Zusammenfassung: Bildungsgutscheine in den USA: Zur Produktivität im öffentlichen und privaten Sektor – Zahlreiche Untersuchungen in den USA haben gezeigt, dass eine private Beschulung vorteilhafter für sozial benachteiligte und aus ethnischen Minderheiten stammende Schüler ist als für privilegierte weiße. Mögliche Gründe für diesen Unterschied in der Wirkung zwischen sozialen Schichten beinhalten: 1.) die geringere Anzahl an Auswahlmöglichkeiten im öffentlichen Bereich für Schüler aus Minderheiten oder aus auf andere Weise benachteiligten Familien, 2.) die kleinere Größe der Schulen, die geringere Anzahl an Schulwechseln und die einfachere Administration des privaten Sektors und 3.) die ausgeprägtere gemeinschaftliche Teilhabe im privaten Sektor durch die stärkeren extrinsischen Anreize für Schüler und ihre Familien (mehr Hausaufgaben, höhere Ansprüche an das Verhalten und die Leistungen, wenn der Schüler an der Schule bleiben will, größere Kontaktintensität zwischen Schule und Elternhaus und ausgeprägtere finanzielle Pflichten sowie höhere Bildungsaspiration). Da stärkere extrinsische Anreize benötigt werden, um benachteiligte Schüler und ihren Familien zu motivieren, hat die private Beschulung gerade auf sie besonders positive Auswirkungen – und das trotz der geringeren finanziellen Ressourcen von Privatschulen.

Schlüsselwörter: Bildungsgutscheine · (Ko-)Produktivität · Privatschulen · sozial benachteiligte Schüler

Abstract: Private schooling has been shown to be more beneficial for students from disadvantaged social and minority ethnic backgrounds than for advantaged white students. Possible explanations for difference in impact across social groups include: 1) fewer choices available in the public sector to minority and other disadvantaged families; 2) smaller schools, fewer transfers among schools, and greater administrative simplicity in the private sector; 3) better co-production in the private sector by providing...
stronger extrinsic learning incentives to students and families (more homework, higher behavioral and educational expectations if student is to remain in the school; more extensive communications between school and family, and requirements that families make financial and educational contributions). Because stronger extrinsic incentives are needed to motivate disadvantaged than advantaged students and families, it is for these students that private schooling has particularly positive educational impacts, despite the fewer fiscal resources available to private than public schools.

**Keywords:** private schools · (co-)productivity · school vouchers · students of disadvantaged social and minority ethnic backgrounds

The debate over school choice in the United States has focused on whether students learn more in private than in public schools. A more useful way of thinking about the question is to look at what kinds of students learn more in private schools and what kinds of students learn more in public schools. Also what are the differences in the characteristics of public and private schools that might help to explain why private schools are able to provide comparable or superior educational experiences with fewer resources. After presenting alternative theories of school choice, we summarize the differential impact of school choice on students from disparate social and ethnic backgrounds and then offer a set of possible explanations for those differential impacts.

1. **School Choice Theories**

School vouchers were originally proposed by Milton Friedman (1955), a Nobel Prize winning economist from the University of Chicago, as a way of enhancing human capital. Public schools typically operate under the direction of a school board that appoints a superintendent who administers the schools within a particular territorial domain. In such a monolithic system, inefficiencies run rampant, Friedman argued, as school administrators have few incentives to identify ways of enhancing their product or providing it at a lower cost. If parents had publicly funded vouchers that covered the tuition at the school of their choice, schools would be forced to compete for paying customers. Levels of productivity, efficiency, and consumer satisfaction would increase in education, just as they have in more competitive industries.

Disturbingly, Friedman’s idea first caught fire with southern legislators who proposed school vouchers as a way of preserving school segregation at a time when it was ruled unconstitutional in Brown v. Board of Education (1954). When a number of southern states enacted laws that transformed public schools into private schools open to those with vouchers, federal courts promptly declared such laws unconstitutional. But for years the voucher concept remained tainted—and even today some civil rights groups regard vouchers as nothing more than a device for segregating schools.

School choice received a much needed facelift, however, when a sociology professor at the University of Chicago, and his colleagues (Coleman/Hoffer 1987; Coleman/Hoffer/Kilgore 1982; Hoffer/Greeley/Coleman 1985), reported that those who attend Catholic high schools outperformed their public school peers. The sociologists were less
inclined than Friedman to focus on questions of monopoly control than on networks of social relationships within educational settings. Accordingly, they ascribed the better performance of Catholic school students to the educationally supportive connections that ostensibly form among students, parents, and teachers within religious communities. Coleman and his colleagues called the positive benefits of these relationships “social capital”. (For extensions of the concept, see Campbell 2006; Putnam 2000, 2001). As Bryk, Lee and Holland (1993, p. 314) put it: “Catholic schools benefit from a network of social relations, characterized by trust, that constitute a form of ‘social capital’ [...] Trust accrues because school participants, both students and faculty, choose to be there.”

A third, more political explanation for the private-school advantage was offered in a widely read Brookings study by political scientists John Chubb and Terry Moe (1990). In their view, public schools are subject to the control of elected officials (school boards, state school superintendents, state legislatures, members of Congress and so forth) who respond to political pressures when formulating school policy. The push and pull of interest group politics subjects administrators to cross pressures that undermine their ability to focus a school on its educational mission. More attention is given to adhering to bureaucratic guidelines than to educating students. Private school administrators are under a different kind of pressure, Chubb and Moe (1990) argued. To keep their clientele, administrators must demonstrate to parents that their schools are educationally effective. Relatively free of bureaucratic regulation, private school administrators have the independence and autonomy to sustain their mission.

All three theories—the economic, the sociological, and the political—have a common element: They anticipate uniformly beneficial consequences from choice initiatives. For the economist, competition motivates improvement at all schools, except those that will eventually go bankrupt. For the sociologist, schools of choice create social networks. For the political scientists, the removal of politics to the periphery enhances the possibility of pursuing an educational mission. According to all theories, most students can be expected to benefit from a voucher-based educational system.

The critics of school choice, by contrast, expect highly uneven consequences for students, if choice is introduced (Guttman 1987; Henig 1999; Ladd 2002; Hochschild/Scovronick 2004). In their view, school vouchers will stratify students by ability and family background. The more talented students, hailing from the better educated, more engaged families, will enjoy advanced educational opportunities in restricted settings. Those “left behind” in less attractive schools will see their educational experience spiral downwards. Competition spurs disparity, not improvement. Even worse, schools will provide highly differentiated curricula as each identifies a particular niche in the marketplace. At risk is the nation’s common political heritage and its sense of commitment to democratic institutions. Racial, ethnic, and religious divisions can be expected to harden, as schools cater to families from particular cultural backgrounds.

Initially, only critics of school choice anticipated uneven impacts. But that began to change in 1990, as the school choice movement took an egalitarian turn. In 1990, the first school voucher law, passed by the State of Wisconsin, focused on the needs of low-income families in Milwaukee, though only secular private schools were allowed to participate. Six years later, the Milwaukee program was expanded to include religious
schools, and the Ohio legislature established a similar program in Cleveland. In 1999, a privately-funded school voucher program for low-income students in New York City captured national attention, stimulating a series of privately-funded programs across the country. Also that year, Florida enacted a proposal made by Governor Jeb Bush to allow students attending schools that failed two-years running to attend a private school. A similar policy was proposed by his brother during his successful 2000 presidential campaign. Then, in the Zelman v. Simmons-Harris case (2002), the Supreme Court ruled constitutional a school voucher program serving low-income families in Cleveland, Ohio, despite the participation of religious schools.

As these developments were unfolding, Howell and Peterson, with Wolf and Campbell (see Howell et al. 2006) theorized that the private sector advantage was more beneficial for African American than for white students. They pointed out that residential school choice was already widely practiced in the United States, as parents could select their school by renting or purchasing a home in the neighborhood of a school they preferred. Residential school choice, however, had a heavy class and racial bias, as the well-to-do could afford the higher housing prices in areas where schools were most attractive, while African Americans suffered from discrimination in the housing market. In other words, some groups had school choice already, whereas others could obtain school choice only through school vouchers. Consistent with this theory, school vouchers and other forms of school choice have become more popular among minority than white adults (Howell/West/Peterson 2007).

### 2. Recent Research

But what happens in practice? Are school choice impacts uniform or heterogeneous? Do school vouchers, and other choice initiatives, materially improve the educational lives of disadvantaged, minority students?

The answers to these questions are less uncertain than is conventionally believed. Contrary to most theories of school choice, researchers have identified uneven impacts of private-sector schooling on student achievement and attainment (high school graduation and college attendance). More often than not, researchers find a larger private school advantage for educational attainment than for test-score performance, for students in middle and high school than for those in elementary school, and for minority students than for white ones.

The most important early study of sector impacts across the United States, carried out by James Coleman and his colleagues at the University of Chicago, focused on test-score performance in high school. Using information from the High School and Beyond (HSB) data set, the researchers discerned positive Catholic school impacts on the achievement of all students, but larger impacts on African American than on white achievement (Coleman/Hoffer 1987; Coleman/Hoffer/Kilgore 1982; Hoffer/Greely/Coleman 1985). However, secondary analyses of the data did not identify notable Catholic school effects (Alexander/Pallas 1985; Willms 1985; for a full review of HSB studies, see Neal 1998). In a balanced assessment, Jencks (1985) concluded that the weight of the evidence indicated a small, positive impact on white achievement and,
possibly, a more substantial impact on black achievement, though observations were too few to be certain.

Subsequently, Evans and Schwab (1993) bypassed the debate over impacts on test-score performance in favor of an estimate of Catholic high school impacts on educational attainment. Using instrumental variables to correct for selection effects, they found positive impacts on educational attainment, with especially large impacts on the performance of minority students. Consistent with these results, Neal (1997), using instruments to estimate impacts from NLSY79 data, found modest positive Catholic high school impacts on the educational attainment of urban whites and larger ones on that of minorities.

Along the same lines, Grogger and Neal (2000), using instruments to analyze NELS88 data, detected Catholic high school impacts on the attainment of minorities but not white students. But using a different instrument (labor laws rather than indicators of Catholicity), Figlio and Stone (1999) found little, if any positive impact of religious schooling on white performance, though they did find positive impacts on minority performance. Also analyzing NELS88 data, but introducing an alternative method of handling selection effects, Altonji, Elder and Taber (2005) found bigger private high school impacts on educational attainment than on test-score performance but little distinctive impact on minority students.

Finally, Morgan (2001), also using NELS88 data, estimated Catholic school impacts on test score performance by means of a propensity-score matching strategy. Inasmuch as observations were too few to permit exact matching on all co-variates, Morgan estimated the impact of co-variates on the propensity to attend a Catholic school rather than a public one. In this way, he was able to reduce multi-dimensional phenomena to a single dimension. To see whether the methodology was sensitive to the inclusion of prior test scores in estimations of propensity to attend a Catholic school, Morgan estimated impacts with and without their inclusion. Results were robust. By both methods, Morgan found that Catholic sector impacts were smaller for whites and others with the greatest propensity to attend Catholic schools and larger for socio-economically disadvantaged minorities who had the lowest propensity to opt for a Catholic education.

As of now, there have been only a few studies of elementary school achievement, based upon a nationally representative sample of public and private elementary school students. In a secondary analysis of HSB data, Sander (1999) found that eight years of Catholic schooling had positive impacts on 10th grade test scores (though he cannot exclude the impact of the early high school years from the estimation). But Jepsen (2003) analyzed data from the congressionally mandated 1992 “Prospects” survey of public and Catholic school students participating in compensatory education programs. He found no differential sector impacts, either in reading or math, or student achievement. Nor did he find any differential impact by ethnic group.

The last finding is inconsistent with results that estimated sector effects experimentally by evaluating interventions that used lotteries to choose among applicants for school vouchers to low-income public school students seeking to attend private schools. This research has generally detected positive school sector impacts on the student achievement of African American students but not of white or Hispanic students (Howell et al. 2006; for methodological discussions, see Krueger/Zhu 2004; Howell/Peterson 2004;
Peterson/Howell 2004). Similar results were obtained when impacts were estimated using an innovative propensity-score analytic technique on the same data set (Barnard et al. 2003). Other experimental studies have also found positive impacts on low-income minority students in urban areas (Greene/Peterson/Du 1998; Rouse 1998; but see Witte 2000).

In sum, certain patterns emerge from the various studies that have attempted to estimate school sector effects, despite the inconsistent results generated by varying methodologies and alternative data sets. Overall, private schooling, and, more specifically, Catholic schooling, the predominant form of private schooling in the United States, appear to have had greater impact on student attainment than student achievement, larger impacts at the high school than the elementary school level, and larger impacts on minority students than white ones.

3. Understanding the Uneven Pattern of the Private School Advantage

Most choice theories are black-box theories that do not attempt to decipher what is happening inside schools themselves. To get a better handle on how and why the private school advantage varies by social and ethnic group requires an examination of another literature altogether, one that explores the factors that affect a student’s motivation to learn. I begin by describing the nature of the private educational sector in the United States.

3.1 Private Schools

New England’s Andover and Exeter or Washington, D.C.’s St. Albans and Sidwell Friends often come to mind when thinking about private schools. These are among the exclusive, expensive, quite secular institutions that serve the nation’s economic, political, and social elite.¹ But according to the U. S. Department of Education’s Center for Education Statistics (2005a), most of the over six million students, or 11.6 percent of those enrolled in school, attend a much less exclusive, less well-endowed private school, which is likely to have a religious affiliation.²

Forty-seven percent of private-school students attend Catholic schools, another 15 percent are enrolled in Evangelical Protestant schools, 4 percent go to Lutheran schools, 16 percent to other religious schools (Jewish, Episcopal, Presbyterian, Greek Orthodox, Jewish, Islamic, and others), while just 17 percent attend a non-sectarian private school, whether exclusive, a local Montessori or Waldorf school, or one seeking to preserve a particular ethnic tradition. Altogether, secular private schools serve less than 2 percent of the school-age population, while schools with a religious affiliation serve about 9 percent.³

According to information from the U. S. Department of Education (2005b), average public school expenditures in 2003 were $9929 per pupil, while private school expenditures were only $5634 per pupil.⁴ In other words, private schools spent per pupil only 57 percent of what public schools did. That difference undoubtedly exaggerates the fiscal differences between the two sectors, as private schools may not have the
same ancillary costs as public schools (school lunch, transportation, costs of regulatory compliance). Also, expenditure data from the private sector are less reliable than public school expenditure data, because tuition does not cover the total cost of educational provision, the remainder coming primarily from charitable contributions (Levin 1998). However, the best evidence suggests that tuition covers by far the largest share of the costs of educational provision (nHowell/Peterson 2002In references only 2004).

Another way of calculating the fiscal differences between the two sectors is to consider class size and teacher salaries, the two most expensive items in a school budget. Nationally, pupil-teacher ratios in the two sectors are estimated to be the same, 15.9 pupils per teacher. But teacher salaries are substantially different. In 2000, annual salaries for public school teachers averaged 44 percent higher than those in the private sector — $42,949 as compared to $29,822. If both sectors spend the same proportion of their classroom-focused funds on teachers’ salaries, then these differences may provide a rough approximation of classroom-related expenditure differentials across sectors.

Despite the fewer resources available to the average school in the private sector, their clientele is of higher socio-economic status, as might be expected from the fact that one must pay tuition to attend private schools, while public schools are free, except for small fees for specialized activities. According to data from a Department of Education survey of elementary school students, the socio-economic status (an index of parental income, occupation and education) of students in the private sector was 0.80 standard deviations higher than that of students in the public sector. The percentage of students that were white was 74 percent in the private sector, as compared to 54 percent in the public one. The percent Hispanic and African American in the private sector was 12 percent and 5 percent, respectively, as compared to 20 percent and 13 percent in the public sector. First-grade test score performance in reading and math of students in the private sector was 0.44 and 0.43 standard deviations higher, respectively (Peterson/ Llaudet 2007).

Given the disparities in expenditure levels between the private and public schools, how do private schools convince families from higher socio-economic backgrounds that the private-sector education is worth the difference in cost between the free public school and the tuition the private school charges? In making the case to parents, the school’s religious identity and contrasting set of cultural values are certainly critical. But that would hardly suffice if students in private schools were not also receiving at least comparable instruction in reading, writing, arithmetic, and other basic subjects. To achieve educational parity, private schools must make their limited resources more productive. What tools do they employ in order to achieve this objective?

3.2 Organizational Solutions

The most easily adopted, though probably not the most significant, of the productivity enhancing tools employed by the private sector are simple organizational ones. As compared to public schools, private schools tend to be smaller, are run with less administrative complexity, and impose fewer transfers on the child as he or she ages.

School Size. Private schools, on average, are about a third the size of those in the public sector. According to U. S. Department of Education (2004) data, the average pri-
vate school in the United States enrolls 184 students as compared to 573 students in the average public school. Among elementary schools, the average private school enrolls 160 students as compared to 436 students in the average public school.

The smaller size of the private school is very likely to be productivity enhancing. Although some have argued that larger schools are more efficient and can provide a broader curriculum, most studies have found smaller ones to be more educationally effective (Chubb/Peterson 2005). Principals can maintain tighter supervision over staff and students, a sense of community is more easily created, and social control can be established through informal networks rather than bureaucratic regulation.

**Administrative Simplicity.** It is not only because private schools are smaller that bureaucratization is minimized but also because most private schools operate with a high degree of independence and autonomy (Chubb/Moe 1990). Many private schools are incorporated independently as non-profit institutions, with their own board of trustees, to whom the head of the school reports. Relations between heads and employees are handled informally. Hardly any private-school head must negotiate salaries with representatives of employee organizations.

**Two-tier vs. Multi-tier System.** Private schools prefer the traditional two-tier division between elementary and high school to the three-tier system that has become increasingly popular within the public school system. No less than 27 percent of public school students are enrolled in middle school, but the institution is virtually non-existent within the private sector (U.S. Department of Education 2004).

Most scholarly studies find that young adolescents learn more if they attend K-8 schools rather than middle schools (e.g., Baltimore City Public School System 2001; Becker 1987; Franklin/Glascock 1998; Moore 1984; Offenberg 2001; Simmons/Blyth 1987; Wihry/Coladarci/Meadow 1992). For example, a recent study of Milwaukee’s public schools found that students in K-8 schools outperformed those in middle school (Cook 2005).

**Summary.** Private schools have several organizational characteristics – smaller school size, administrative simplicity, a broader age-structure – that enhance their productivity. Yet no one of these policies, nor all of them together, is the most important mechanism for achieving high levels of educational efficiency within the private sector. More important is the greater capacity of the private sector to enlist the services of others in the provision of educational services, a practice we shall characterize as “co-production.”

### 4. Co-Production

Co-production takes place whenever a product or service is created or delivered by those who do not receive monetary reimbursements as well as by those who do (Parks et al. 1982). A pervasive fact of modern life, co-production is to be found in both the public and private sectors. Within the public sector, examples are readily identified. Safety is preserved by paid police and fire officials but also by watchful citizens. Streets are kept clean not only by compensated sanitary engineers but also by ordinary citizens who throw their trash in publicly-provided barrels. Within the private sector, groceries are distributed by
paid clerks but also by shoppers who place items in their carts. Similarly, gasoline is pumped by drivers, cash is retrieved by ATM cardholders, and soft drinks, junk food, and newspapers are all obtained by inserting coins in vending machines. Indeed, a well-known secret to efficient retailing is shifting the cost of (co-)production from paid employees to unpaid customers.

To achieve efficient co-production, firms must attend to the interests and concerns of those not paid for their services. If ATM cards are not easy to use, customers will wait for the teller. If trash barrels are not emptied by paid employees, unpaid pedestrians will discard their junk promiscuously. If food is not attractively displayed by store employees, customers will not select the item.

Education that takes place within schools is co-produced by those who do not receive monetary reimbursements for their services as well as by those who do. Paid for their services are teachers, principals, maintenance personnel, bus drivers, and the myriad other specialized personnel necessary to maintain complex, modern school systems. They are motivated to provide educationally relevant services in part by the wages and salaries they receive. If shirking is excessive, the employee can be asked to leave.

No less important are educational co-producers who cannot be asked to leave, even if they are low-performing. (To simplify the presentation, paid personnel shall, from this point on, be referred to as producers and non-compensated personnel as the co-producers.) The most important co-producer is the student himself or herself. In addition, peers, parents, relatives, neighbors, and friends are key co-producers. Altogether, the actions of the co-producers are almost certainly of greater significance for educational production than are the actions of the paid producers.

4.1 Co-Production in Public and Private Schools

Generally speaking, private schools are better designed than public schools to motivate positive contributions to learning from co-producers, whether parents, peers, or the students themselves. For one thing, parents must pay money to send their child to a private school. Once a financial sacrifice has been made, the family has a strong incentive to make sure its resources are being well spent, and parents can be expected to be more engaged in their child’s education (Howell et al. 2006, pp. 111-112).

Apart from family expectations, a student at a private school must meet the school’s expectations in order to remain there. First and foremost, the student must meet the disciplinary standards of the school. Tardiness, excessive absenteeism, fighting, cheating, disruption of the classroom’s educational climate, and destruction of school property can all be grounds for suspension and eventual expulsion. Young children, as long as they are well-behaved, may not need to meet any particular academic standards, but in most private schools, older students will be expected to exhibit good study habits, do their homework, complete term papers, and perform satisfactorily on tests. Otherwise, they may not be invited to return the following academic year. In all these respects, standards at public schools, though not entirely absent, are generally much lower.
4.2 Peer Culture

Just as the school’s expectations will create incentives for each student, so will school expectations shape the peer culture within a school. In private schools, the fact that students are expected to adhere to the school’s disciplinary code and to perform at least at a satisfactory level affects not just each student individually but the general culture within the school. But when peer culture is shaped by policies that rely upon intrinsic incentives (such as making learning fun and enjoyable), as is too often the case in public settings, then peer groups as co-producers can become highly variable, sometimes as much of a negative as a positive influence on learning, especially in urban settings where schools serve a low-income, minority population.

Forty-one percent of public school teachers report that the “level of student misbehavior in this school interferes with my teaching”, but only 25 percent of those in private school report this as a problem. Student tardiness and class-cutting is said to interfere with teaching by 32 percent of public school teachers but only 15 percent of those in private school. Seventeen percent of teachers in public school, but only 4 percent of their peers in the private sector, report “student disrespect for teachers” as a “serious problem” at their school. (reference).

Not surprisingly, nationwide surveys provide ample evidence that private schools, as compared to public schools, communicate more extensively with parents, contacting and involving them in a wide variety of ways (Vaden-Kiernan 2005). In another U. S. Department of Education survey of parents (2005b, table 25), those with children in private school were much more likely to report that they volunteered in school, attended a class event, attended a general school meeting, and attended a parent-teacher conference. For example, 69 percent of the private-school parents said they volunteered at school, as compared to just 38 percent of the public school parents. Attending a class event was reported by 86 percent of the private-school parents, as compared to 68 percent of the public school parents.

These higher levels of involvement and communication between private schools and families could be in part a function of the greater resourcefulness of such families. However, in the three-city study, Howell et al. (2006, p. 106) found that those with children in private schools, as compared to those with children in public schools, were more likely to receive a newsletter from the school; participate in instruction; speak to classes about their jobs; receive notes from teachers; be informed about their child’s progress halfway through the grading period; participate in parent-teacher conferences; attend open houses; and be notified about their child if their was a behavioral problem. That sharp differences could be observed, despite the fact that the two groups of families were much the same, only underlines how much greater emphasis the private school places on involvement of parents in the educational process.
5. Differential Impact on Disadvantaged Students

The more extensive co-production in the private than in the public sector may account for the particular pattern the private sector advantage has taken. The larger private sector impact in middle and high school (as compared to elementary grades) may be due to the greater challenge in keeping students educationally engaged as they enter their adolescent years. Coleman (1961) identified more intense anti-educational peer group pressures among adolescents in public than in private schools. Continuing this line of research, Bishop (1999) identified what he terms “nerd harassment” in middle and junior high schools. Conceivably, the comparative advantages of private schools better equip them to address this situation. They could also account for the particularly strong private sector impacts on educational attainment.

Similar considerations are relevant to the greater private-sector advantage for minority students. Fordham and Ogbu (1986) argued that minority students felt especially intense peer group pressures impeding academic accomplishment. Their anthropological investigation was subsequently supported by analysis of the school friendship patterns of a nationally representative sample of adolescents, in which Fryer and Torelli (2005) found that high performing African American and Hispanic adolescents had fewer friends of the same racial background than white students if they went to public school, but not if they went to private school. It may be that smaller, K-8 private schools, with their stronger sense of mission and tighter disciplinary controls, are better able to sustain minority student attention during the middle years of schooling.

6. Conclusions

If we assume that, for the white majority, the rate of learning in the private sector is only just as good, and not greater, than the rate of learning in the public sector, productivity is higher in the private sector in that private schools are doing equally well at one half to two-thirds the cost. Any automobile maker who could do the same would drive the competition into oblivion. Only the public schools’ access to government subsidies prevents the same from happening to them.

But can any of the productivity-enhancing elements in the private sector be exported to the public one? Is there a way of achieving more adequate public education other than pursuing a financial strategy that has so far proven illusory? Certain organizational steps are already being undertaken in places where public schools are facing strong competition. In Milwaukee, the most competitive environment in the United States, middle schools are being phased out, elementary schools are expanding up through eighth grade, high schools are being divided into smaller units, and authority is being decentralized to the building level.

All these are important first steps, but can public schools do a better job of enlisting the help of educational co-producers? Here, the place to begin is with the students, who need to be given strong incentives to learn. Ideally, attendance at desired public schools should depend upon self-discipline and, as a child ages, educational
achievement. Short of that, students should not be promoted from one grade to the next unless they reach a stated level of proficiency. Students should reach a certain level of achievement in a range of subjects before they are given their high school diploma. And high school examinations should be subject-based, comprehensive and allow for a range of achievement beyond the bare minimum. Results should be incorporated into high school diplomas and, if the student so authorizes, scores should be made available to employers and institutions of higher learning. Then, the higher performing students will be given incentives to reach still higher levels of accomplishment.

All of these steps will affect students, peers, and families alike. With goals well specified, achievement rewarded, failure penalized, and peers who interfere with the learning process removed from the educational setting that most students enjoy, the conditions for learning in public schools will be greatly enhanced. All of this can be done at a minimum cost, well within the budgets of almost all school systems.

Endnotes

1 The examples are taken from Howell and Peterson, with Wolf and Campbell (see Howell et al. 2006), p. 90.
2 Throughout this paper, data are reported from several sources and various years, making the assumption that variation from year to year is minor enough to be ignored for the purposes of this paper. Data reported in this sentence are projected enrollments for 2005. The percentage falls to a little more than 10 percent if pre-school enrollment is excluded.
3 In 1999-2000, the average private school tuition was $4689, while per pupil expenditures in public schools were an average of $8149.
4 Per pupil expenditures were calculated using enrollment figures from table 3 and total expenditures from table 30: Data on private school expenditures are estimates. Total expenditures for public schools include current expenditures, interest on school debt, and capital outlay. The estimate is for the 2002-03 school year. Snyder/Tan/Hoffman (2006). Table 63: Public and private elementary and secondary teachers, enrollment, and pupil/teacher ratios: Selected years, fall 1955 through fall 2014.
5 Snyder/Tan/Hoffman. (2006). Table 75: Average salaries for full-time teachers in public and private elementary and secondary schools, by selected characteristics: 1999-2000. These are the most current data available.
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