This newsletter discusses factors that shape federal education funding policies. It examines the size of the federal deficit and its progress, as well as the factors affecting the resources available for education. The 1993 interest on the federal debt is projected to be $314 billion and payments such as these have held down funding for student aid, as well as funding for other domestic social programs. In addition, the burden of the federal budget has been used in the process of reauthorizing the student aid program to preclude consideration of transforming Pell grants into entitlements. For students, this means still heavier reliance on loans to finance their college education. For institutions, it means still more self-funded student grants and higher tuition to cover the costs, or changes in education missions and in the types of students served. Students and educators need to confront not only student aid issues, but also to play a much greater role in public debate about larger federal budget issues. (GLR)
In the past year, HEES Review has discussed academic outcome measures — specifically, retention and achievement, and the student-related variables that influence those outcomes. But, as was emphasized in the first issue in the series, "Issues in Student Retention" (Volume 3, Number 1), student-related factors account for only part of students' outcomes: institutional factors contribute much of the balance.

Foremost among institutional factors is student financial aid. As long ago as 1957, Iffert found that students ranked personal finances as the third most important factor in decisions to drop out of college (Iffert, 1978). In 1962, Summerskill's review of the literature determined that in sixteen out of twenty-one studies, financial problems were mentioned as among the three most important reasons students drop out of college (Iffert, 1978). In the twenty-odd intervening years since those studies, the cost of a public four-year college education has risen three-fold, much faster than income; thus financial aid can only have become an even more important factor in students' achieving their educational goals.

This year's series of the Review, (continued on page 11)
ed to exceed $400 billion. The federal deficit amounted to about 20 percent of federal revenues in the 1970s, slipped to about 40 percent in the 1980s, and is projected to sink to almost 60 percent in the early 1990s, as shown in Chart 2, possibly rebounding thereafter.

What caused the growth of the deficit? Those who believe that government is too large allege that its growth was caused by increased government spending — that is, from the rate of increase for outlays exceeding the rate for revenues. Those who are more concerned with the delivery of services than with the size of the government, perse, allege that the deficit grew because of shortfalls in revenues.

Thus, belief and perceptions about the role of government shape the definition of the deficit and the characterization of its causes.

In trying, nevertheless, to derive a description of the deficit and what caused it, analysis of the actual trends in revenues and expenditures is useful, starting with the objective identification of the time when changes in trends occurred and associating those changes with causes. Trends in federal receipts and outlays over the last three decades are shown on Chart 3.

A large increase in the federal budget deficit occurred in 1982-83, when the cut in tax rates of the Economic Recovery and Tax Act of 1981 began to take full effect. The tax cuts were intended to stimulate private investment, to accelerate economic growth, and, thus, ultimately to increase total tax revenues in spite of the cuts in tax rates.

At the same time, reductions in domestic programs were proposed, intended to down-size government and limit spending. Many of the spending reductions proposed by the Reagan Administration did not get through Congress, and there was no acceleration in the rates of government spending for domestic social programs in the early 1980s. Defense spending, however, was increased significantly.

Examining the net effects statically at one point in time, or dynamically over time, the tax cuts had not, by the mid-1980s, produced a sufficient increase in revenues to offset the initial revenue losses. Thus, the deficit grew. As it did so, efforts to cut spending continued to be made, with domestic social programs absorbing much of the reduction. Yet, the annual deficits worsened, cumulating over the decade of the 1980s to add more than $2.3 trillion to the federal debt. The federal debt in current dollars unadjusted for inflation more than tripled from about $900 billion in 1980 to about $3.2 trillion in 1990, as shown on Chart 4.

The dollar increase in the federal debt, of course, led to increases within the federal budget for inter-
est payments on the debt. Interest payments, in turn, ballooned because interest rates in the early 1980s were extremely high. A downward spiral of worsening deficits leading to deeper debt, in turn leading to larger interest payments and still more deficits, had been unleashed.

Then, in the late 1980s, the savings and loan bail-out increased the debt still further. Added together, interest payments on the federal debt and the cost of the savings and loan bail-out now equal 80 to 90 percent of the annual deficit, as shown on Chart 5. (Interest payments exceed net outlays for interest because of interest income from funds held in trust by the government, such as Social Security contributions.)

To put the relative size of the interest payments on the federal debt into perspective, Chart 6 shows that in the 1960s and 1970s, an amount equal to about 20 percent of total federal income tax payments made by individuals was needed to make the interest payments on the federal debt. By the end of the 1980s, that figure had increased to about 60 percent, leaving less and less for all else, including education.

Other Factors That Influence Resources Available For Education

Interest payments and the savings and loan bail-out help explain what is happening to the amount of money available for education and student financial aid, but there are other factors as well.

Tax Revolt Versus Economic Squeeze. A tax revolt, begun in the 1980s, has been sustained in the 1990s by taxpayers' beliefs that not only are they overtaxed but that their taxes have been rising. In part, this is the result of focusing on federal tax rates without considering the effects of credits, exemptions, and deductions, which have the effect of lowering rates for individuals.

When federal income and other personal tax payments are calculat-
ed as a percent of personal income, there has been, in fact, very little rise in the tax share paid out over the last 20 years. The share, shown on Chart 7, has fluctuated between about 13 and 14 percent from the 1970s to the 1990s.

Despite the fact that their federal tax payments have remained at a fairly constant share of income, people do feel an economic squeeze. One reason is that federal taxes on employment have risen sharply. Another major source of pressure, arising from the private sector rather than the government, is increased mortgage debt. As the prices of homes and mortgage interest rates reached historic highs in the early 1980s, mortgage debt increased substantially as a share of personal income, as shown on Chart 8. Other demands on individuals for more money are increases in consumer credit interest rates, state and local taxes, excise taxes, and even corporate taxes, which many economists believe are ultimately shouldered by individuals in the form of increased prices for the goods and services they buy.

 Tightening economic constraints are real, but the sources are diffuse. Nonetheless, voters' wrath has focused on "the government," making it difficult to garner support at any level — local, state, or national — for increased education spending in the public sector.

**Shifts in Revenue Sources.**

Federal budget revenues are generated from three major sources: personal income taxes; corporate income taxes; and Social Security contributions, paid equally by employers and employees.

Individual income taxes continue to be the largest single source of federal budget revenues, providing about 45 percent of the total in 1990, but down from 48 percent in 1980, as shown on Chart 9.

The of shares derived from corporate income and payments, however, has shifted dramatically. In 1950, for example, corporate income taxes provided about
30 percent of the federal budget revenues. By 1990, however, that share had dropped to about 10 percent. In contrast, taxes on employment, in the form of Social Security contributions, were about 10 percent of the federal budget revenues in 1950 and rose to almost 40 percent by 1990, also shown on Chart 9.

Higher education institutions have been particularly hard hit by employment tax increases. Tax-wise, higher education institutions aren't corporations. Colleges and universities are "tax-exempt," but only from income, not employment taxes.

Ostensibly, half of the employment taxes are paid by the employer and half by employee, but economists argue whether, ultimately, employment taxes are all paid by employees in the form of lower wages, or by students in the form of higher tuition, or by the institution themselves, because of their limited ability to shift them forward (increase prices) or backward (lower wages). None of these alternatives is good for colleges.

One thing is sure, however. Because higher education is comparatively labor intensive, many colleges and universities, in fact, initially pay more in employment taxes than a similarly-sized company pays in income taxes. Thus, payments of employment taxes by colleges and universities reduce the benefits intended by their "tax-exempt" status.

Income Shifted From the Poor and Middle Income to the More Affluent. Increases in employment taxes have had greater effect on the finances of low and middle income citizens, placing additional strains on the majority of students and their families, because those with incomes above the limit, now $55,500, face no additional tax.

In addition, interest payments on the federal debt have shifted income from general taxpayers to more affluent bond-holders. (Sizeable shares of the funds used to finance the federal deficit also have come from foreigners, leaving the U.S. vulnerable to changes in their willingness to lend at prevailing interest rates.)

As a result of the sluggish economy, more families have fallen below the poverty line, and even families with incomes above the poverty line have seen the cost of college education rise much faster than their incomes. Correspondingly, more students need financial assistance to pay for college. Thus, more demands are made on governments and higher education institutions to finance education.

Tax Expenditures. A tax expenditure takes place when, for instance, a tax credit or deduction is allowed, resulting in taxes not collected. Examples are a tax credit for industry investment in physical capital, and a deduction for interest paid by individuals on funds borrowed to buy homes. Such foregone revenues are nonetheless accounted for by the U.S. Treasury Department as though they had been collected and subsequently expended for the stated purpose. Some object to the entire concept of "tax expenditures" because it implies that the funds belong to the government to spend, rather than to taxpayers to use as they please.

Nonetheless, tax credits have been introduced into the tax code to stimulate certain types of activity, such as research and development. The Economic Recovery and Tax Act of 1981, for example, enacted tax credits to encourage investment. The investment stimulated, however, was primarily in physical capital. But human capital is also needed to maximize the nation's economic productivity and growth. Ways to encourage investment in people, and particularly investment in college education through student aid, appear not to have been a major consideration in the national investment policy deliberations.

The disparities in the tax incentives between physical and human capital are large. For example, in 1987, accelerated depreciation allowances for machinery and equipment reduced the income taxes of industry and businesses by over $30 billion. In the same year, deductions for charitable contributions to education reduced personal income taxes by only $1.3 billion, and parental exemptions for students reduced taxes by only $2 billion.

Overall, tax expenditures resulting from federal policies designed to stimulate investment in physical capital amounted to close to $90 billion in 1987, but companies did not receive similar incentives to
train their workers. While federal expenditures for higher education increased (before decreasing and leveling off in mid-decade), outlays for training, including subsistence costs for workers while receiving training, were cut by half, as shown on Chart 10.

Since increases in outlays for higher education were offset to a large degree by cuts in outlays for job training, the budget category as a whole increased very little. Indeed, only one percent — $6.7 billion — of the $660 billion increase in federal budget outlays from 1980 to 1990 was allocated to education and training. In contrast, outlays for defense increased by $165 billion, representing almost 25 percent of the growth. Together, increased spending on defense and on debt interest accounted for 45 percent of the increase in the federal budget over the decade, illustrated by Chart 11.

**Entitlements.** Entitlements are benefits awarded as a matter of right created by law, with eligibility for the benefits determined by status. Entitlements have a prior claim on budget revenues, and are not subject to constraints imposed by limited appropriations. Veterans' benefits and Social Security payments are entitlements, awarded as a matter of right. Student aid, on the other hand, is not an entitlement because payments of grants to students are subject to limitations of funding set in the appropriations process. Commonly, they are reduced below authorized levels. As shown on Chart 12, in some years outlays for student aid have fallen as much as $1 billion below the amount authorized. Student aid is forward funded, confounding year-to-year dollar comparisons, but what is real and felt by students is that the maximum actual Pell grant award frequently falls as much as 40 percent below the authorized level.

Confronting a huge deficit, a case has been made for “no new entitlements”. However, while financial aid to students is not an entitlement, payments to banks and other lenders that make loans to students...
are an entitlement of sorts, because they are made by contractual agreements which are not subject to funding limitations.

In some years, payments to lenders under the Guaranteed Student Loan Program (GSLP) have equalled or exceeded grants to students. In 1990, as shown on Chart 13, for example, payments to lenders by contract under the GSLP program equalled just under $4 billion, while Pell grants to students equalled just under $5 billion. (On an even larger scale, payments by the federal government of interest to the lenders financing the federal debt — government bond-holders — are also contractual and therefore equivalent to entitlements).

Peace Dividend? The end of the Cold War and reductions in defense spending could lead to a peace dividend. The public debate over it, however, ranges from assertions that it doesn't exist because funds have already been committed elsewhere, to arguments that it must — or must not, depending upon one's perspective — be used for reducing the deficit instead of funding social programs such as education.

Often overlooked in these budget debates is the sharp distinction between spending and investment. Spending for consumption — a subsidy for grain storage or for tobacco growing, for example — cycles through the economic system in a given budget and is gone. Investment, such as student aid, however, creates the capacity to produce income and wealth for the future.

Up until now, decisions about government outlays, including those for reducing the deficit, have been made using spending criteria and budget balancing mechanisms to make choices. Decisions about what to do with a peace dividend might more wisely be made on the basis of expected future returns.

Impact of the Federal Deficit on Student Aid Funding

The government has reported large increases in outlays for federal student aid over the decade of the 1980s, an increase from $3.4 billion in 1970-71 to about $14.4 billion in 1980-81 to $22.8 billion in 1991-92, unadjusted for inflation. Most of the increase in aid through the 1970s was in the form of grants, but since 1980-81 virtually all of the increase has been in the form of loans, as shown in Chart 14. In fact, federal grant aid actually declined throughout the 1980s because of large decreases in education benefits provided under veterans' and Social Security programs.

The growth of the federal loan programs is shown in greater detail on Chart 15. The explosive growth of the Stafford Loan Program actually began in the 1970s, just as the gap between federal revenues and outlays started to widen. When, in the 1980s, the government was faced with increasing costs of defaults, new loan programs were introduced permitting parents, with more collateral and greater ability to repay, to borrow to help pay for their children's college education.

Chart 16 shows federal grant aid programs superimposed. Chart 17 which is a comparison chart showing state and institutional grant aid superimposed on federal aid, indicates that virtually all of the increase in grant aid awarded to students in the 1980s came from states and the colleges themselves.

A total of $14.4 billion was awarded to postsecondary students
in 1980-81, rising slightly the following year to almost $15 billion in 1981-82. The next year saw the beginning of the phase-out of aid to dependent students under the Social Security program, using the reasoning that students who required financial aid would be served by the need-based Pell Grant program. But in 1982-83, the Social Security program was cut by close to $1.3 billion while the Pell Grant program was increased by only $117 million.

The decline in value of grant aid over the 1980s occurred even when measured in current dollars. If the dollars were adjusted for the decline in purchasing power because of steep rises that have occurred in college costs, the decline in the constant dollar, or real value, of the grant aid would be even more substantial.

Trends in the dollars of grant aid should also be examined in light of the increasing numbers of students seeking aid. The numbers of recipients of aid under each of the federal grant programs are shown on Chart 18. Considering both the increases in the costs of colleges and the increases in the numbers of students seeking aid, student aid funding did not keep up with the growing need for aid, and unmet need increased in the 1980s.

To illustrate the erosion of the purchasing power of grants during the 1980s, the share of the cost of attendance at public and private colleges covered by Pell grants is shown on Chart 19. A Pell grant covers a small share, which has decreased to no more than about 10 percent of the cost of attending private institutions. A Pell grant also covers a decreasing share of the cost of attending a public four-year institution. Only in the public two-year college sector have Pell grants kept up with tuition, and now they cover a little over 40 percent of the cost of attendance.

The cuts in funding for federal programs that helped students pay for college contributed to a dip in total enrollment in 1984 and 1985. Biennial enrollment data, by race/ethnicity (which shows a
lower total than data for all enrollment because some students do not report their race/ethnicity) indicate that overall enrollments, including whites, dropped by 153,000 between 1982 and 1984, with African Americans accounting for about 25,000 of the decrease. In fact, Black enrollment had peaked in 1980, declined slightly in 1982, dropped significantly in 1984, and in 1986, was still below the 1980 peak. Black enrollment in college did not increase to the 1980 level again until 1988 and 1990, as shown on Chart 20.

It Matters How Students' College Education Is Financed

It has become common practice to lump grants and loans together and label the total, together with work-study funds, “student aid.” But loans are not the same as grants in their effects on students' educational decisions. As early as 1978, Alexander Astin, Director of the Higher Education Research Institute (HERI) at UCLA, established on the basis of analysis of student survey data that grants had a more positive affect on achievement of student's educational goals than did loans. He and his colleagues at HERI found, in a study done under contract for the U.S. Department of Education, The Impact of Student Aid Programs on Student Choice, that after controlling for different student characteristics, students with loans were more likely to drop out of college than students with grants. More recently, Thomas Mortenson did extensive analyses summarized in a report published by the American College Testing Program in 1990 on The Impact of Increased Loan Utilization Among Low Family Income Students. He concluded that “low income students face inherently higher risk of not completing college. When they encounter student loans in their financial aid package, this risk imposes cost-like considerations that reduce the prospects of net benefits of college enrollment for them.”

Loans have to be paid back with interest that, in effect, increases the cost of college. Loans, particularly...
for students who have uncertain job prospects, and no assurance of income after college high enough to pay off the loans, add much greater risk to students' calculations of the costs of their education. Loans can affect students' choices of whether or not to enroll in college, whether to go to a public or private college, and whether to start at a four-year or a two-year college. The prospect of having to pay back large loans can be a factor in students' decisions about going on to graduate school.

An additional consideration is that after paying back their education loans, students who have to borrow to pay for college end up considerably behind their peers who did not have to borrow in their ability to accumulate the savings they might need to invest in a home or small business. Indeed, financing college with loans could be an option (not yet enacted but being discussed publicly) of working off the loans through national service may prove very attractive.

**Impact of the Federal Deficit on Reauthorization of the Federal Student Aid Programs**

The basic legislation establishing the federal government's role in postsecondary education is the Higher Education Act, originally enacted by Congress in 1965. Every four or five years, when the period covered by the authorizing legislation expires, the programs are reauthorized through a process of amending the original act. For the last two years or more, in preparation for the 1992 reauthorization of the federal student aid programs, Congressional committees, under the leadership of Representative William D. Ford of Michigan in the House, and Senator Claiborne Pell of Rhode Island in the Senate, have been reviewing the programs, holding extensive hearings, and formulating reform proposals. In the reauthorization process, testimony made clear that most of the growth in the funds available to students to help pay for college was being made available in the form of loans, not grants, and that a grant/loan "imbalance" had emerged. As a consequence, major efforts were made to redress this imbalance by increasing the amounts of grants available to students and transforming the Pell Grant into a true entitlement.

Discussion of entitlements was stopped dead by the conclusion that there could be "no new entitlements." The language used in the arguments to oppose entitlements ignored the fact that the contractual agreements made by the federal government with the lenders to pay interest on loans to finance the federal debt, as well as to make payments to lenders under the student loan programs, were the functional equivalent of entitlements — not subject to appropriations limitations — and that these entitlements were skyrocketing; they put enormous pressure on the remaining budget functions, particularly the domestic social programs, including student grant programs. As a consequence, the efforts to redress the grant/loan imbalance did not result in major changes in the student financial aid programs. Once again, concern about the deficit overwhelmed efforts to create a right to financial assistance, and ultimately a right to education for students.

**Looking into the Future**

Budget projections four or five years out are often quite speculative and usually differ from the actual outlays. Nonetheless, the budget projections reflect spending priorities over the next several years. The federal budget projections for higher education made before the 1992 elections for FY 1992 and FY 1993 for the succeeding five years, are shown on Chart 21. Those out-year budgets projected sharp decreases in spending for higher education, dipping far below authorized spending levels before turning up again half a decade from now in 1997.

The question which educators must carry into the public policy arena where federal budget issues are being debated is this: **Will the nation be wealthier in coming years if we invest more in people, by channelling more funds to student aid?**
The answer could pose a fundamental challenge to current national budget priorities.

**Summary and Conclusions**

1. Beginning in the early 1980s, after the tax cuts and the reduction in revenues, the federal budget deficit grew sharply.

2. The annual deficit grew to a level estimated to equal more than one-third of the federal budget outlays in fiscal 1992. This means that the federal government failed to balance the federal budget by almost one-third.

3. The annual deficits accumulated to add close to $2.3 trillion to the federal debt in the 1980s. The federal debt, in current dollars without adjustment for inflation, more than tripled in the 1980s, rising from $900 billion in 1980 to $3.2 trillion in 1990. The debt is projected to increase by more than another $1 trillion from 1990 to 1993.

4. The federal debt has grown so large that an amount equal to almost 60 percent of the individual income taxes collected by the federal government in FY 1991 was needed to pay the interest on the debt.

5. By 1993 interest on the federal debt is projected to soar to $314 billion, exceeding defense spending by almost $20 billion.

6. The burden of the federal deficit has been used ever since 1982-83 to hold down funding for student aid, as well as funding for other domestic social programs.

7. The burden of the federal deficit has been used to preclude major redress of the growing grant/loan imbalance.

8. The burden of the federal budget deficit was also used in the process of reauthorizing the student aid programs to preclude consideration of transforming Pell grants into entitlements.

9. For students, this means still heavier reliance on loans to finance their college education. For institutions, this means still more self-funded student grants and higher tuition to cover the costs — or changes in education missions and in the types of students served.

10. The implication of these fiscal realities for students and for educators is that there is an urgent necessity to confront not only student aid issues, but also to play a much greater role in public debate about larger federal budget issues.

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**References**
