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Changes in the Provision of Education in the United States: A 25 – Year Retrospective

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Education is the single largest domestic public service funded by government in the United States, although provision of education is a joint public and private venture. In 2006, total expenditure by all educational institutions (public and private; elementary, secondary and post – secondary)was $ 972 billion, which represented 7.4 percent of GDP. Expenditures by public educational institutions,$ 792 billion, accounted for more than 81 percent of total educational spending and represented slightly more than one – third of direct general expenditure by all states and local governments in the U. S. This past year, nearly 74 million students were enrolled in these educational institutions – 56 million in primary and secondary schools and 18 million in higher education institutions – amounting in aggregate to nearly one – quarter of the U. S. population. More than 85 percent of these students were enrolled in public educational institutions.

Given the political and economic strength of the U. S. , many might expect that the educational system in the U. S. is mature, stable, and

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secure, with few controversies or important changes. And in some ways it is. But many important aspects of public education in the U. S. have been a matter of substantial public debate over the past 25 years, resulting in several significant changes in finance, provision, and structure.

Schools systems have had to deal with continuing dramatic demographic changes, both in the number and background of students. The role of state governments, and to a lesser extent the federal government, has expanded and changed in character. A past concern about variation in educational resources has given way to a focus on educational achievement and productivity. The changing nature of employment has increased the demand for post – secondary education, straining capacity and raising costs in public higher education. Public financial support for higher education has not kept pace with costs and enrollment growth, leading to increasing real tuition and raising issues of access and affordability.

These changes in educational finance and provision in the U. S. over the past 25 years are the topic of this paper. These issues illustrate that even an extensive, established, and well – financed educational system periodically faces the stress of necessary change. Some believe that a confluence of circumstances – including economic and demographic trends, a more open global economy, and the evolving political landscape – may foster continuing substantial changes in educational policy and practice in future years, as well.

I. Overview of Public Education in the United States

Traditionally, the U. S. has utilized one of the most decentralized systems to provide primary and secondary education of all nations, even compared to the other major industrialized nations with federal systems of

government (Australia, Canada, and Germany). About 15,000 local school districts in the U. S. – which in most cases are independent, single – function governments – generate about 43 percent of revenue for public primary and secondary education and are responsible for spending essentially 100 percent. In comparison, reliance on local finance is substantially lower in Germany, and state governments in Australia govern, finance, and operate the schools (as is done only in Hawaii in the U. S.). Although primary and secondary education is also provided through private schools, many of which are operated by religious organizations, these private schools account for only about 10 percent of primary and secondary enrollment.

Public primary and secondary education in the U. S. is a uniform or non – stratified system, with students at any given age and location participating in the single school system and taking a similar curriculum. A number of other nations, notably many European nations, operate stratified systems, with students sorted into various educational tracks at relatively young ages (as young as 10 years of age in Austria and Germany). Universal, relatively uniform primary and secondary education has been an explicit policy in the U. S. As a consequence, educational attainment in the U. S. is quite high, with 86 percent of adults (persons over 25) having completed high school, and 54 percent having completed some college (post – secondary)education.

In terms of painting a statistical picture of primary and secondary education, the U. S. spends about 4 percent of GDP on primary and secondary education, with spending per student of more than $ 9,000 (in 2000)and nearly $ 10,000 in secondary schools (OECD, 2004). About 89 percent of 16 – year olds are in school, and about 75 percent of students graduate from secondary school at the typical age. Students in

the U. S. attend school for more hours per year (about 1,150)than in any other nations. The U. S. is a nation that spends an average fraction of its income on education compared to other industrialized nations, but because income (GDP)is high in the U. S. , spending per student is also high. Data reported by the OECD show clearly that education spending per student is positively related to national income, as measured by GDP per capita. The relatively high spending in the U. S. funds a larger than average amount of time in school for students rather than substantially smaller than average class sizes or higher than average teacher salaries (which could be alternative uses of the funds). The longer time in school per year by U. S. students arises not because U. S. students go to school more days per year, generally, but rather because of more hours per day.

The structure of higher (post – secondary)education in the U. S. is more varied than for primary education, but traditionally there has been a substantial role for the public sector. Among the 4,300 degree – granting higher education institutions, there are both two – year and four – year institutions, some of which are operated by the public sector and some privately. Private higher educational institutions may be either non – profit or for – profit. Although public higher education institutions represent only about 40 percent of all colleges and universities, they account for about 75 percent of higher education enrollment (and almost all enrollment at two – year institutions).

II. Fundamental Changes in Education Finance and Provision

As noted above, the finance and provision of education in the U. S. has undergone important changes in the past twenty – five years.

Five of the most substantial and important of those changes are described in the remainder of the paper, with both the causes and implications of each explored.

A. Demographic Changes (Return to a Period of Increasing Numbers of Students)

Since 1985, enrollment in primary and secondary education institutions in the U. S. has been increasing and currently is projected to continue to increase for at least the next 15 years. This growth came after a period when enrollment was first stable and then declining. Enrollment grew substantially after World War II until the late 1960s, as shown in Figure 2. Enrollment was stable for an 8 to 10 year period in the late 1960s to late 1970s, but then the number of students in schools declined from 1978 to 1985. Accordingly, educational institutions and local government have had to adjust from a long period of growth to a brief period of decline and then to one of growth again, the current period. In the 1950s and 60s, new schools were being constructed and more teachers hired across the U. S. But from the middle 1970s to the middle 1980s, governments reacted to declining enrollment by closing or consolidating schools and reducing the number of teachers (although average class sizes also declined in this period).

The current period of growth in primary and secondary education enrollment since 1985 is substantially different than in the post – war period in at least two important ways. First, the increase in students has not been even or uniform across the nation. Since 2000, public elementary and secondary school enrollment has declined in 19 states and increased in the other 31, as shown in Figure 3. The pattern is uneven among the growing states, as well. Enrollment increased greatly, by more

than 10 percent, in four states (Arizona, Georgia, Nevada, and Texas) and by 5 to 10 percent in 8 states (Arkansas, Colorado, Delaware, Florida, Idaho, North Carolina, Utah, and Virginia). Consequently, schools are being closed and the number of teachers declining in about 40 percent of the U. S. , at the same time that new schools are being built and many new teachers hired in the other 60 percent of the states.

Second, not only is the pattern of growth uneven, but the source of the growth is also quite different than in the earlier period. Part of the recent growth in population and school – age children is the direct or indirect result of immigration to the United States. This is part of the reason why growth has been particularly exceptional in such states as Arizona, Texas, Florida, and Colorado, among others. Between 1995 and 2005, the share of students in public primary and secondary schools of Hispanic heritage increased from 13. 5 to 19. 8 percent. In fact, about 85 percent of the total growth in public primary and secondary school enrollment in that 10 – year period was the result of an increase in the number of Hispanic students, most of whom do have English as their native language. The 20 states in which Hispanic students comprise more than 10 percent of total enrollment are shown in Table 1, with those students representing about half of enrollment in three states (New Mexico, California, and Texas). In other words, where the student population is growing in the U. S. , it is also becoming substantially more diverse. That diversity creates additional costs for the educational system, as well as presenting cultural challenges and opportunities.

B. Centralization of Responsibility for K – 12 Education: Financing

Although provision of primary and secondary education traditionally

has been the responsibility of local governments in the U. S. , the role of both state governments and the national government has expanded substantially in the past 25 years. One important example of this change is that the federal and state governments are providing an increasing share of revenue for K – 12 education. As a consequence, variation in educational spending levels geographically (among and within states)has been reduced.

The relative roles of state compared to local governments in financing education changed dramatically initially in the 1970s, with the two levels of government effectively switching positions, as shown in Table 2. Prior to the 1970s, state governments provided about 40 percent of school revenue, on average, and local governments more than half. Responding to a number of forces, state governments attempted to equalize educational opportunity geographically in the 1970s, which resulted in increased state financial commitments and corresponding decreases in the financial responsibility of the localities. The increased state share was accomplished both by changing the magnitude and type of state grants to local school districts. However, this pattern changed in the late 1980s, when the local share began to increase at the same time the state share decreased. Beginning in the middle 1990s, a new round of state education finance reforms caused the state share to increase again to 49. 7 percent, the highest share since 1986 – 87, but it has declined every school year afterward until 2004 – 05, when the state share was 46. 9 percent. Between 1994 – 95 and 2004 – 05, the federal share of revenues rose to 9. 2 percent and the local share declined to 44. 0 percent.

The increasing role of state governments in financing education was a response to concerns about wide differences in financial resources among local school districts in states. In some cases, state governments

acted on their own to address resource disparities, although in many cases the state actions were a response to legal challenges or court decisions. Huang, Lukemeyer, and Yinger (2004) report that as of 2003, only 5 states (Delaware, Hawaii, Mississippi, Nevada, and Utah) had not faced any litigation regarding education finance, with state education finance systems having been rejected or overturned by the courts in 18 states. Anna Lukemeyer (2004) reports that while many court challenges to state education finance systems were based on the wide differences in educational spending per student that existed within states, more recent challenges are based on clauses in state constitutions about the required state role in providing or guaranteeing adequate or appropriate education for all students. In such cases, plaintiffs are less concerned about spending differences, per se, and more about the level of education spending, services, and outcomes in the state overall.

Evidence reported by William Evans, Sheila Murray and Robert Schwab (1999) and by Caroline Hoxby (2001) suggests that court-ordered changes in state systems to finance education did lead to equalization of education resources among districts. Evans, Murray and Schwab report that in 11 states with school finance changes between 1972 and 1992, all of which involved increases in the state government role in financing schools, spending differences between districts in those states were reduced substantially – on average about 20 to 30 percent. The reduced spending differences between districts occurred both as a result of the lowest-spending districts increasing spending substantially – what is called “leveling up” – and by limiting or restricting spending by the highest-spending districts – what is called “leveling down.” In all of these instances, the autonomy of local education governments was reduced and replaced by state controls.

The increasing financial role taken by state governments has been uneven, though. As shown in Table 3, state governments provide at least 60 percent of public education revenue in nine states (including Hawaii, where the state operates the schools). On the other hand, there are still 12 states in which state government takes a minority financing role for education, providing less than 40 percent of revenue.

C. Centralization of Responsibility for K – 12 Education: Assessment & Accountability

Although real public education expenditure at the K – 12 level has been increasing in the U. S. since the middle 1980s, there is concern that educational achievement, measured by graduation rates and test scores, has not improved commensurately. As a result, both state governments and the national government have taken increased action to monitor and influence educational performance by assessing educational results and enforcing accountability. In essence, the focus on educational resource differences – equity – that dominated in the 1970s and 1980s has given way to a focus on measuring and improving educational results – productivity. But just as with the earlier expansion in state financing of education, these changes have reduced the autonomy of local education governments.

State governments initiated the emphasis on accountability during the 1990s, resulting partly from the legal decisions that forced states to take more fiscal responsibility for the distribution of educational resources and for ensuring adequacy of educational production. In addition, a second driving force was the long – run trend of continuous increases in real per student spending by public schools and decreases in average class sizes, whereas student performance either declined or did not improve

nearly as fast as spending grew. With the adoption of the No Child Left Behind Act in 2002, the federal government became an additional force encouraging educational assessment and accountability.

After adjustment for inflation, expenditures per student in public schools in the U. S. increased during the 1980s, remained stable during the first part of the 1990s, and rose again thereafter. Since 1994 – 95, real public education expenditures per student have increased by more than 25 percent, continuing the long – term trend, as shown in Figure 4. The issue is whether educational outcomes have improved commensurately with the increases in school spending. There is some evidence that they have not, either that educational results have not improved at all or not as much as one might expect. For instance, average scores, for both verbal and mathematics skills, on the Scholastic Aptitude Test (SAT) – a test purporting to measure preparation for college given to high school seniors – declined from 1963 to 80. Since 1980, average SAT verbal scores have remained about the same, while average math scores have increased modestly.

A set of tests called the National Assessment of Educational Progress is used by states in the U. S. to measure educational outcomes in various subjects at various stages of the educational process. Although there has been some improvement in these test scores, particularly in the past 10 years, the results remain quite uneven. Improvements have occurred for some subject areas more than others, and there remain wide differences in measured outcomes among different states and different segments of the population. Recent attention has also focused on a set of student assessments used internationally, which show achievement by students in the U. S. remains below that of students in many other nations that have lower educational spending. There also is concern about

"dropouts" – students who do not complete high school. Although the dropout rate declined from 12.2 percent to 9.3 percent from 1986 to 2006, it also remains quite uneven and is substantially higher in some locations and for some types of students.

For a nation that once left education decisions to local governments, the change has been dramatic. According to the U. S. Department of Education (2007), all but three states (Iowa, Montana, and Rhode Island) now have substantial state – set academic requirements for high school graduation, many of which were established or strengthened since 1985. Twenty three states now require students to pass a competency test in order to graduate from high school, something quite rare before. All the U. S. states have report cards on schools and rate schools or identify low performing schools according to federal requirements, with 28 states also rating schools based on additional state criteria.

The provisions of the federal No Child Left Behind Act are outlined in Table 4. These are additional requirements for schools to assess student performance, set achievement goals, and make specified changes if those goals are not being met. Most importantly, states must set proficiency standards in various subjects, and the number of students meeting those standards must increase until there is 100 percent proficiency by 2014! Enforcement of NCLB is done through the threat of losing federal government support for public primary and secondary education ($45 billion in 2005). Although only about nine percent of total revenue for public K – 12 education, this is still an amount of funds that provides the federal government substantial influence. In this case, local government autonomy is lost to state governments, but through the requirement of the national government.

The focus on assessment, productivity, and accountability requires

that a number of issues be addressed, including (1) who should be evaluated – students, teachers, schools, or school districts; (2) how should the evaluation be structured – i. e. what are the relative advantages of various evaluation or testing methods; (3) what level of government should be primarily responsible for setting standards, conducting the evaluation, and paying the costs – states or the federal government; and (4) what remedies or consequences should apply to schools or students who fail to meet assessment standards. These issues continue to be debated and procedures revised in the U. S.

D. Rising Relative Cost of Higher Education

A substantial increase in demand for higher education and the resulting strong growth in the number of higher education students have greatly contributed to increased costs of providing post – secondary education. These cost increases are due partly to the required expansion in capital facilities, partly to increasing costs of scientific research facilities, partly to increased competition for faculty with private – sector, non – academic jobs, and partly because of rising health – care costs for all employees.

Nearly 17.5 million students were enrolled in degree – granting higher education institutions in 2005 – 2006; more than 13 million in public institutions alone. Full time equivalent enrollment in public higher education institutions increased from about 7.5 million students in 1982 to 10.2 million in 2007, an increase of about 36% over the 25 – year period. Expansion has been especially substantial recently, with 24 percent growth in the past 10 years and 15 percent growth in public higher education enrollment in just the past 5 years, as shown in Figure 5. Higher education spending in real terms (constant dollars) and higher education spending per student has increased as well, reflecting the

higher costs. The dramatic increase in real spending by both private and public higher education institutions in shown in Figure 6. And according to the U. S. Department of Education, general fund expenditures per student by public higher education institutions (in constant 2006 – 7 dollars)increased as follows:

Year	Real Expenditure per Student
1985	$ 17,780
1990	$ 18,749
1995	$ 20,373
2000	$ 24,024

The growth in higher education enrollment has been fueled by an increase in demand in the labor market for individuals with post – secondary degrees and the resulting growing wage difference between students with a high school education and a college education. In 2006, median annual earnings in the U. S. for individuals with a high school education only were $ 27,383, whereas median annual earnings for individuals with a bachelor's degree were $ 46,435, a nearly 70 percent difference. That difference has been growing substantially, providing an incentive for more individuals to enroll for post – secondary education.

It is a fundamental result of economic analysis that this increase in demand to attend college by students has lead to increased real, perstudent costs. That analysis is depicted in Figure 7. The initial short run response to the increased demand for college enrollment is an increase in price (to E1)and more intensive use of the existing college capacity, permitting enrollment to increase (to S1). In the long run, the higher education industry expands, which requires expansion of facilities and increased competition for faculty with private – sector, non – academic jobs. These increases in input costs imply that the long run price remains

higher than initially (now at E2), although enrollment is also much greater (at S2).

E. Privatization of Higher Education

State and local government support for public higher education has not increased in real, per – student terms, and thus has not kept pace with the increase in costs of providing higher education. Consequently, students are bearing a larger share of the costs for higher education than in the past, leading some to the view that a process of “privatization” of higher education is underway in the U. S. This has created pressures for both students and universities. As tuition increases in real terms, there is concern about access to higher education opportunities for students from less affluent families and implications for both economic growth and economic equality in the U. S. For universities, the relative decline in public support has required higher education institutions to seek alternative sources of funding, furthering the notion of “privatization”.

Over the 10 – year period from 1997 to 2007, there was a 24 percent increase in higher education enrollment, a 19 percent increase total real state – local support for higher education, and a 50 percent increase in real tuition net of financial aid. In 1982, net tuition (that is, tuition net of student financial aid)provided about 22. 1 percent of revenue for public higher education in the U. S. , but by 2007 that share had increased to 36. 6 percent, as shown in Figure 8. The rise in the share of revenue from tuition corresponded to a decrease in the share of revenue from state – local government support. State – local expenditures accounted for 78 percent of revenue for public higher education institutions in 1982, but only 63 percent in 2007.

What happened over the longer 25 – year period is clear, as reflec-

ted in research reported by the State Higher Education Executive Officers Association (2008). State and local government support for public higher education increased in nominal terms, but not enough to offset increases in the number of students or costs. Indeed, real state – local support per student for higher education was the same in 2007 as in 1982. But real higher education revenue per student had increased. So, consequently, real net tuition paid by students had increased. In essence, the increased relative costs of higher education and the increase in the number of students has been financed by students paying higher tuition and bearing a larger fraction of costs. Simply put – more students, higher cost, all covered by higher tuition.

In 2005 – 06, the average tuition and room and board charge at a public, four – year higher education institution in the U. S. was more than $ 12,000. Tuition and charges at private higher education institutions are much higher, of course. The irony and related public policy issue arises from the fact that just at a time when post – secondary education seems essential for continued economic growth and vitality, the nation is requiring that higher education be financed privately to a much greater degree than in the past. This so – called "privatization" of public higher education raises a number of other concerns, as well, including the feasibility of financial access by students from lower – income households and the necessity for universities to seek alternative sources of financial support (including research grants and private donations).

III. Future Prospects

In summary, local education governments have had to adjust from a period of growth to one of decline and now to one with both growing and