fact in Pritchett (2001c) the coefficient on growth of educational capital is zero. But the important point is not that it is zero, as other equally plausible specifications of how education affects output can recover a positive coefficient (e.g. Krueger and Lindahl, 2001). While Krueger and Lindahl 2001 are able to show a positive impact in their unconstrained specification, it is not empirically or statistically significantly higher than would be expected. Given the imprecision in the instrumented point estimates of education (and in estimating the “no externality” comparison), “statistical significance” will be a tough standard.

¹³ Appleton and Balihuta (1996) show internal and external returns in farming productivity in Uganda nearly equal in magnitude.

¹⁴ There is a possible way to save NAP: the question for a positive behavioral model of technocrat policy makers is not whether there *are* spillovers or even whether there is evidence of spillovers, but whether the technocrat *believes* there are spillovers. If it is conceivable that the beliefs of the technocrat embedded in his model of the constraint set (*M^{Technocrat}*) is such that even without evidence his/her beliefs about externalities (or other market failures) are exactly of the appropriate magnitude and distribution so that the observed level and allocation of education budgets is the optimal response to those beliefs. And it is possible these patterns of beliefs are nearly universal among developing country policy makers—again, even in the absence of empirical evidence. But this is a classic begging of the question that if there is no necessary and sufficient relation between the existence of externalities and beliefs about externalities then actions are not explained by externalities via beliefs, but the true “cause” is beliefs—which are themselves, left unexplained.

2.3. SUMMARY ON DIRECT PRODUCTION

The standard formulations of NAP have never actually been sufficiently articulated to explain direct production as the *optimal* instrument to address the presumed set of market failures in and around education. While NAP with externalities to basic education might be a causal explanation of the direct production of some types of schooling *somewhere*, it has little intuitive or empirical appeal and is dramatically inadequate to face the reality that (nearly) all governments directly produce (nearly) all types of schooling as the (nearly) only support to education.

I have singled out the NAP explanation of “production externalities to basic schooling” as it is the most obvious, well developed, and apparently widely accepted of the rationales for government intervention in education. As detailed above, there are a number of other market failure arguments for ISW intervention in schooling, but ultimately they have the same three problems: (a) it is difficult to show that government production of schooling is ever the *optimal* response to the market failure presented, (b) modeling of governments as motivated by social welfare maximization is inconsistent, (c) the universality of government production belies the specificity of the rationale, (d) there is little or no match between the empirical evidence of the magnitude of the market failure and the magnitude of the proposed solution.

One small digression is that there is a recent set of models that move beyond the standard NAP and are quite like the model developed in Pritchett (2001a,b) in that they invoke the importance of the inculcation of beliefs in the education process. This creates a contracting constraint and potentially rationalizes direct government production if governments seek to control the beliefs taught in schools (Kremer and Sarychev, 2000, Gradstein and Justman, 2000). While these are on the right track, many of the same problems in terms of range of country coverage and evidence about the magnitude of externalities apply to these models. The limitations of these papers are discussed in greater depth in Pritchett (2001b).

3. SIX ADDITIONAL EMPIRICAL PROBLEMS WITH NAP

The problems with NAP go much deeper than just not being able to explain production. Suppose we wanted to use NAP as the “workhorse” economic model for examining educational policies in developing countries. On the face of it, NAP appears inconsistent with almost everything that governments actually do in education. The following section briefly presents six elements of educational policy that create testable hypothesis against which the NAP model can be judged. While I do not perform any formal empirical tests, I argue these are not needed as, eventually, the simple accumulation of obvious problems rules out NAP as a generally applicable model: while NAP might be true somewhere, it is more likely to be a very special case than the default scenario. Table 1 summarizes the six common features of educational policy that create problems with NAP.

1. Bans on private education. Many developing countries have at some point banned the private production of education at the primary or secondary level (and some even ban it at the university level) (World Bank, 1993). Reconciling a ban on private education with NAP is perhaps not impossible—but no one has, and it would require some ingenuity to show why a technocrat with the objective to increase skills through education would prohibit voluntary, skill enhancing, public budget reducing, agreements between parents and providers¹⁵.

2. Support to tertiary education. A very difficult problem for the NAP model is the large fraction of government budget that goes to higher education. In the technocrat model, decisions about funding allocation across *levels* of schooling (e.g. between primary, secondary, tertiary) should be based on evidence about the extent of externalities (or other market failures) across those levels. Basic education has a number of plausible (if empirically unsupported) “market failure” and “equity” arguments in its favor—e.g. network externalities to literacy, a minimal degree of literacy is a “merit” good, the distributional incidence of universal basic education is favorable. However, most of these arguments do not apply to expenditures on tertiary education¹⁶. Since the public subsidy per student in higher education has often been *orders of magnitudes* higher than the per student subsidy for basic education, the NAP case for public sector intervention to subsidize the acquisition of higher education must rest on a market failure of similarly large magnitude. I know of no evidence for this proposition and know of no case in which government decisions about the allocation of funding to higher education has been based on evidence about larger externalities to tertiary than to basic education.

3. Productive efficiency of education expenditures. A necessary implication of NAP is that if the technocrat chooses government production of schooling to promote skills, then it should be productively efficient (cost minimizing). This is not the case. First, the apparent difference in skills increment per expenditure across inputs (e.g. books versus class size) is often one, two, or even three *orders of magnitude*. Second, the evidence suggests the deviations from productive efficiency are *systematic* such that too much is spent on inputs that directly benefit teachers and too little on other learning inputs (Filmer and Pritchett, 1999).

4. Lack of enforced mandates. Not only is a mandate of minimal required level of education not the principal educational policy, it is commonly accepted there is almost no developing country in which the enforcement of a legal mandate accounts for a significant increase in the amount of education (Basu, 1998)¹⁷. This is difficult to reconcile

¹⁵ Perhaps there is a model with important peer effects in which the only way to preserve the positive externalities of “high quality” students is to force them into public schools.

¹⁶ Higher education is clearly not a merit good and the distributional incidence of higher education is never more progressive than a uniform transfer and is commonly de-equalizing.

¹⁷ Krueger presents evidence contrasting the impact of raising the mandatory age in Britain (which shows some impact) with that of Brazil (where it shows no impact).

with a technocrat who desires to increase the quantity of education. A mandate would be a relatively public resource economizing technique for expanding the total quantity of skills and positive mandates are widely used in a variety of other contexts to increase consumption of goods with externalities (e.g. a child must have vaccinations to enroll in school).

5. *Minimization of displacement effects.* Suppose that the government builds a new school and attendance at that school is 100 children, by how much did the “public sector intervention” increase enrollment? The answer could be 100, or the answer could be zero. Suppose all children enrolled in the new government school were previously enrolled in a private school (and suppose, for argument’s sake, this school was of equivalent quality in skills). If displacement effects are large then, since taxation is costly, publicly financed school construction could be ISW reducing. If NAP were the correct description of behavior then the magnitude of displacement effects would be a huge empirical issue, both in assessing overall support to education and in the location decisions of individual schools. I would argue the complete lack of interest in displacement effects (there are only two empirical studies, and both are quite recent)—or a direct interest in *maximizing* displacement (e.g. Pakistan nationalizing and banning private schools in the 1970s to push children into government schools (Farooqi and Pritchett, 2002)) suggests NAP does not describe government objectives in the provision of schooling.

6. *Explaining support to non-government schools.* There are countries for which direct production is not the only form of support: they provide public resources directly or indirectly to private educational institutions at the primary, secondary, and tertiary level. If decisions were driven by NAP these interventions should be explained by differences in the actual (or perceived) objectives or constraints faced by the ISW maximizer. In contrast, in nearly all instances of public support to private institutions the explanation is ideological. Some predominantly Catholic countries public monies are allowed to flow to Catholic schools (e.g. Argentina, Venezuela). Some predominantly Muslim countries public monies are allowed to flow to Muslim schools (e.g. Indonesia). The only country which has historically provided resources to public and private institutions on a (more or less) comparable footing is Holland where the roots of the policy are clearly in the populations mixed religious denominations—not any differences in the relative efficacy of public and private schools. NAP cannot explain variation in the extent to which government support is “only” for public sector production.

TABLE 1. SIX EMPIRICAL PROBLEMS WITH MAINTAINING THE “NORMATIVE AS POSITIVE”

Empirical problem (which may not occur in all countries)	Policy choices consistent with maximizing an individualistic social welfare function consistent?
1. Ban on (or ideological regulation) of private education	A ban on private education is difficult to reconcile with NAP both because it limits citizen choice and because it would reduce total education.
2. Extensive support of tertiary education	The high levels of spending on tertiary education are difficult to reconcile with NAP as it is not equalizing and there is no evidence on larger externalities at the tertiary level.
3. Poor performance in transmitting skills and lack of maximization of productive efficiency	No production function estimate has ever shown government production to be productively efficient. Existing empirical evidence and the generally poor performance suggests systematic deviations from productive efficiency—which is inconsistent with NAP.
4. Lack of the enforcement of a mandate	If the objective is to increase skills then it is puzzling that enforcement of mandates is rare.
5. Failure to minimize displacement effects	With NAP governments should be indifferent between private and public production of equivalent skills but governments often pursue, rather than minimize, replacement.
6. Support of private schools when it does exist	Public finance for private schools not driven by differences in policy maker beliefs about efficiency of private versus public schools.

CONCLUSION

There is nothing intrinsically incorrect about the normative economics of education. It is easy to construct models in which assumptions about the true economic model exhibit certain features and create “market failures”. If there are market failures, then the possibility exists for an agent whose objective function is welfare maximization and who has power of compulsion to undertake some “intervention” that will be (potentially) Pareto improving. Normative modeling of educational policy is not incorrect it is just irrelevant.

The usual standard for a positive theory is: “if the facts don’t fit you must quit”. By that standard economists should stop using “normative as positive” (NAP) to explain educational policies in developing countries as it is an abysmal failure. While NAP

can provide a rationale for *some* public sector intervention *none* of the typical features of educational policy can be easily explained within NAP—including the universal direct production of education.

So, who cares? You should. This paper is critical about using NAP to explain education policies not because I personally believe there should be less or, (perish the thought) lower quality education. I personally believe that there should be more and better schooling in every developing country but being lulled by a warm and fuzzy, yet false theory like NAP, is an impediment to achieving this goal.

Suppose that you have an objective to increase the quantity and/or quality of schooling in developing countries (whether as a concerned citizen, activist, donor, academic, government official, whatever). Improving government policy requires a positive model of how policies are made (and changed). Suppose you were an economist and you really believed NAP as well as the causal *reason that the* government provided schooling was because there were positive externalities. Then, if you believe the existing level of education is “too low” it is because you believe that market failures are higher than the existing policy maker believes they are. Therefore, producing evidence that externalities are high is of enormous importance from a practical policy view. If on the other hand, NAP is wrong and the government produces schooling for some completely different reason then additional evidence about the magnitude of externalities is probably irrelevant (or possibly even worse than irrelevant).

Some might believe that the introduction of a more realistic positive model political economy of policy formation is irrelevant, as roughly the same things would be recommended no matter what the positive model because, after all, what is recommended is the normatively best policy. But introducing political considerations is not a marginal change that leaves the recommendations produced by NAP unchanged. Gelbach and Pritchett (1997) present a model in which policy recommendations based on NAP which ignore political constraints are not only sub-optimal—the “politically naïve” policy choices are *pessimal*¹⁸.

While the present work is entirely destructive of NAP as a useful approach, the two companion pieces build a more useful model. The first, emphasizes the conditions of production of schooling which are that (a) in schooling “skills” and “beliefs” are jointly produced, (b) beliefs are unobservable in a way that skills are not, and (c) since beliefs are unobservable there is the possibility of collusion in instruction against the desires of the principal (in a principal agent model). Pritchett (2001a) shows the conditions under which this unobservability of beliefs will lead someone who desires that another person

¹⁸ Gelbach and Pritchett (1997) show that the recommendations on targeting that emerge from a “naïve” political economy in which budgets for transfers are fixed independently of the targeting transfers are in fact the recommendations that, if implemented when in fact there was voting over the budget, would be not only sub-optimal, but are welfare *minimizing* for the poor.

receive instruction in beliefs to which they might object (e.g. indoctrination) to directly produce schooling rather than rely on arms-length “third-party” contracts with teachers or students of any type.

Pritchett (2001b) shows how the concern of regimes for the beliefs of their citizens leads government to directly produce schooling. This approach can not only easily handle the “any, all and only” problem of direct production but can also explain all of the features in table 1 that are inconsistent with NAP.

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