The State, Socialization, and Private Schooling: When Will Governments Support Alternative Producers?
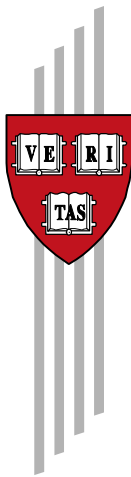
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The State, Socialization, and Private Schooling:
When Will Governments Support Alternative Producers? [1]

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The State, Socialization, and Private Schooling:

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Abstract

Understanding the institutional features that can improve learning outcomes and reduce inequality is a top priority for international and development organizations around the world. Economists appear to have a good case for support to non-governmental alternatives as suppliers of schooling. However, unlike other policy domains, freer international trade or privatization, economists have been remarkably unsuccessful in promoting the adoption of this idea. We develop a simple general positive model of why governments typically produce schooling which introduces the key notion of the lack of verifiability of socialization and instruction of beliefs, which makes third party contracting for socialization problematic. We use the model to explain variations around the world in levels of private schooling. We also predict the circumstances in which efforts to promote the different alternatives to government production –like charter, voucher, and scholarship- are likely to be successful.

Introduction

Educational achievement is regarded as a key determinant of the economic growth and long-run prosperity of nations. Understanding what are the institutional features of the education system that improve educational achievement and schooling quality is a top priority of development policy, as shown by the centrality of education in the Millennium Development Goals. One great puzzle for economists and policy-makers is why so few governments around the world choose to rely on alternative suppliers. Not only do all governments directly produce schooling, but in many countries the *only* significant government support to schooling is through direct production and schooling is provided for citizens "in-kind." Yet there is no purely *economic* reason in the standard public economics why either governments or citizens would prefer this structure of support to education so generally[4]. Moreover, there is a substantial body of evidence from around the world that private schools are more productive, in the narrowly defined sense of cost-effective in producing measured learning outcomes (Jimenez and Lockheed 1995)[5]. Not surprisingly the estimates of the superior productivity ranges from small (and disputed) in countries with reasonably well functioning public sectors (e.g. the large literature in the USA) to massive superiority with less efficacious governments (e.g. Pakistan (Das et al.

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[4] Mark Blaug's (1976) review of the economics of education, although more than 30 years old, remains roughly true: *"what needs to be explained about formal schooling is not so much why governments subsidize it as they do, but why they insist on owning so much of it in every country. On this crucial question we get no help, and cannot expect to get help, from the human capital research program, even when it is supplemented by the theory of externalities and public goods of welfare economics." (p. 831).*

[5] Given that individuals attend private schools are self-selected, there are obviously difficult issues in assessing the magnitude of the private schooling productivity gains versus selection, which have been handled in the literature through a variety of more or less plausible identification techniques (Evans Oates and Schwab 1992) including estimates from Colombia based on lottery selection of scholarships that could be used private schools (Angrist et al. 2006).

2008) or India (Kingdon 1996))[6].   While the advantage may be disputed *no study* has ever suggested that private schooling is *less* productive than the typical public sector alternative.   Arguments based on simple principles that are widely accepted by economists can show that an "ideal voucher" (Hoxby 2002) system could be designed that, by augmenting individual choice and allowing competition among a greater variety of suppliers, could improve on the "production only" policy of in-kind provision of schooling services by the government as a supplier for any *observable* objective. It is a puzzle for economists that, despite all this, choice based systems are exceedingly rare.

This is not because "choice" is an academic, untested, idea whose implementation is difficult or whose success has never been demonstrated. The Netherlands has operated a mixed system of government production plus provider neutral financing for all of its national history and has reached admirable outcomes not just educationally (in access, quality, and equality) but also socially, politically, and economically. And yet there has been strikingly little diffusion. Not only have very few countries adopted fundamentally choice based systems with provider neutral financing (Chile's 1981 reform being the exception that proves the rule) but there is little support for private schools, either directly to schools or through demand side transfers (e.g. provider neutral scholarships), of any kind.

But this bias against choice is not an actual mystery, just an unnecessary disciplinary puzzle created by the economists' narrow framing of the outputs of education. Economists have almost exclusively treated schooling as if the only relevant

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[6] Also, if the source of the superior results for individual students moving into private schools is exclusively peer effects one can question whether these estimates would translate into general equilibrium improvements in a choice based system (Urquiola and Hseih 2007).

output was some measure of "skills" both in modeling the demand for schooling by students (and their parents) and the supply of schooling by governments. This willfully ignores three key facts.

First, to all other disciplines, as well as common sense, it is obvious that education, of which schooling is one element, is a process of the socialization of youth and their preparation for their economic but also their social and political roles as adults. Schooling is intended to convey not just ideologically neutral skills (e.g. arithmetic) but also through socialization process an array of beliefs, attitudes, dispositions, and convey a view of the order of society and the child's current and future appropriate roles in his/her society[7].

The second key fact is that there is something fundamentally different about the external observability and verifiability of skills versus beliefs. While an individual can always dissemble and pretend *not* to possess either skills or beliefs that they *do* have, a person cannot pretend to *have* skills they *do not* possess—there is some assessment that will reveal their lack of skill. Beliefs are fundamentally different in this regard. People can pretend to have beliefs they do not have and there is essentially no external assessment that could detect this. Contracting possibilities always depend on the costs of verification and this inability to externally assess the acquisition of belief affects the extent to which "third party" contracting for socialization is feasible.

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[7] As Jerome Bruner (1968) puts it: *An "official" educational enterprise presumably cultivates beliefs, skills, and feelings in order to transmit and explicate its sponsoring culture's ways of interpreting the natural and social worlds.*

The third key fact is that states and governments care directly about the beliefs of their citizens. This is true whether the governments are democratic or autocratic. This concern for their citizens' beliefs can either be purely cynical as a means of furthering the non-ideological goals (e.g. staying in power, as modeled by Lott (1999)) or because the state and the individuals that control its actions have sincere concerns for the beliefs of others.

This paper is organized as follows. First, we build a simple positive model of the supply of schooling by governments (and other potential providers) and the demand for schooling by parents. This model builds in socialization objectives in the objective functions of both suppliers and demanders. It also imposes the constraint that because socialization has very high costs of verifiability there cannot be "third party" contracting for that component of schooling. In this model a key element is the gap between the socialization the state desires children to have and the socialization children would receive in the absence of state intervention. Second, we argue that this model captures important elements of actual policy towards private schooling. We show how the interaction of state and citizen demands for control over the content of socialization produce an array of outcomes with respect both to the magnitude of schooling (how much it is subsidized) as well as the policies of the state towards privately provided schooling. At one extreme many countries effectively ban private school, some tolerate but do not encourage private school, while others actively promote private schooling in a variety of ways, and at the other extreme government support follows the student and is provider neutral. The third section examines how this alterative model of schooling alters the way in which the promotion of school choice is conceptualized, its gains measured, and policy environments designed.

I)   <u>Analytical Framework</u>

An analytical framework for schooling policy and school choice needs schools, demander of schools and schooling, and suppliers of schools and schooling.

Schools. An individual school is taken to be a combination of skills (A) and beliefs (B), where each of A and B is a potentially large dimensional vector that the school attempts to convey—a definition that covers the complete array from the ordinary "primary school" to a dance school to computer tutoring to the notion of a "school of thought" within a discipline. Throughout we assume there is some, potentially very complicated, relationship that maps inputs and actions via some pedagogical process into outputs of skills and beliefs. As it is not essential we make no assumptions about this process other than that we consider only *feasible* schools, those within some frontier of possibilities.

$$S^j = S(A^j, B^j) \tag{1}$$

Associated with each school is a cost of attending that school, c^j. That cost is some combination of monetary (e.g. tuition, fees) and non-monetary (e.g. travel) costs.

Demand. We assume that households do what households always do, maximize their utility by choosing. In this case they simultaneously choose the level of schooling to be attained and the desired mix of skills and beliefs among the available alternatives, balancing the cost of the school(s) against the alternative of the consumption of a single

aggregate consumption good (normalized to have a unit price). Their demand for schooling, and in particular their demand for skills, depends on assessed earnings returns to increased skills.

While the choices are often conceived of as "school" versus "no school" in fact the decision is always complex as parents/students can participate in multiply educational activities by attending multiple schools. So, a child could both attend a "regular" school and supplement that school with tutoring in a particular subject in which the student is weak (to compensate) or strong (to amplify), alternatively the child could attend a "regular" school with a broad based curriculum and also attend religious instruction to supplement their training in "beliefs", or a child could attend a regular school and a music school (or, for aspiring professional musicians, attend a music school with after hours tutoring in other subjects).

Supply. What distinguishes a supplier of schooling from the supply of other goods or services say, shoes, hats, meals in restaurants, dry cleaners etc. is that a supplier of schooling may have preferences such that the conformity of the general population or particular prospective student's beliefs with the beliefs of the supplier of schooling provides the owner, or potential supplier (PS) of the school with direct utility.

$$U^{PS}(X^{PS} - E^{PS}, \|B - B^{PS}\|) \tag{2}$$

Hence potential suppliers can be arrayed by their willingness to sacrifice consumption of other goods to explicitly or implicitly subsidize the (re)production of their beliefs. At one end would be strictly for profit schools that are ideologically neutral. At the other end

of the spectrum are potential suppliers who are willing to provide their instructional services for free to all willing students with the only reward being the ability to shape their students beliefs.

The introduction of the socialization process, or "beliefs" directly into the definition of schools, directly into the demand function of parents/students, and directly into the objective function of potential suppliers is the first step towards a realistic framework for schooling. The usual economic set-up of considering only "skills" ignores the most basic facts about not just government schooling, but about alternative providers, which is that throughout history and even today in most situations the ubiquitous source of alternative suppliers of schooling is not the for profit private sector but schools associated with religions. Religions clearly are willing to subsidize skill acquisition in order to link it with socialization and the inculcation of belief.

Observability, agency constraints and third-party contracting for beliefs. We have assumed that there are agents who care about the beliefs of others and have a willingness to pay for altering their beliefs, but we have not yet specified why this would turn them into potential owners and operators of schools as opposed to simply paying for the demonstration of instruction in such beliefs, or better yet, paying for demonstrated beliefs.

An analogy with driver's licenses is perhaps instructive. There are good reasons for me, as a driver, to want other drivers to have improved driving skills as there are externalities to driving skills. This could rationalize a concern by a government (as a simple aggregator of preferences) to desire better driving skills, or at least some minimal competence. The government could either mandate that to drive a person needs a license and part of the licensure process is a demonstration of knowledge of the relevant laws and procedures and a demonstration of actual capability of driving (which could depend on

occupation and type of vehicle (e.g. higher skills demanded of professional drivers or truck drivers). Alternatively, the government could mandate a minimum number of hours of instruction. Or a government could do both, mandate both some minimal instruction and demonstrated competence. A third alternative would be for the government to own and operate schools of driving instruction. The choice depends in an obvious way on the costs of observing competence in driving skills. If this can be assessed with relatively low cost, say one thirty minute driving session, then simply mandating minimal standards and assessing those is likely sufficient.

If the skills are sufficiently complex or the performance standard sufficiently high that it is difficult to observe the needed range and level of skills at low cost, then one might move to both a minimal period of instruction plus an objective assessment. In the USA many professional or vocational licensure requirements are of this type one must attend a (certified) school (or apprentice) *and* pass an independent examination.   For instance, to become a barber in Massachusetts one must "*show[s] that he has studied and practiced the occupation of barbering for two years as an apprentice under one or more registered barbers, or for at least six months in a properly equipped and conducted barber school or barber college under the instruction of a registered barber and eighteen months as an apprentice under a registered barber, ... **and** that he is possessed of the requisite skill in such occupation to perform properly all the duties thereof, including the preparation of the tools, shaving, haircutting and all the duties and services incident thereto*".   In the case of a migrant who has practiced as a barber the assessment is very specific: "*The examination shall consist of a haircut, shampoo, shave, face massage and a scalp massage*".

If one imagines the same approach of stipulating time of instruction plus an external

assessment with respect to goals about beliefs, the problem is immediately apparent. For instance, the current website of the Turkish Ministry of Education states as its objective: "*In this sense, the Turkish education system aims to take the Turkish people to the level of modern civilization by preparing individuals with high qualifications for the information age, who: (a) are committed to Atatürk's nationalism and Atatürk's principles and revolution…".* How would one assess whether a student was "committed to Ataturk's nationalism"? While questions could reveal whether a student knew how to *demonstrate* a commitment to Ataturk's nationalism by answering questions correctly (e.g. "How much are you committed to Ataturk's nationalism" (a) not at all, (b) only a little, (c) quite a bit or (d) a lot.) revealing the student's sincere commitment would be difficult, if not impossible.

If demonstrating a commitment to nationalism was part of a graduation requirement, but the student was a committed anti-nationalist (say committed to a regional separatist group) they could find an instructor and contract for *insincere instruction,* proposing a deal with a school/teacher of the type "teach me to *demonstrate* the requisite skills of commitment to nationalism while reminding me that nationalism is not a true or desirable belief." This is a feasible contract as the student knows what instruction they are receiving so instruction in beliefs, of whatever type, is directly contractible.

Imagine that in order to obtain a desirable position with an organization there were a requirement to be able to pray and that the organization was willing to reimburse students for the necessary instruction from tutors to learn how to pray. One can easily imagine an atheist student contracting with an instructor—"teach me to mimic all of the forms of praying all the while reminding me there is no God." If one regards the actual belief or faith in God as an integral part of prayer then this "third party" contract for socialization

in beliefs has been thwarted by *insincere instruction.* It is very difficult to imagine that either (a) one could devise an assessment of praying that could reliable distinguish the sincere from insincere or (b) there is a low cost means of preventing mutually desired insincere instruction as it would likely take very little unobserved private communication between instructor and student.

We bring in the constraint that socialization or instruction in beliefs is not third party externally verifiable, either through direct assessment of students or observation of the instructional process (without very high verification costs) in a particularly stark way. We assume if school j is a government school it conveys the government beliefs and if j is not a government school it conveys whatever beliefs it chooses. The same is true for schools controlled by any other owner, that is, a Catholic or Muslim owned and operated school conveys the views of its owner and operator but cannot control the socialization directly of schools they do not own and operate.

$$Agency\ constraint: B^j = \begin{Bmatrix} B^G & if\ j \in G \\ B^{j*} & if\ j \notin G \end{Bmatrix} \tag{3}$$

We assume something called a *regime* has sufficiently coherent preferences it can be treated as a single actor that makes choices solving a constrained maximization problem. Of course this is a gross simplification of the historical and political reality of even the most autocratic of states.

Governments as potential suppliers of schooling. In our simple models a government is going to make two distinct choices. One is about the magnitude of the total amount of schooling they wish to promote (which can be expressed as an objective on years of

schooling) and the other is the modality they use for achieving that, in particular how much private schooling is allowed or even supported and hence how much the government is concerned about the mix between publicly produced and other suppliers.

In order to specify a positive model of government action the key element is a specification of the objective function of the government. One extreme is to model policy decisions as if the government is some simple aggregator of underlying citizen preferences—with median voter models a particularly simplistic representative of this. The other extreme is to assume there is an entity called a "regime" that, although not a single individual, acts with sufficient coherence to be treated as an independent agent[8].

There are three elements to the regime objective function.

First, a key assumption is that the regime utility depends on citizen instruction in beliefs. This can be motivated in two ways. Lott (1990, 1999) models the provision of education as governments choosing between staying in power through directly repressive means or through spending on education to increase legitimacy and hence lower the current and future expenditures necessary on direct repression. In this case beliefs in the objective function is only a short-hand for a dynamic problem of maximizing total extracted resources with a tradeoff between instruments (direct repression and belief modifying schooling). In this case belief instruction is entirely instrumental (and cynical). However, while much of government sponsored belief instruction may well be insincere,

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[8] We are not imagining that in general "L'état c'est moi" is true of anyone. Even p*ersonalistic* autocratic regimes, in which a single individual exerts considerable power—e.g., Stroessner in Paraguay, the Duvaliers in Haiti, Hastings Banda in Malawi, Mobutu in Zaire, Lee Kuan Yew in Singapore, Ghadafi in Libya-- require coalitions. Conversely, small groups can act coherently as a regime, e.g. a smallish group of military officers (Burma/Myanmar). In o*ne party* regimes a single party, and usually a small elite within that party, can act as a regime, the Communist countries (Russia, China, Albania, Vietnam) are the most obvious examples but there are other long-running dominations by a single party (Baath Party in Syria). One party dominance can exist even in a democracy, such as PRI (until recently) in Mexico or the LDP in Japan. Even countries where a small group of individuals or families control the state apparatus directly or indirectly can be treated as a single regime.

we do not believe this model is sufficiently general and we do not want to rule out *a priori* that the regime may want citizens to be instructed in their preferred beliefs *because* the regime believes they are "true." Regimes with ideologies of all stripes: Catholic, Muslims, Nationalists, Democrats, Marxist/Leninists, Liberals, African Socialists appear, at least at some times, to be quite sincere in their beliefs and in wanting others to share their beliefs independently of any direct pecuniary personal gain. Not able to distinguish the two we allow B to directly enter the utility function do not distinguish sincere from cynical motivations.[9]

The regimes desired beliefs instruction B^R is a N_B (number of relevant dimensions) by C (number of citizens) vector. B could include direct content (e.g. "civics" or "morals" or "history" training), the content in materials used to teach all subjects (e.g. teaching reading using the Bible/Koran/Confucian texts), and teaching methods that inculcate the regimes preferred attitudes. Regimes potentially have different desired beliefs for different individuals or groups; for instance, elite and mass education may have quite different objectives and even allow different degrees of freedom of thought.

Second, regimes can have the level of skills of their citizens/subjects directly in their objective function, but this is inessential to the structure and predictions.

Third, to remain in power the regime must meet a political viability constraint. This is represented as a politically weighted function of each citizen's utility:

$$PW \geq PW(U^1(X^1, S^{1,j}), ...U^c(X^c, S^{c,j}), ...U^C(X^C, S^{C,j})) \tag{4}$$

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[9] Although it might be possible in principle to distinguish the two motivations rate as regimes with high discount rates (inclusive of probability of overthrow) would act differently in promoting education that regimes with low discount rates.

This political welfare function is not necessarily a well-behaved social welfare function (positive first and negative second derivatives). There is no assumption of any benign interest: weights depend only on political viability. The regime may need to please some factions (military elites, preferred ethnic groups, urban middle classes, large landowners) and may be able to ignore, or even punish, other groups (e.g. rural peasants, ethnic minorities). The political viability constraint can change either in response to increased responsiveness of the regime to all citizens (keeping distribution fixed) or to changes in power that citizens (or coalitions or citizens) command that requires higher levels of welfare.

Each citizen's welfare depends on consumption and on schooling utility. Income is also exogenous and hence the consumption of non-education goods is net of expenditures on schooling. The j*th* school provides a mix of "academic" skills, A, and beliefs, B, and schooling utility depends on the school attended. All dynamics are suppressed and a choice of A,B implies the content and duration of schooling. I make no distinction between children and adults—there is only utility per "citizen."

$$U^c(X^c - E^c, S^{c,j}(A^j, B^j)) \tag{5}$$

Given an assumption of utility separable in goods and schooling the citizen maximizes utility by choosing the mix of consumption between goods and schooling and then chooses the mix of skills and beliefs. In an interior "no intervention" equilibrium citizen choice is A*, B* and schooling sub-utility is $S^c(A^*, B^*)$ and total cost is E^{C*}.

The choice facing the regime is whether they prefer to offer public schooling, which is a school, A^{Public}, B^{Public} and a public subsidy $E^R > 0$. Suppose the political viability constraint is that the citizen can be no worse off, so that:

$$U(X^C - E^{C*}, S^c(A^*, B^*)) = U(X^C - E^{C*} + E^R, S^C(A^{Public}, B^{Public})) \qquad (6)$$

Equation 6 reveals the ways which citizens could be coaxed away from the "no intervention" choice of beliefs instruction at the same utility: more skills for the same price, lower price for the same skills (or some mix of the two). Payments for schooling could be held constant while skills are increased which requires more instructional input. Second, skills could be held constant while beliefs were altered but net payments for schooling reduced ($E^C - E^R$).

Summary of the analytical framework. The share of schooling that is private in any given country is an endogenous outcome of supply and demand. The little existing research that examines cross national variation in private schooling tends to either focus on demand (e.g. James (1992)) or on supply (e.g. Lott (1990) but without an explicit recognition that (a) the mix of skills and beliefs provided by a school affects both supply (through alternative suppliers) and demand, (b) the socialization process or the inculcation of belief is not third party contractible, and (c) regimes have preferences not only about skills but also about the beliefs of their citizens.

Government policies, which are controlled by regimes, are affected by the difference in the equilibrium distribution of beliefs of its subjects/citizens that are produced by various policy actions compared to its desired distribution of beliefs. This has a number of aspects.

First, even with zero formal schooling children are socialized into some set of beliefs and attitudes (likely those of their parents, other available socially ascriptive identities (e.g. tribe, ethnicity), and local community). Much will depend on how close the default "no schooling" beliefs are to the regime's desired beliefs. If they are close then one would expect, all else equal, less effort from governments in expanding schooling at all, and much less concern about the allocation between public and private.

Second, schooling policy will depend on the discrepancy between the beliefs of the regime and those of alternative suppliers. If people would opt out of publicly produced school precisely because they wish a different socialization, one that is explicitly or implicitly opposed to the regime's wishes (e.g. separatist or religious in a secular state or market oriented in a socialist state) one should expect both high effort at expanding public schooling but also actions to limit the availability of private schools—such as bans on private schools, or at least bans on private schools supported by specific organizations (e.g. bans on Catholic schools by anti-Catholic regimes).

Third, one will expect support for private schools—either direct or indirect through "money follows the student" or "vouchers"—to be (a) rare and (b) directed at specific alternatives when available. It will be rare because of the ideological control issues. When it does exist, one would expect it to be limited to those suppliers who the regime is comfortable with.

II) Empirical Examples

We start with data from the UN system on the fraction of students who are enrolled, and of those, the fraction who are enrolled in private schools. To define "public" versus "private" schools we use the OECD/UNESCO classification which does not rely on the origin of financial resources but on the legal status of the school board. That is, according to this definition a "public school" is a school managed directly or indirectly by a public education authority, government agency, or governing board appointed by government or elected by public franchise. On the other hand, a "private school" is a school managed directly or indirectly by a non-government organization (e.g., a church, trade union, businesses, other private institutions).

Rather than attempting to specify some regression function to explain the private share across countries as an outcome, we first want to illustrate in obvious instances how the interaction of regime ideology and policy choices over the level and type of schooling operate. We start from countries that ban private schools, then examine countries that actively promote private schools systemically, and then finally examine outcomes in countries that tolerate private schooling (and perhaps selectively promote). We are not attempting to "prove" our theory with a set of tight hypothesis tests but rather just illustrate its potential usefulness.

II.A) Countries that "ban" private schooling

We begin by examining the countries that have "very low" private shares, which we suspect is *prima facie* evidence of either *de jure* or *de facto* ban on private schooling. We begin with a provisional examination of those countries that have less than 1 percent of students in private schooling in either 1990 or 2000 in either primary or secondary level.

What immediately emerges is perhaps not surprising, but in any cross-national examination of private schooling needs to be stressed, which is that (a) nearly all countries with

an extended episode as a one party state (OPS), where that one party was of Communist/Marxist-Leninist (C/ML) nature has banned private schooling and that (b) nearly all countries that have these very low shares of private schooling are one party states, either Communist or some other type of Socialist. There are 46 countries which meet the criteria for "very low private share" of which 30 have been C/ML one party states and another 10 who have been one party socialist. Only six countries have these very low shares without having been one party states (and looking at the list, most have distinctive social characteristics which relate to government desire to control ideology—e.g. Israel, South Africa, Malaysia, which we will come back to). It is also the case that nearly all countries with an extended episode as OPS-C/M-L have also effectively banned private schooling. This is of course not so surprising, given that their ideology led them to oppose the private sector in many sectors.

Table 1: Percentage of Enrollments in Private Schools at Primary and Secondary Level, less than 1 percent in 1990*, 1990-2000**

Country	Primary		Secondary		Marxist-Leninist countries (C) vs Socialist countries (S)
	1990	2000	1990	2000	
One Party States-Communist (Marxist-Leninist)					
Afghanistan	.	.	0	.	C-Democratic Republic of Afghanistan (April 27, 1978-April 18,1992)
Albania	0	2.843	0	2.228	C-People's Socialist Republic of Albania (January 1, 1946-April 30, 1991)
Armenia	.	0.991	.	0.519	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Azerbaijan	0	0	.	0	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Belarus	0	0	0	0	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Bulgaria	0	0	0	0.759	C-People's Republic of Bulgaria (September 15, 1946-December 7, 1990)
Cambodia	.	0.922	.	0.787	C-Democratic Kampuchea (April 17, 1975-January 7, 1979)
China	0	3.571	.	7.481	C-People's Republic of China (October 1, 1949-)
Republic of Congo	0	22.02	0	16.35	C-People's Republic of the Congo (January 3, 1970-March 15, 1992)
Croatia	0	0	.	0.958	C-Socialist Federal Republic of Yugoslavia (November 29, 1943-April 27, 1992)
Cuba	0	0	0	.	C-Republic of Cuba (January 1, 1959-)
Czech Republic	.	1.011	.	6.645	C-Communist Era (May 9, 1948-December 10, 1989)
Finland	0.894	.	.	.	C-Finnish Democratic Republic (December 1, 1939-March 12, 1940)
Georgia	0	2.556	.	3.106	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Hungary	0	5.556	.	8.871	C-People's Republic of Hungary (August 20, 1949-October 23, 1989) and Hungarian Soviet Republic (March 21-August 6, 1919)
Kazakhstan	0	0.553	.	0.778	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Kyrgyzstan	0	0.078	.	0.218	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Latvia	.	0.992	.	1.098	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Lithuania	0	0.064	.	0	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Macedonia	.	.	.	0.37	C-Socialist Federal Republic of Yugoslavia (November 29, 1943-April 27, 1992)
Moldova	.	0.958	.	1.357	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Mozambique	0	2.141	.	14.06	C-People's Republic of Mozambique (June 25, 1975-November 30, 1990)

Country					Description
Poland	0	1.3	.	4.017	C-People's Republic of Poland (June 28, 1945-July 19, 1989)
Romania	0	0	.	0.596	C-Socialist Republic of Romania (December 30, 1947-December 22, 1989)
Russia	0	0.069	.	0.281	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Serbia	.	.	.	0	C-Socialist Federal Republic of Yugoslavia (November 29, 1943-April 27, 1992)
Slovenia	0	0	.	1.483	C-Socialist Federal Republic of Yugoslavia (November 29, 1943-April 27, 1992)
Tanzania	0	0.306	50.716	.	C-Socialism rooted in African village life under President Nyerere (October 29, 1964-November 5, 1985)
Ukraine	0	0.13	0	0	C-Union of Soviet Socialist Republics (December 30, 1922-December 26, 1991)
Vietnam	0	0	.	10.76	C-Socialist Republic of Vietnam (July 2, 1976-) and Democratic Republic of Vietnam (September 2, 1945-July 2, 1976)

OPS Socialist, but not Marxist-Leninist/Communist

Country					Description
Algeria	0	0	0	0	S-People's Democratic Republic of Algeria (1962-1988 under the National Liberation Front)
Burundi	0.765	1.216	.	10.4	(1966-1993 under the Union for National Progress)
Iran	0	4.048	0	6.817	(1975-1978 under the Rastakhiz Party)
Iraq	0	0	.	.	S-Republic of Iraq (1968-2003 under the Baath party)
Mauritania	0.713	4.736	2.539	11.56	(1961-1978 under the Mauritanian People's Party)
Myanmar	0	.	.	.	S- Revolutionary Council of the Union of Burma (March 2, 1962-March 4, 1974)
Rwanda	0.75	1.052	24.057	43.27	(1965-1973 under the Democratic Republican party-Party of the Hutu Emancipation Movement; 1978-1991National Revolutionary Movement for Development)
Sudan	1.011	3.94	21.03	8.95	S-Democratic Republic of Sudan (1971-1985 under the Sudanese Socialist Union)
Tunisia	0.537	0.909	11.99	5.881	S-Tunisian Republic (1963-1981 under the Constitutional Democratic Rally)
Turkey	0.648	1.682	2.77	2.021	(1923-1946 under the Republican People's Party)

Table 1 (cont'd): Percentage of Enrollments in Private Schools at Primary and Secondary Level, less than

1 percent*, 1990-2000**

Country	Primary		Secondary	
	1990	2000	1990	2000
Non-OPS				
Israel	0	0	.	0
Japan	0.681	0.929	16.47	18.75
Malaysia	0	0.547	6.817	5.312
Oman	1.749	4.508	0.719	0.993
South Africa	0.788	1.902	.	2.451
Sweden	0.914	4.978	1.193	5.658

Source: UNESCO Database, CIA The World-Factbook, Eurydice Database
Notes:* the data reported are related to the countries that exhibit enrollments in either the primary or secondary private sector lower than 1 percent in 1990. In case of missing data for 1990, the share of reference is related to 2000. Countries with less than one million population have been excluded from the analysis.
** "1990" refers to the year 1991 and "2000" refers to the average over 1997-2006
. missing data
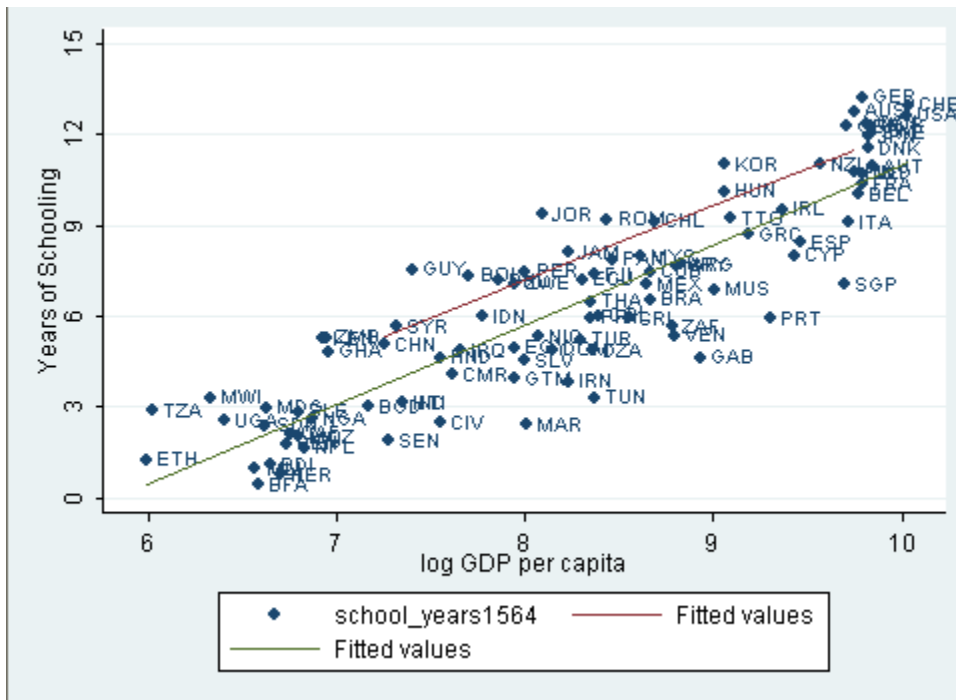See appendix 1 for a detailed description of the data.

The result is that if one compares the shares of private schooling in countries with an extended episode as a one party state to other countries it is easy to see the private share in schooling is much higher outside of one party states. Table 2 compares the median levels of enrollments from the existing data for various types of countries. At the primary level the differences are especially striking, as in OPS-C/ML the median is zero, for other one party states is just one percent and for "the rest" the average is 4.81 percent. The same is true at the secondary level, where the OPS-C/ML have less than one percent enrollment in private schools versus over 10 percent for all other countries. In this regard however the "other" one party states appear to have similar levels of enrollment as all other countries.

Table 2: Private Share of Enrollments, Median for Different Subgroups*, 1990-2000**				
Countries	Primary		Secondary	
	1990	Around 2000	1990	Around 2000
Countries in the entire sample				
Historically OPS-Communist/Marxist-Leninist	0	0	0.96	1.03
Historically OPS-non communist	1.03	1.03	10.76	10.76
Historically OPS-communist and OPS-non communist	0.60	0.60	2.94	3.11
Historically non-OPS	4.81	4.81	10.76	10.76

Note: *Countries with population less than one million have been excluded from the analysis. The sample consists of 156 countries. ** "1990" refers to the year 1991 and "Around 2000" refers to the average over all available data, 1997-2006

The ban on private schooling does not lead however to lower *totals* of schooling years. Rather, in their interest to promote schooling with one motivation certainly being the socialization (some would call indoctrination) of youth, the OPS-C/M-L also had substantially higher levels of schooling than countries at equivalent levels of GDP per capita[10]. This is consistent with the desire to transform beliefs way from those children would have received with no schooling, who were less likely to be aligned with the new Communist ideology.

Graph 1: Average Years of Schooling (15-64), GDP per capita with a Dummy for Communist Countries (red) and Non-communist Countries (green), 1990

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[10] The regression has a coefficient on log GDP per capita of 2.63 (std. err. 0.15) and a dummy for the OPS-C/M-L of 1.33 (std. err. 0.685).

One can see the drive for ideological control leading to expansion of the educational system, even in the absence of any benign motivation on the part of the regime, in the extremes. According to official statistics the number of children 8-15 in the Ukraine almost doubled from 1928-29 to 1932-33 and enrollment reached 4.5 million. During 1932-33 there was also a combination of purge of Ukrainian elite with "nationalist" sympathies and a famine that cost somewhere between 3 and 5 million lives. Was Stalin of two minds about Ukraine—expanding schools for benign motives and yet killing, deporting, and confiscating food for malign motives on the other? Of course not, the expansion of schooling, purges, and the famine has the same objective—a suppression of Ukrainian nationalism and of opposition to Soviet (Stalin's) policies.

This key role of ideology is clear both in the banning of private schooling and in its re-introduction. For instance, up until 1959 Cuba had always had a very active private sector, which, not surprisingly, was very Catholic and only loosely "nationalist." The lack of government control over private schooling was a recurring political issue during the Republican period from 1902 to 1958. In 1917 legislation was proposed that "asserted the state's right to inspect private schools…only texts approved by the government appointed Board of Supervisors should be used…that directors of private institutions should be Cuban born…that the history of Cuba (not then taught in most private schools…) and civics should be taught only by Cuban born teachers…and that only those with qualifications recognized by the state should be entitled to employment." (Johnston 1997). This legislation did not pass. After the turmoil of the 1930s a new constitution was adopted that contained many of the same nationalist aims for controlling private education as the 1917 legislation. However the legislation introduced in 1951 to make those constitutional aims effective created another round of political struggle and again public

regulation failed when the legislation was defeated (for good) in 1955, which is where the issue stood in 1959. In 1959 the end of the Republic coincided with the end of private schooling in Cuba, as the government nationalized the existing schools.

The policy changes undertaken in the Czech Republic clearly show how the ban on private schooling was reversed, precisely as a reaction to the previous regimes. In the former Czechoslovakia, under the communist regime, the education system was highly centralized and controlled, private schools were banned, levels of education were high but without school choice and indoctrination was very strong as the curricula was determined by the central power (Hanley, 2001). Among other great changes, the "Velvet Revolution" of 1989 led to the introduction of democratic-based principles in the education system which was democratized, "de-ideologized" and decentralized (Flanagan, 1998). Primary and secondary private and church schools were legalized in 1990 and the number of private secondary schools increased from 0 to 448 at the end of the 1990s (Filer and Münich, 2000, p.5) and the level of secondary private enrollment reached the European average, attaining 5.8 percent in 1999 (UNESCO Database, 2008).[11] Among the reforms, the introduction of vouchers represented a major change in the schooling system. With the voucher scheme the public support to private schooling started to be given according to the type of school and quality of the school as evaluated by the Ministry of Education. Filer and Münich (2000) provide an evaluation of this scheme based on a survey of a representative sample of 1,411 individuals and show that overall the large scale voucher school funding system was successful. They find that private schools were built where the public system could not satisfy the demand for schooling and in the districts where the quality of the State education system was lower. They also show how public schooling improved slightly as a result of the competition with the private sector and how the private sector was more

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[11] On the other hand, the level of private enrollment in primary schooling was equal to 0.8 percent in 1999 (UNESCO Database, 2008).

responsive to changes in the labor-market in the provision of technical education. The same policy change was implemented in Slovakia and similar reforms took place in Hungary and to a certain extent in Poland.[12]

The example of the one party states illustrate that (a) "democracy" is hardly an essential feature of the expansion of schooling, in fact, the non-democratic socialist states have higher levels of schooling than others, (b) this higher commitment to education is plausibly the result of the explicitly stated desire to create a new socialization that neither alternative schools nor a lack of schooling (with direct parental transmission of beliefs) would have accomplished, (c) the lack of private schooling is consistent with an expansion of schooling at the state did not want any alternatives to their supply.

II.B) Countries with very high private shares: Heterogeneity in citizen beliefs

We move to the opposite end of the spectrum on the extent of private schooling and Table 3 shows the share of enrollments in private schooling for all countries with private enrollments in secondary school greater than 50 percent in either 1990 or 2000. There are two routes to very high private enrollments in secondary school. One, emphasized by James (1992), is the result of government expansion of primary education while limiting public spending and/or available places at the secondary level (which may be rationed by an examination). This creates an excess demand from students who have completed primary but for whom the availability or access or cost or quality of the public sector is very low. This creates a very distinctive attainment profile

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[12] In the case of Poland there are some differences as the State provides to private schools a subsidy which is 50 percent of that provided to public schools whereas in the Czeck Republic, Slovakia and Hungary since the early 1990s the support given to the private schools is equal to the one given to state-schools (Filer and Münich, 2000, p.5). Private enrollments in 1999 in Poland (primary: 0.8 percent, secondary: 4.5 percent) remain slightly lower than in Slovakia (primary: 3.8 percent, secondary: 5.3 percent) and Hungary (primary: 4.7 percent, secondary: 4.6 percent), (UNESCO Database, 2008).

with high discontinuity/drop-out across the levels of schooling as in Tanzania or Indonesia (in contrast to, for example, Brazil where the transition between primary and secondary is not apparent).

The other route to high private shares is if the government actively supports the private sector, often through producer neutral financing, channeled either through students or directly to schools, usually in some form of provider neutral financing or "money following the student." Of particular interest in this regard is the Netherlands, which is a rich industrial country with near universal enrollment at the secondary level (so that exclusion or low quality cannot explain the high private share). The origin of the high private share in The Netherlands is that the country has very high religious heterogeneity—with the country being roughly balanced between Catholics and Protestants. At the time schooling systems of the nationalist variety were being adopted and promoted in other European countries in the nineteenth century the democratic polity of the Netherlands could not agree on either a mainly secular nationalist education system (as did France) nor a largely Catholic system (as did Spain) nor a Protestant system (as did Nordic countries). Rather, as a compromise on the ideology of the citizens it was decided to have producer neutral funding of the existing Catholic and Protestant systems as well as the expansion of publicly produced schooling. The equal treatment of the public and private sectors was constitutionally established in 1917 and this involved the freedom to found a school and to teach according to a particular ideology or social principles (Driessen and Van der Slik 2001). That is, the "educational pillarization" that characterizes the Dutch system was the result of the religious heterogeneity and was not related to the quality of education across school sectors. This system of equal treatment of both state and denominational schools has persisted

even after the progressive secularization that started in the late 1960s (Sturm et al. 1998). Hence the private share remains the highest among developed countries (table 3).

While this is obviously not the explanation of all of the countries with high private shares (more on that later) it is striking is that several of the countries that have preserved high private shares of secondary schooling are also very high of the rankings by religious heterogeneity (Netherlands) or have distinctive histories of religious differences (e.g. Belgium, Lebanon). In this case support for private schooling appears to be the result of "the state" either autonomously or as the expression of the will of the majority having insufficient power to impose the socialization of a publicly produced schooling on a minority.

Table 3: Percentage of Enrollments in Private Schools at Secondary Level and Religious Heterogeneity, 1990-2000* (all countries with private share>50 percent in either 1990 or 2000 are listed)

Country	Secondary		Average	Religious Heterogeneity Index (H)[1]		Religious Heterogeneity Index (J)[2]		State Religion 2000
	1990	2000		Level	Rank (most=1)	Level	Rank	
Bangladesh	.	95.816	95.816	0.25	120	0.49	114	Muslim
Netherlands	82.858	83.418	83.138	0.77	18	1.24	28	None
Guatemala	.	73.749	73.749	0.38	98	0.69	94	Catholic
Mauritius	.	73.181	73.181	0.71	34	1.39	7	None
Zimbabwe	70.782	71.413	71.098	0.68	40	1.27	23	None
Belgium	65.793	62.305	64.049	0.34	100	0.57	107	None
Lebanon	.	52.691	52.691	0.67	43	1.13	40	None
Tanzania	50.716	.	50.716	0.76	19	1.54	15	None
Chile	49.103	50.18	49.642	0.51	77	0.73	88	None
El Salvador	52.636	.	52.636	0.29	111	0.57	106	Catholic
All others**	14.18	14.12	14.15	0.46	82	0.79	84	

Source: UNESCO Database, McCleary and Barro (2005)
Note: * "1990" refers to the year 1991 and "2000" refers to the average over 1997-2006. Countries with more than 50
     percent private enrollments either in 1990 or 2000 have been chosen. Countries with population less than one million
     have been excluded from the analysis.
     . missing data
*"All others": refers to the 158 countries in the dataset for which data on religion (McCleary and Barro (2005)) and enrollments
(UNESCO Database) are available and with a population greater than one million.
1-2: see appendix 2 for an explanation of how these indexes have been constructed

II.C) Countries that "tolerate" private schooling

Two examples of differences with regions of countries, in which there are (relatively) homogeneous populations in terms of religion, but the regimes/governments have historically had very different attitudes towards those religions.
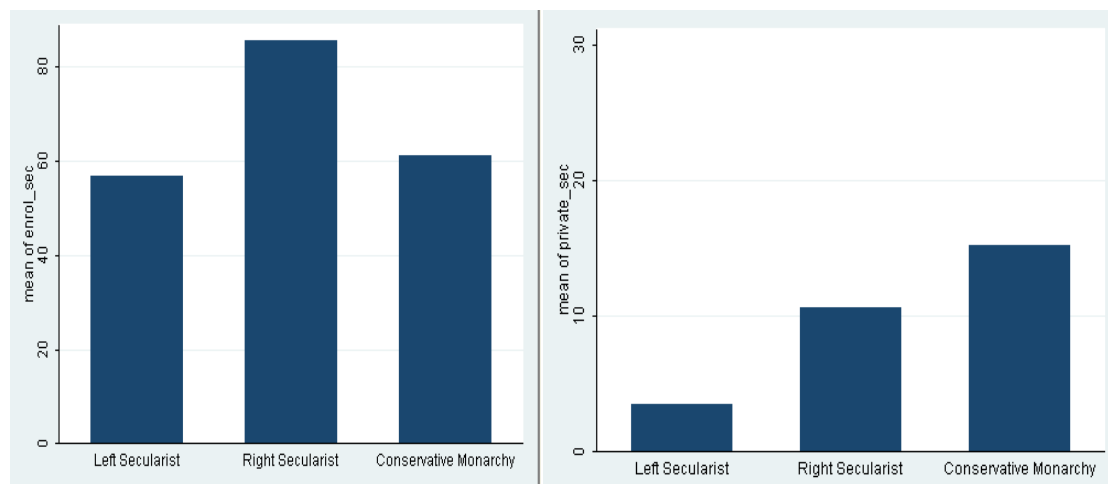
Islamic states in the Arab World.   Within the Arab world the countries have largely predominantly Islamic populations. However the regimes fall into various categories. On the one hand are the "left secularist" states that have worked to promote secularist and nationalist (sometimes Pan-Arab nationalist but not Islamic nationalism) sentiments. For these regimes the "default" education a child would receive in the absence of formal schooling is less conducive to the regime's ideology. Moreover, the education supplied by the usual alternative suppliers—which would be Islamic—is also less conducive.

In contrast, in the "conservative" states, many of which are versions of monarchies the state is legitimated by the "default" education (including no schooling) is consonant with their beliefs and the potential private suppliers from an Islamic tradition are less of a threat.

In this case, we would expect (a) the share of *private* education to be lower in the secularizing regimes but (b) the *level* of education higher in the secularizing regimes (all else equal, particularly controlling for levels of income). The findings are definitely consistent for the comparison of the share of private schooling in "left secularist" versus "conservative monarchies" as the private share is more than ten percentage points higher, consistent with the objective of the secularizing regimes to shift education in the public sector. On the other hand, the left secularists have not achieved higher enrollments in secondary schooling (controlling for income) compared to the conservative countries. The "right secularist"

(which includes only Jordan and Turkey) have higher enrollments and lower private shares than the "conservative monarchies."

Graph 2: Average Enrollments in Secondary Schooling and Share of Secondary Education that is private, Arab countries, 2000, controlling for log GDP per capita
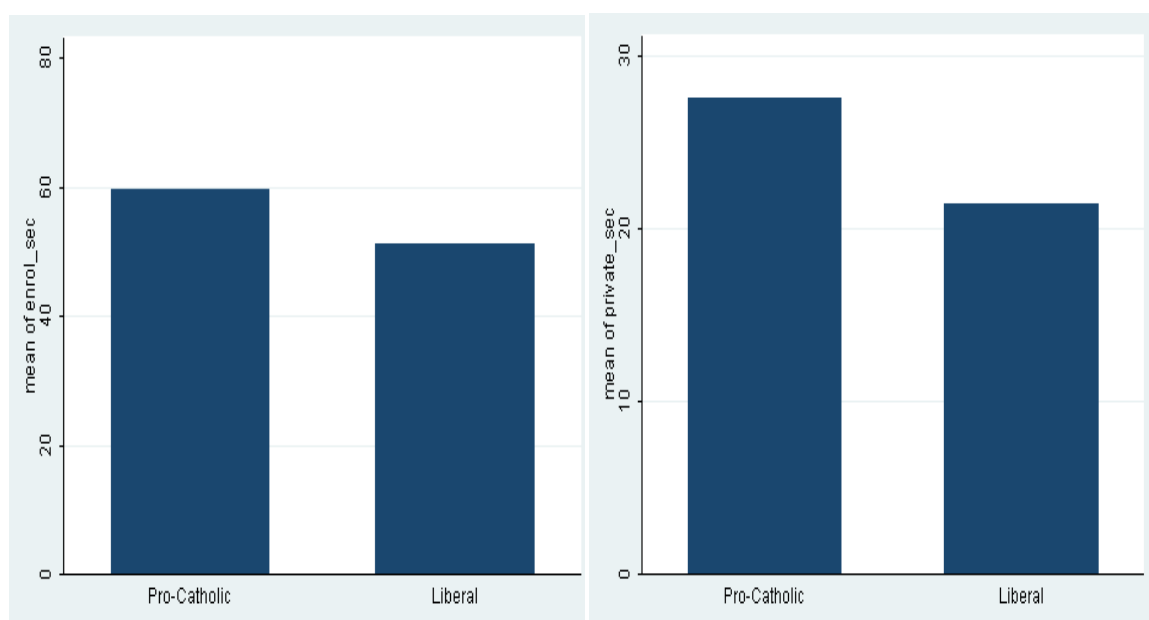

Note: see appendix 3, II.C.i, for the list of countries included in these categories

Latin America and Catholicism. There is a similar dynamic that played out historically in Latin America, where populations were predominantly Catholic. But there were regimes that were more or less favorable to the Catholic Church. For instance, Mexico, which turned virulently anti-Catholic in the early 20th century, while other states that have actively supported Catholic education (e.g. Cordoba in Argentina supported Catholic schools with public subsidies). Again, we would expect a higher private share in states that were less opposed to Catholic education and, to some extent, might expect the anti-Catholic (Liberal) states to be more aggressive at promoting secular, state provided, education and hence observe more education. In this case, it is the case that the private share is substantially higher in states that were historically more "pro-Catholic" (as determined by whether

Catholicism was declared as the state religion in 1900). However, the total education is actually slightly higher in the pro-Catholic countries (which is more consistent with a demand side story).

Graph 3: Average Enrollments in Secondary Schooling and the Private Share in 2000 and the Religious Inclination of the State in 1900 (whether Catholicism as the State Religion)

Note: see appendix 3, II.C.ii, for the list of countries included in these categories

II.D) *Doubly Indifferent States*

So far we have explored various combinations of concerns of the state/regime about beliefs and skills and how that interacts with the distributions of population beliefs (e.g. relatively homogenous versus heterogeneous, consonant or discrepant with the state's) and the extent to which the state is concerned with reflecting the underlying preferences of the citizens (from little with totalitarian states to gradations of democracy). A final category are states that

are, in some sense, "doubly indifferent" about schooling. That is, they are not ideologically motivated or legitimated, or more particularly, the "default" beliefs that result with no formal schooling are not inconsistent with the desired socialization of the state. Moreover, the state has not demonstrated a strong commitment to the expansion of schooling as a means of expanding skills.

In these circumstances, since the state is neither rapidly expanding publicly produced schooling to encourage a particular socialization nor as an element of economic strategy, one would expect that (i) the overall level of schooling would be responsive to the demand for schooling, not the supply, so if demand is low then expansion would be low and only if private returns are high would overall levels would increase and (ii) the share of private schooling would be relatively high, both because the state would tolerate such schooling and because the state supplied schooling is likely to be of poor quality (since broad based quality education would take a back seat to other agendas, including the agenda of politically mobilizing teachers and patronage). The case of the doubly indifferent state is well illustrated by India and Pakistan.

India.   As Myron Weiner pointed out early on, and in his 1991 book *The Child and the State in India,* the government in India has historically neither been particularly aggressive in either limiting child labor nor in expanding mass education. There are many complex political explanations for this, but one of those is that India, as a continuous democracy, even though ruled by the Congress party from independence to the mid 1970s, has never particularly used the socialization process of education as a major tool of legitimacy either of the nationalism of India nor of the regime's ideology. Again, this is a topic far too complex for a few paragraphs, but involves at very least (i) the relationship of the caste system to electoral politics, (ii) the fact that, after early debates and the alignment of states with language groups, the states became the

primary locus for control of mass education (hence the Center lost substantial control), (iii) the economic structures of rural India combined with the rigid economic policies in the formal sector, and (iv) the legacy of caste interacting with a commitment to high quality elite education.

The likely results of the relatively low level of commitment to the expansion of basic education led to a situation (particularly prior to the onset of more liberalized economic policies and continued rapid economic growth) of limited supply—since there was little autonomous push of education by the state and limited demand—since in many parts of India the returns to education were low (Rosenzweig and Foster). As shown in Table 4 in 1990 and 2000 India lagged almost a full year of schooling behind that predicted for a country with its level of GDP per capita. Moreover, around 1990 the gap in the enrollment or attainment rates of children from rich and poor households was larger than in any other country in the world. As shown in Filmer and Pritchett (2000) in 1998/99 the median attainment for a child from the richest quintile of assets was 10 years while the median attainment of children from the lowest two quintiles was zero (less than half ever enrolled).

Table 4: India, Total Average Years of Schooling and Share of Private Schools in Secondary Enrollments			
	Years of Schooling	Dummy for India in regression: school_years=GDPpc	Private Secondary Enrollments (share)
1960	1.17	-0.44 (1.49)	.
1970	1.95	-0.23 (1.59)	.
1980	2.61	-0.21 (1.67)	.
1990	3.15	-1.08 (1.81)	.
2000	4.34	-0.97 (1.91)	42.21

Source: UNESCO Database 2008, Cohen and Soto (2001); Note: . missing data

This was also accompanied by a high share of the private sector. As the demand for education has expanded recently (at least since 1991) and parents are convinced quality education is important there has been increasing reliance on the private sector. Overall in 2000 the private sector accounted for 42 percent of enrollment in secondary schools. If one limits attention to the urban areas of India, one has the striking result that over half of the *primary* school enrollment is in private schools—in spite of very expansion of limited support, and often active hostility, of the governments to the private sector[13]. This implies that the *de facto* privatization of low government commitment to schooling or quality schooling (double indifference) has led to more privatization in urban India than even in Chile with its voucher like system.

Pakistan. Pakistan (which of course was part of British administered India until the partition) is another interesting case as it demonstrates a shift from ideologically motivated to doubly indifferent regimes.

After 13 years of military rule and the bitter loss of East Pakistan (Bangladesh), in December 1971, Zulfiqar Ali Bhutto was elected President under a socialist manifesto. Within three months he announced nationalization of all private education institutions, free basic (to grade 8) education, a shift towards technical education and a greater ideological orientation of the nationalized schools. The Ministry of Education and all of the provinces opposed Bhutto's decision to nationalize and even the Minister of Education, Mr. Pirzada was quoted saying "it was a political" not educational decision. After Bhutto was ousted and Zia-ul-Haq established martial law in 1977 the ideological winds shifted again and the nationalization policy was reversed. The private sector was again encouraged to open schools but the medium of

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[13] With the exception of the state of Kerala, which has always had a large private sector enrollment and support to the private sector. Kerala is the most religious heterogeneous Indian state, with a large Christian minority.

instruction was switched to the national language (Urdu) in all public schools. Zia also pushed the idea of bringing mosques into the education system and his decade of rule was an era of "Islamization" for Pakistan.

The more recent history of Pakistan has included shifting back and forth between two regionally based but in many senses "traditionally" oriented political parties who have become more known for patronage and corruption than any particular ideology or program, followed more recently by another military intervention in 1999 lasting until (at least) 2008. During this period Pakistan has been another "doubly indifferent" state as it has not used the schooling system to promote a particular ideology nor has it promoted education as an integral part of government strategy.

The result is the same as for India. The average years of attainment lag relative to their level of income, in this case by almost 2.5 years relative to other countries with their income. There are huge socio-economic gaps in attainment, as late as 2001 less than half of those 15-19 from the poorest 40 percent of households had ever enrolled in school. As demand has expanded this has also led to a very rapidly rising private share of schooling in Pakistan—as of 2005 one in three children in primary school in all of Pakistan (not just urban areas) was in a private school.

Table 5: Pakistan, Lagging Attainment, High Private Share			
	Years of Schooling	Dummy for India in regression: school_years=GDPpc	Private Secondary Enrollments (share)
1960	0.63	-0.95 (1.48)	.
1970	1.68	-0.59 (1.58)	.

1980	1.74	-1.25 (1.66)	.
1990	2.29	-2.03 (1.80)	.
2000	2.45	-2.79 (1.90)	32.14

Source: UNESCO Database 2008, Barro and Lee (2000); Note: . missing data

Of particular interest, given the attention that the "radical" Islamic schools have received in the Western press, is that this constitutes a very small portion of the private sector supply--or the demand for parents for schooling—in Pakistan. Rather, the major impetus is that parents have demand for higher quality schooling than the government is willing or capable of providing. The recent LEAPS study showed private schools in rural Punjab with learning achievement higher across three subjects by around 100 points (on an exam with mean 500 and standard deviation 150).

III)   Implications for Promoting Greater Citizen Choice of Schools

The role of bringing of socialization directly into the considerations of the demand for private schooling by households, the availability of alternative suppliers, and the objective of the state and regimes brings a very different viewpoint on several issues about policies promoting greater use of public sector resources to support private schools.

III.A) *The welfare gains from private schooling are (vastly) underestimated*

The notion that free choice is welfare enhancing is one of the foundations of modern market-oriented societies. In the specific case of schooling household's valuation of the "school match" can take into account socialization and pedagogy as well as the "skills" component. However,

the welfare gains arising from the increased variety of schools have not been examined in the literature as existing analyses have been limited to estimates of changes in schooling achievement. The case of Chile's privatization of schools clearly shows this. The Chilean education system underwent major transformations in 1981: a nationwide school voucher program was introduced in the framework of major market-based reforms. That is, the Chilean government decentralized the administration of schools, transferring responsibility for public school management from the Ministry of Education to municipalities. The government also changed the education financing scheme. Municipalities began to receive funding from the central government according to the level of enrollments. Moreover, privately run schools that did not charge tuition began receiving the same per-student voucher as the public schools whereas tuition-charging (elite) private schools mostly continued to operate without public funding (Elacqua et al. 2008, Carnoy and McEwan 2000).

The conventional wisdom is that there were some gains from individuals shifting from public to private schools but that in general equilibrium, given peer effects, the overall impact of privatization was small (Urquiola and Hsieh 2006). A recent study by Elacqua et al. (2008) also shows that students in Chilean private schools network perform better than their counterparts in stand-alone schools. By controlling for various variables related to socio-economic status, the authors find that 4th graders in private schools network achieve 19 percent and 25 percent of a standard deviation higher than students in the other schools in Spanish and mathematics.

All evaluations of the gains from the privatization policy have focused on the learning gains alone. But in no other field besides education would economist pick a single dimension of output and evaluate gains strictly on the basis of that dimension of the mulit-dimensional attributes that drive consumer demand. The welfare gains arising from consumers free choice in

their children's education may have been important. Over the course of the privatization the share of students in private schools increased by roughly 20 percentage points—from 28 to 48 percent of all students. This suggests that roughly one in five parents is in a different school because of vouchers which, by revealed preference, suggests that relative to their own rankings of well-being they are better off. In this regard, suppose that public and private schools were exactly as productive in producing learning outcomes on skills but that private schools product differentiated on socialization—some were more Catholic, some were more left-progressive, some taught more basics other more creativity, etc. By any standard approach to economics there are welfare gains to allowing choice.

While a proper valuation of these gains would be complicated, a crude estimate can be derived. Since the private enrollment was substantial before privatization, there were many people who, in the absence of vouchers, enrolled their children in private school in spite of the higher cost. The marginal household choosing a private school was just indifferent between a low cost (to them) publicly provided education (whose socialization content was perhaps not their preferred variety) and paying the full cost of the private education for a more preferred variety (plus perhaps some learning gains, that may be peer effect influenced) so the estimate of the valuation difference for the marginal switcher is the difference in the prices of the two alternatives. This makes the welfare gains from privatization a *huge* number, crudely around 2.5 percent of income of the households with students[14]--that makes Chile's move to a voucher like

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[14] Here is a very crude, back of the envelope calculation. Public cost per child in school is roughly 12.5% of GDP per capita (assume teacher wage 2 times GDP per capita, 25 students per teacher, teacher costs 80 percent of total). If we assume the private sector cost (for equivalent learning) is the same then the marginal private sector enroller f they had average income per capita is willing to pay 12.5 percent of income for private school. If we take the marginal as the estimate of the average (which overstates the gains as the willingness to pay must decline) then the gains are 12.5 percent of income for the 20 percent of those switched, which is a .2*12.5=.2.5% gain averaged over all students/parents with students.

scheme a massively successful policy even if there were (which is debated) no general equilibrium learning gains at all.

III.B) The political economy of adoption of choice policies depends on socialization more than efficacy in learning achievement

The second element of analysis for which a consideration of the socialization role is important is considering the situations in which "vouchers" or "money follows the student" might emerge, and in particular, which type of support would be feasible in different circumstances.

III.B.i) "Good" Democracy, Functional State

In order to understand the political economy of adoption of choice policies we should consider the two dimensions of the schooling production: skills and ideology and examine how the introduction of a voucher program could change the median voter's utility by affecting the average of skills and the dispersion of beliefs.

We define a "good democracy"[15] the institutional setting where the preferences of the government in terms of mix of skills and beliefs are approximately equal to the aggregated preferences of citizens. A "functional state" is able to carry out its policies and programs effectively.

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[15] We refer to the quality of democracy in terms government and median voter's preferences but also acknowledge that "a fully democratic government has three essential elements: fully competitive political participation, institutionalized constraints on executive power, and guarantee of civil liberties to all citizens in their daily lives and in political participation" [Polity Index (POLITY IV)].

While making the optimal choice of schooling provision the government also maximizes the median voter's utility function. Suppose we have some formulation in which the utility of the government depends on a function $S(.,.)$ of the mean and variance of skills $S(\mu_s, \sigma_s)$ and a function $B(.,.)$ of the mean and variance of beliefs (balanced against expenditures required to produce those of course but that term is suppressed). One could imagine that this is simply the ranking of the median voter:

$$U^G(S(\mu_s, \sigma_s), B(\mu_b, \sigma_b)) \approx U^{Mv}(S(\mu_s, \sigma_s), B(\mu_b, \sigma_b)) \qquad (7)$$

In this case, the mix of instruction and ideology provided by the state is very close to what the majority of citizens, hence the median voter, prefer. Therefore alternative suppliers of education come from ideologies that are different from the official one. This is because in a system where public schools function relatively well, alternative producers that provide a similar quality of education with a similar instruction of beliefs would not be able to attract a sufficient number of students to make the investment profitable. On the other hand, schools that provide the instruction of a very different type of ideology may be willing to make the investment.

However, a negative externality may arise when there is a deviation from the teaching of the ideology of the median voter. That is, citizens may prefer other people sharing the same ideology, hence children to be educated in schools with an ideology not dissimilar from their own as this would keep the balance of political power closer to their political preferences. Also, they may find it less costly to interact with people who share similar social preferences (Kremer and Sarychev 2000). That is the median voter would be more concerned by the loss in socialization than the small potential gain in terms of increased learning productivity. This is

because this would eventually lead to an ideologically polarized society (graph 4) and in some cases to ideological extremism (Kremer and Sarychev 2000).

In the case of the US, the adoption of school choice policies may lead to some gains in terms of average skills as shown by the existing literature (Carbonaro 2006; Howell, Peterson and West 2007), but these gains are not enormous. But this is balanced against the risk in the median voters' mind of the potentially increased dispersion of beliefs provided across schools. If the median voters' utility is increasing in the mean of skills but decreasing in the dispersion of beliefs this reveals a key trade-off. Who are the people with the highest willingness to pay for a non-public education? Some element of this might be those who want a very different type of pedagogy (either more strict (e.g. military schools) or more open and "creative"). Some element of this might be parents willing to pay for higher skills. But some substantial body of utilization of "vouchers" would come from people who want a different socialization. For instance, take families who home school their children because they feel the public schools are insufficiently "Christian"" and are willing to provide their own schooling[16]. If vouchers were available there would be both demand and supply of more Christian fundamentalist schools. The same is true for other minority groups. For instance, many African American parents may prefer a more Africo-centric curriculum; Hispanic parents a more Hispanic friendly curriculum. Not to mention the historical uses of private schools in some parts of the USA as a means of avoiding racial integration. Consequently the median voter may consider vouchers as an instrument that increases the ideological dispersion of society.

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[16] According to the Parent Survey of the National Household Education Survey, in the spring of 1999, 850,000 students were being homeschooled.

Among other factors, this can explain why the introduction of universal voucher programs in the United States has not received wide-spread support in voting[17] in spite of the successful implementation of the privately funded experimental voucher programs. Vouchers or tuition tax credit were voted down in California in 1993 and 2000, in the state of Washington in 1996, in the state of Michigan in 2000 and Colorado in 1992[18]. In this regard Utah is particularly remarkable. Utah is one of the nation's consistently most conservative states[19] and was believed by vouchers advocates to be a state potentially receptive of the voucher program (Schaeffer 2007). However, when Utah voters had to decide whether to adopt the country's first statewide school voucher program that would have been open to anyone[20], a majority of Utah's voters, 62 percent[21], rejected it and the proposed law lost majority in every county. It is likely that voters had perceived the introduction of publicly financed private school vouchers as a risk that public support would flow to religious fundamentalists (e.g., polygamists who represent a break-off from the mainstream Mormon religion in Utah).

The case where voters would be in favor of a greater dispersion of beliefs is in the case of an ideologically divided society. The Netherlands, as previously suggested, have been a segmented

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[17] In the USA there is of course the additional political element of judicial review on the issue of the constitutionality of the provision of support to religiously controlled institutions.

[18] In California, Proposition 174 mandated a voucher equal to 50% of per pupil expenditure in the previous year; Proposition 38 required vouchers initially worth $4000 per pupil. Initiative 173, in Washington, seeking to provide vouchers equal to 55% of public spending per pupil, excluded religious schools. Proposal 1, in Michigan, sought to permit the state to provide indirect support to students in districts with low high-school graduation rates attending private schools. Amendment 7 in Colorado required that all state money appropriated for K-12 education be apportioned as vouchers. (Gradstein and Justman, 2005, p.885).

[19] In the 2000 presidential elections Bush received 66.8% of votes and in the 2004 presidential elections, Utah was the Rebublicans' strongest state with 71.5% of votes.
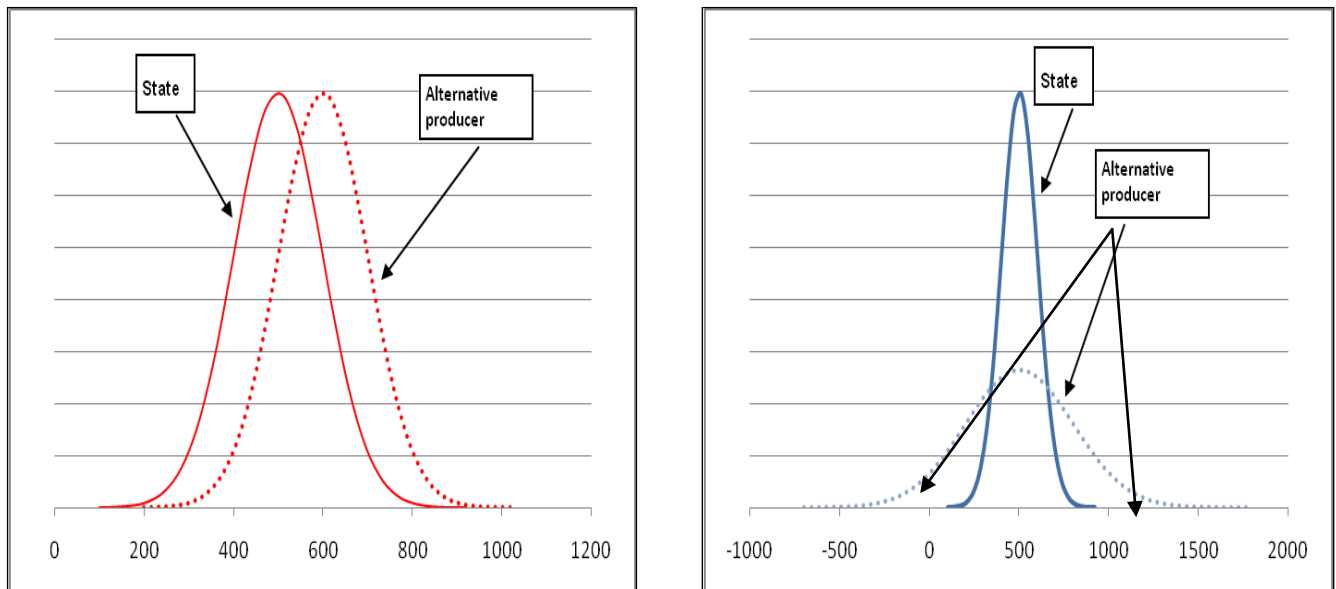
[20] The proposed voucher law would have granted between $500 and $3,000 based on parents' income to each child willing to attend a private school.

[21]Wall Street Journal, November 8, 2007.

society, and the formalization of the freedom to found ideologically diverse schools, has certainly reinforced the vertical separation of a society where each religious group has its own political parties, TV networks, newspapers and schools but without negative social or economic consequences.

Hoxby's (2002) argument that vouchers can be made "ideal" is exactly right and completely compelling as long as we are only concerned with the elements of schooling that are observable at low cost to a third party. Obviously "skills" are in this category. But if people care about socialization as a primary aspect of schooling then it is control of socialization the main feature to take into account for the design of the "optimal voucher". Therefore, in an ideologically homogenous society charter schools, which are publicly funded but have been freed from some of the regulations that apply to public schools, may be more appealing to the median voter than vouchers. With vouchers the pool of potential entrants to the market is open and hence the entrants may well be those at the ideological extremes. The fact that with charter schools governments can more effectively regulate entry means they can lay down requirements and standards in charter schools.

Graph 4: Average of Skills and Dispersion of Beliefs in Case of Introduction of Alternative Suppliers of Schooling, Good Democracy

A "charter" school approach which limits the new school entrants to also be wholly "public" in some way (although be given, via a "charter" a different set of operating guidelines than a standard public school) allows a regulation over ideology that would be difficult or impossible to do directly in a voucher system. That is, imagine the desire to prevent a polygamist school from opening. It would be difficult to establish a set of entry regulations (e.g. on physical facilities, "quality", curriculum) that a potential polygamist school could not meet; even requirements on the "ideological intent" or ownership of the school (e.g. churches could run schools by establishing a legally separate entity) could of course be met by dissembling. Once operational, it would be almost impossible to regulate the school to prevent such a school from conveying the message "polygamy is acceptable" as both parents and school would want this message and could subvert attempts to superimpose alternative messages from outside the school. While this example of polygamy may seem extreme, one can easily imagine under a voucher scheme and free entry a whole range of schools from radical "green" schools preaching the evils of capitalism's impact on the earth, to religious fundamentalist of a variety of flavors (Islamic, Christian, Wicca), to race/ethnicity based schools. Voters will be naturally concerned that their tax dollars are being used to promote these non-mainstream—far from median voter preferred socialization—ideologies, especially balanced against small(ish) learning gains[22].

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[22] Interestingly, this exactly reverses some of the usual arguments for limiting entrants in the provision of services to non for profit suppliers. There is an argument that in contracting out services there are efficiency gains to choosing not for profit suppliers as there may have a difficult to observe component of the quality of services based on the "commitment" of the supplier and hence "for profit" suppliers are going to be more likely to "cheat" on the agreement (e.g. stint on quality)—Besley and Ghatak (2001). However, in the case of schooling the not for profit suppliers may have an ideological motivation for being willing to provide services more cheaply, but a motivation at odds with the regime/state/government, in which case the government might prefer to limit vouchers to *only* for profit firms.

By "weak administrative state, weak ideology" we refer to countries where the ideology of the government is not significantly different from the ideology of the median voter ("weak ideology") but where the existing institutions fail to provide adequate schooling, not necessarily because of a weak commitment to schooling per se but because of a general weakness and inefficacy of the administrative apparatus of the state ("weak administrative state")[23].   As previously suggested in the case of the doubly indifferent state, the expansion of schooling is demand driven. Countries like Bangladesh, India and Pakistan belong to this category. The problem of homogenous ideology is not a major concern in these countries and the quality of public schooling is very low.

In these situations the learning gains, particularly the learning gains per dollar, from the expansion of private schooling would be enormous as the government schools are ineffective. While in the industrialized countries there are large debates about the magnitude of the learning gains from private schools, in India and Pakistan there are plausible estimates from some regions that private schools are *twice* as cost-effective (learning gains per unit expenditures) as the publicly operated schools[24].

In this case, the government/regime has no fundamental objections to the introduction of school choice policies, as this would lead to a significant improvement in the quality of schooling (graph 5). At least in the first instance, the government/regime would not impose any restriction to the expansion of the private sector. The case of Pakistan provides a good example

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[23] Pritchett (2008) refers to India as a "flailing" state as the official policies and programs announced do not sharply constrain or determine the actual actions of the agents of the state (e.g. policemen, teachers, regulators).

[24] Murgai and Pritchett (2006) report a variety of estimates both of the learning gains and of the increased costs of maintaining the existing system in India.
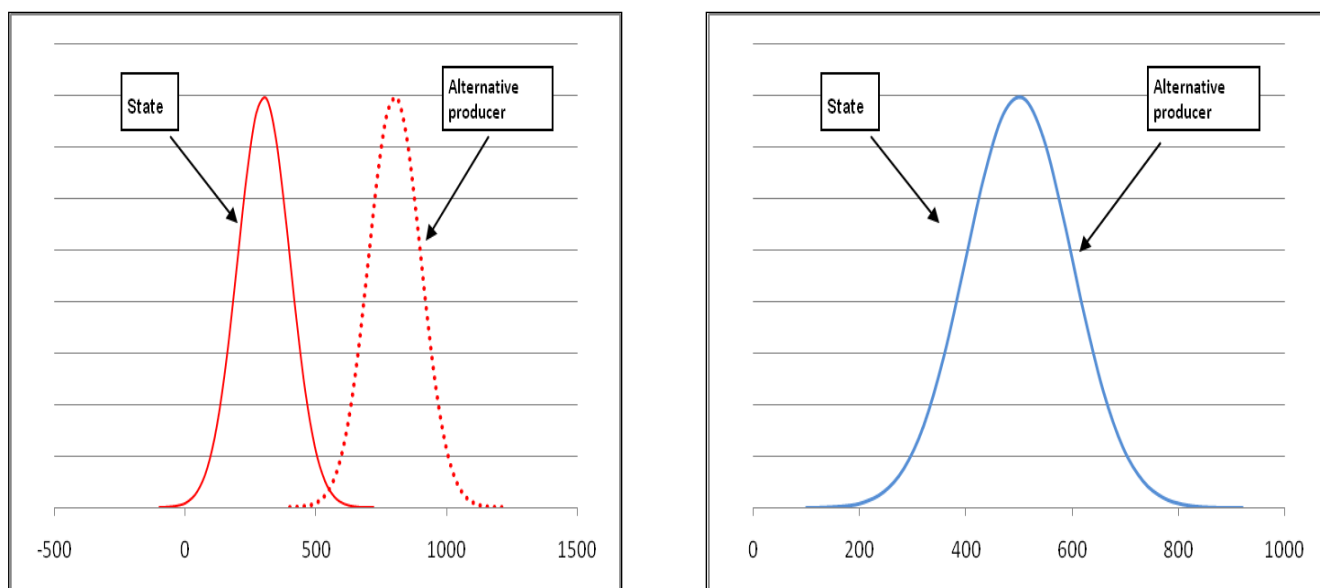
of this. After the denationalization of 1979 *laissez-faire* has characterized education policy in Pakistan. Therefore the expansion of the schooling sector has been driven by demand (section II.D). The increase in private enrollments has been very rapid in both rural and urban areas and at any level of socio-economic status. In 2000, 35 percent of primary school students were enrolled in primary schools whereas only 25 percent of students in middle and high school were enrolled in the private sector (Andrabi et al 2008, p.3). By the end of the 1990s 10 percent of children in the poorest deciles were studying in private schools. As a result, the increase in enrollments in fundamentalist schools has not been important[25]. By relying on the Census of Population and different waves of the Pakistan Integrated Household Survey Andrabi et al. (2005) find that *madrassa* enrollment is low, less than 1 percent of the overall enrollment in the country and that the great increase in private enrollments in recent years has not led to an expansion of enrollments in religious schools. Among the households, less than 25 percent of parents sent all their children to *madrassas* and 27 percent of parents sent their children to private schools (Andrabi et al. 2005, p.4). This shows the enormous potential gains from privatization.

It is worth stressing the difference on charter versus vouchers. In this institutional setting the introduction of vouchers would be preferred to charter schools because it is precisely the inefficiency of the public sector in producing learning gains that accounts for the increased demand by citizens for private schools. If "charter" schools inherited the restrictions of the government schools then this would defeat the purpose. India's experience shows two examples of this. One, there was state support given to some private schools in India, but which

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[25] *Madrassa* enrollment declined from 1940 to 1980 but increased during the religion-based resistance to the invasion of Afghanistan by the Soviets in 197 9. The largest increase in *madrassa* enrollment occurred after the withdrawal of the Soviet Union and the rise of the Talibans, Andrabi et al. (2005).

subjective them to a variety of regulatory requirements (especially on teachers). In most empirical analyses the "aided" private schools look much less effective than the "unaided" private schools. A second example from India is the use of "community" teachers of one form or another. This innovation is always popular as many would argue the existing system of teacher selection and compensation is a "perfect storm" (Murgai and Pritchett 2006) producing high costs, poor outcomes, and disgruntled teachers. However, in spite of the fact that community schools are almost always at least as effective as the state system (even using teachers with fewer formal qualifications, see for instance, the scheme in Madhya Pradesh (LeClerq 2002)) each time the "community" schools come in contact with the existing system, the desirable features of the community schools (in producing greater accountability at lower cost) are sacrificed.

Graph 5: Average of Skills and Dispersion of Beliefs in Case of Introduction of Alternative Suppliers of Schooling, Weak Democracy
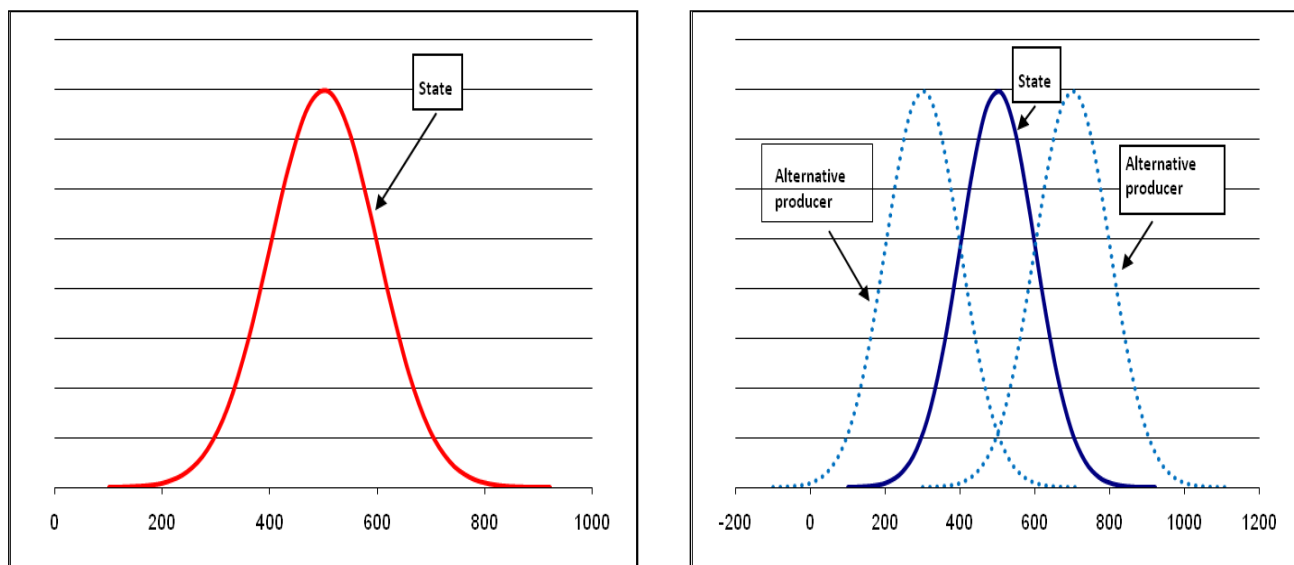

The best option for the promotion of alternative suppliers in education appears to be in these cases, in which the regime and citizenry do not have large differences on average in

ideology (see next section) but the differences in efficacy are very large as in this case the potential entrants will be competing for students mainly in efficacy in learning gains, not primarily on ideology. In this case it is feasible to create a system for support to flow to private suppliers of education that is based on creating transparent measures of quality (on input, output, and outcomes) for light touch regulation, support, and using consumer choice as a means to drive system improvements.   In this case there are large average gains in learning sacrificed against less increase in ideological variance.

III.B.iii) Ideological State

The third case is in which the motivation of the state/regime for engagement in education is largely (if not exclusively) based on the ideological/socialization gap between the state and the typical citizen. The introduction of a voucher system would lead to the foundation of schools with a different ideology from the one of the State (graph 6). In this case the establishment of choice is diametrically opposed to the interests of the state. Hence, an authoritarian State could not allow alternative providers of schooling as this would lead to the foundation of schools with a different ideology and this could ultimately undermine the totalitarian power of the State (Lott 1990). The aim of the State is to inculcate the desired socialization in the officially proclaimed ideology. Hence, no matter what the changes in the provision of skills could be under a voucher system or a charter school, private schooling or public schools with less regulated statutes would not be permitted as the State would loose control over the indoctrination of youth. The discussion on the Marxist-Leninist regimes and their schooling systems in section II.C illustrates this point.

Graph 6: Average of Skills and Dispersion of Beliefs in Case of Introduction of Alternative Suppliers of Schooling, Ideological State

Conclusion

Even before there was the Millennium Development Goal on education and even before the Jomtien declaration on Education for All there was the Universal Declaration of Human Rights as part of the founding of the United Nations, which was adopted in 1948. Article 26 declares makes three interesting assertions: (i) "everyone has the right to education", (ii) "education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory." and (iii) "parents have a prior right to choose the kind of education that shall be given to their children." [26] This appears to be a mandate for choice and vouchers, as it is the

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[26] The entire text of course reveals the tensions always present in any discussion of schooling as, while article (3) declares parents right to choose, article 2 declares " (2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities

only way one can have both free and compulsory schooling and give parents choice is to allow money to follow the student. But in spite of this "pro-voucher" rhetoric, the reality has moved in the opposite direction. In the process of decolonization and with the advent of the promotion of "development" existing educational institutions were in many instances nationalized and in practice the entire effort has been to strengthen only the state as a producer of schooling. In some ways universal schooling has come to be equated with universal *publicly produced* schooling.

Why did economists loose this policy debate so badly? Was it because of lack of theory or evidence demonstrating that allowing greater supply of alternative producers would be welfare enhancing or would improve skills? No, not at all. The real reason is socialization. If governments want to provide alternative producers as a means to improve the schooling option available to parents and students, governments have to tackle the political economy of school socialization hands-on and economists need to incorporate this real and complex feature into their modeling of the consequences of alternative arrangements for the production of schooling.

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of the United Nations for the maintenance of peace."—but nothing is said about the cases in which parents do not choose an education that furthers the United Nations.

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APPENDIX 1: Countries with Extended Historical Episodes as One Party States

    i)   Countries that effectively banned private school:

In primary (<1% in 1990): 36; Albania, Algeria, Azerbaijan, Belarus, Bulgaria, Burundi, China, Republic of Congo, Croatia, Cuba, Finland, Georgia, Hungary, Iran, Iraq, Israel, Japan, Kazakhstan, Kyrgyzstan, Lithuania, Malaysia, Mauritania, Mozambique, Myanmar, Poland, Romania, Russia, Rwanda, Slovenia, South Africa, Sweden, Tanzania, Tunisia, Turkey, Ukraine, Vietnam

In secondary (<1% in 1990): 10; Afghanistan, Albania, Algeria, Belarus, Bulgaria, Republic of Congo, Cuba, Iran, Oman, Ukraine

Either primary or secondary (<1% in 1990): 38; Albania, Algeria, Azerbaijan, Belarus, Bulgaria, Burundi, China, Republic of Congo, Croatia, Cuba, Finland, Georgia, Hungary, Iran, Iraq, Israel, Japan, Kazakhstan, Kyrgyzstan, Lithuania, Malaysia, Mauritania, Mozambique, Myanmar, Poland, Romania, Russia, Rwanda, Slovenia, South Africa, Sweden, Tanzania, Tunisia, Turkey, Ukraine, Vietnam, Oman

In both primary and secondary (<1% in 1990; problem of missing data): 8; Albania, Algeria, Belarus, Bulgaria, Republic of Congo, Cuba, Iran, Ukraine

Historically one-party system (OPS) communist[27] states, among countries in table 1: 30; Afghanistan, Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Cambodia, China, Croatia, Republic of Congo, Cuba, Czech Republic, Finland, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mozambique, Poland, Romania, Russia, Serbia, Slovenia, Tanzania, Ukraine, Vietnam

Historically one-party system (OPS) communist states, among countries in the entire dataset: 33; Republic of Korea, Benin, Ethiopia,[28] + countries historically one-party communist in table 1 [i.e., 30; Afghanistan, Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Cambodia, China, Croatia, Republic of Congo, Cuba, Czech Republic, Finland, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mozambique, Poland, Romania, Russia, Serbia, Slovenia, Tanzania, Ukraine, Vietnam]

- Fraction of those banned (i.e., table 1, either primary or secondary <1% in 1990) that are historically OPS-communist: (22/38) 58% (due to missing data, if only primary considered: 22/36, if only secondary considered: 7/10, if both: 6/8)
- Fraction of those OPS-communist banned (i.e., either primary or secondary <1% in 1990) with respect to the total number of historically OPS-communist in the dataset: (22/33) 67%

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[27] We refer to the communist countries as the traditionally Marxist-Leninist states with authoritarian governments and command economies based on the Soviet model (CIA, the World-Factbook 2008).

[28] On second thought I excluded Greece as the Communist-dominated government was in power only during the Civil War between December 1944 and January 1945.

(due to missing data, if only primary considered: 22/26, if only secondary considered: 7/10, if both: 6/8)

Historically one-party system (OPS) non-communist, among countries in table 1: 11; Algeria, Iraq, Japan, Myanmar, Sudan, Tunisia, Turkey [Burundi, Iran, Mauritania, Rwanda: one-party states, non socialist]

Historically one-party system (OPS) non-communist, among countries in the entire dataset: 19; Egypt, Syria, Ghana, Guinea, Madagascar, Mali, Nicaragua, Senegal + countries historically OPS in table 1 [i.e., 11; Algeria, Iraq, Japan, Myanmar, Sudan, Tunisia, Turkey [Burundi, Iran, Mauritania, Rwanda: one-party states, non socialist]

- Fraction of those banned (i.e., table 1, either primary or secondary <1% in 1990) that are historically OPS-non communist: (10/38) 26%

  (due to missing data, if only primary considered: 10/36, if only secondary considered: 2/10, if both: 2/8)

- Fraction of those OPS banned (i.e., either primary or secondary <1% in 1990) with respect to the total number of historically OPS in the dataset: (10/19) 53%

  (due to missing data, if only primary considered: 10/19, if only secondary considered: 2/10, if both: 2/10)

APPENDIX 2: Index of Religious Heterogeneity

a) Herfindahl Index (H)

Religious heterogeneity has been conventionally measured by the Herfindahl index (H). It is calculated by subtracting the summation of the squared proportion of each religious group from one or H= 1- Σr_i^2 (Blau 1977; Finke and Stark 1988). A value approaching zero indicates a religious monopoly while a value approaching one indicates many religious groups of equal proportionality. In spite of some criticism (i.e., geographical units selected for the analysis, relevance for measuring religious economies) this index is the most widely used in the literature (e.g., McCleary and Barro, 2002). [in McCleary and Barro (2002) it is presented with the inverse scale as 1-H but here H is presented to make a comparison with the other index J].
(The Herfindahl index is based on the fractions of adherents in 2000 in ten major religious denominations among persons expressing adherence to some religion. The denominations are Catholic, Muslim, Protestant, other Christians, Hindu, Buddhist, other eastern religions, Jewish, Orthodox, and other. These data are from the McCleary and Barro (2002) dataset for the year 2000).

b) Index derived from the Theil's Entropy Index derived by James (1992) (J)

$J= \Sigma r_i \ln 1/r_i$. The index grows according to the number of religions; it reaches the maximum when the population is equally divided among a large number of religions

APPENDIX 3: Countries in the Different Categories of the "Toleration" Section

I.C.i) Islamic States (with more than 80% Muslim population) versus Secularizing Arabs

"Conservative Monarchy": Bahrain, United Arab Emirates, Kuwait, Morocco, Oman, Qatar, Saudi Arabia

"Left Secularist": Algeria, Egypt, Iraq, Libya, Yemen, Syria, Tunisia

"Right-Secularist": Jordan, Turkey.

II.C.ii) Latin America and Catholicism

Two categories: countries with state religion and without state religion in 2000, data from McCleary and Barro (2005),

In 2000, "Pro-catholic" (state religion is Catholic): Argentina, Bolivia, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Panama, Paraguay, Peru, Venezuela
"Liberal" (no state religion): Brazil, Chile, Ecuador, Mexico, Nicaragua,[29] and Puerto Rico, Uruguay

[see long run effect, in 1900, "Pro-catholic" (state religion is Catholic): Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Panama, Paraguay, Peru, Venezuela
"Liberal" (no state religion): Ecuador, Mexico, Nicaragua, and Puerto Rico, Uruguay]

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[29] There is no official state religion; however, the Roman Catholic Church enjoys a close relationship with the Government. It is the most politically active religious denomination and has significant political influence. Catholic Church leaders routinely meet with senior government officials (U.S. Department of State, International Religious Freedom Report, 2005).