

College Affordability in Kentucky

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Executive Summary

Kentucky is not alone in grappling with the question of affordability. Concern about college affordability is on the agenda in many states and is of long standing. The reason for the concern is simple: college costs are increasing faster than families' ability to pay and are for the most part outstripping the resources of student aid programs. At a time when a college degree is ever more important, the financial effort required to attend college is becoming greater.

As financing for higher education becomes more complicated, it becomes more important to know the actual price that students pay. Measuring affordability includes the following considerations.

- First is the student's and his or her family's ability to pay for college.
- Second is the tuition and other costs associated with attending college.
- Third is the amount of student financial aid that is available to help students pay for their education.

All three must be considered in any analysis of affordability. The most meaningful measure of affordability is the net price, which is the amount the student and the family have to pay after grant aid is distributed. The majority of full-time students in Kentucky receive grant aid, so the minority actually pays the published price.

By our measures, most full-time students in Kentucky can pay for college without undue effort. The exception to this is independent students. We do not have direct evidence as to whether students have been dissuaded from enrolling because college is unaffordable or they have dropped out of college because of affordability issues. National research provides us with some insights that are applicable to Kentucky.

Do current Kentucky funding strategies influence postsecondary education access, retention and completion?

We are not able to comment directly on the effect of affordability on access in Kentucky. No longitudinal student data exist that would allow us to estimate the choices that students with different ability to pay made about attending college in Kentucky. The same lack of longitudinal data limits the ability to understand the relationship between affordability and retention.

National research is consistent in showing that low-income families are more sensitive to the price of attendance than are higher-income families. The national research also concludes that low-income students are more likely to drop out of college for financial reasons than are their higher income peers

Our survey of Kentucky high school seniors shows that finance is an important part of students' planning for college. Over three-quarters of students have talked with their parents about the cost of college and believe their parents are willing to help pay for college. One-half of the students indicated that their families have saved for college, and 43 percent said that they themselves had saved for college. Two-thirds of students planning to go to college anticipated

that they would require student aid. Four in five students planned on working while in college. Three-quarters were willing to borrow to pay for college, of which one-half were willing to borrow over \$2,000 a year.

Students often undermine their potential to succeed in college by the choices they make about how to save money. These money-saving decisions include putting off enrolling in college to earn money, attending part-time and working full-time and living at home while going to college in order to save money. Research shows that these choices all reduce a student's chance of graduating. These enrollment decisions represent compromises that many older students find necessary in order to support their families.

What changes to the state's postsecondary policies other than financial aid programs would enhance access for underserved populations of Kentucky students?

We do not have any direct measure of how price of attendance affects the decision of Kentucky high school graduates or returning adults to attend college. Evidence does show that choice of college varies by county. Counties with a high proportion of high school graduates with financial need are less likely to send students to either of the state research universities compared with counties where the graduates have less financial need.

Findings from our high school survey lead us to believe that outreach and information are important factors in helping students and families make postsecondary plans. Outreach efforts should make sure that parents and counselors in all high schools have timely information about the cost of attending college in Kentucky and how student aid can help them pay the bill. Special efforts should be made to supplement information for families without college experience.

Federal/State programs such as Kentucky GEAR UP provide the type of resources to help students, especially those from lower-income backgrounds, gain a better understanding of what going to college requires. This includes academic preparation, paying for education and succeeding at the college level.

Helping low-income families save for college and helping parents who have not gone to college understand that their children can succeed in college and should aspire to getting bachelor's degrees could help more students make the transition to college.

Special efforts should be made to provide adult students with educational options that meet their needs. Colleges, especially community colleges, should provide suitable enrollment options for adult students who need to balance work, family and school. Institutions should offer short-term certificate programs that provide stepping stones to associate and baccalaureate degrees.

Community colleges in Kentucky should take leadership in designing an integrated approach to serving the educational needs of adults. For example, Arkansas is taking leadership on finding ways to bring a larger share of adult students into postsecondary education. They have identified structural and personal barriers to education that go beyond student aid to help bring adults into education and help them succeed.

Is College Affordable in Kentucky?

Based on data for those Kentucky students who completed the Free Application for Federal Student Aid (FAFSA), Kentucky higher education is within reasonable range of affordability for most full-time students. The biggest exception to this is lower-income independent students who do not receive as much state aid as dependent students and face a higher net price, which requires more borrowing. Independent students are generally over 24 years of age; their need for student aid is calculated based on their income, not the income of their parents.

Some dependent students in the lowest income quartile attending 4-year public or private institutions are also at the margins of affordability. Community colleges are well within the affordable range for students in all income groups with the exception of the lowest-income independent students.

Many full-time students and most part-time students do not complete the FAFSA form; as a result, we have no data on their incomes or how they pay for college. It may be that some students who would be eligible for student aid do not complete the application. Every effort should be made to see that students make at least a preliminary application to make sure they receive all the financial aid to which they are entitled.

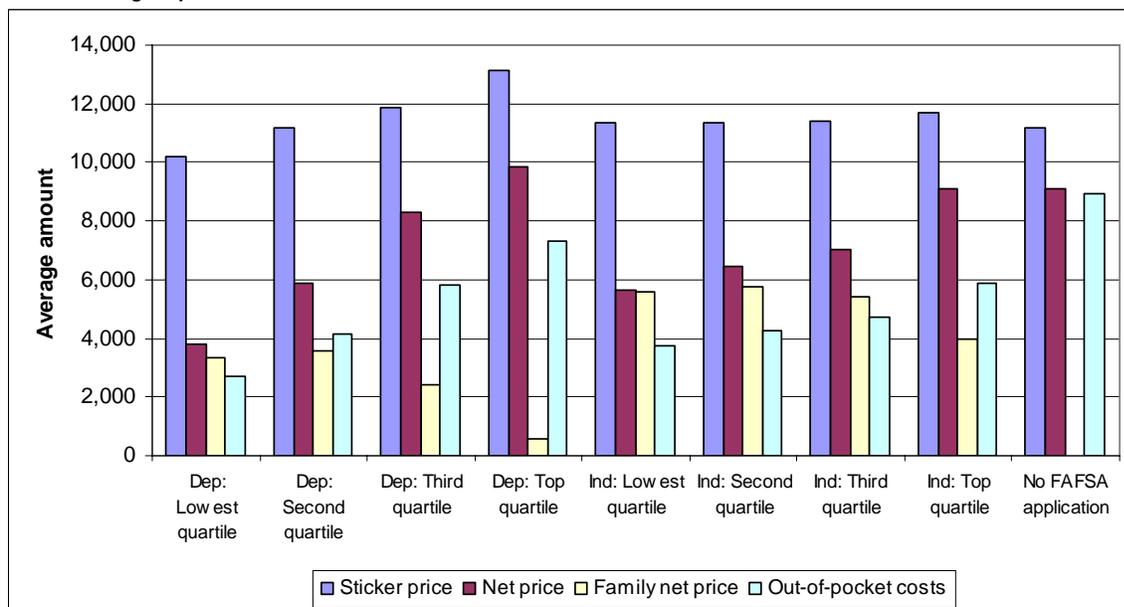
Chart A shows different definitions of prices paid by full-time undergraduates in Kentucky. The first price is the published price, or “sticker price,” of attending college. The second price is the net price of attendance, which is the sticker price minus all grant aid. The third price is the “family net price,” which is the sticker price minus the combination of grant aid and expected amount provided by the family. The final price, or “out-of-pocket cost,” is the sticker price minus the combination of grants and loans.

The family net price is the best measure of affordability. If the resulting family net price of attendance exceeds \$4,000, which represents a reasonable amount that would allow a student to work part-time and earn that much, or borrow an amount that would not result in excessive debt.

The results show that in Kentucky, lower-income students pay lower net prices than do those with higher incomes. Most of this difference is due to federal grants; state and institutional grants help students across the income spectrum. Students attending higher-priced institutions are paying more than those attending lower-priced institutions. The results suggest that the basic conditions of equity have been met.

Affordability affects the choice of institutions within the state. Higher-income students are more likely to attend higher-priced institutions than are lower-income students. The average price of attendance increases with income.

Chart A.—Average sticker price, net price (sticker price-grants), family net price (sticker price-grants-family contribution) and out-of-pocket costs (sticker price-grants-loans) for all full-time Kentucky undergraduates by income group: AY2004¹



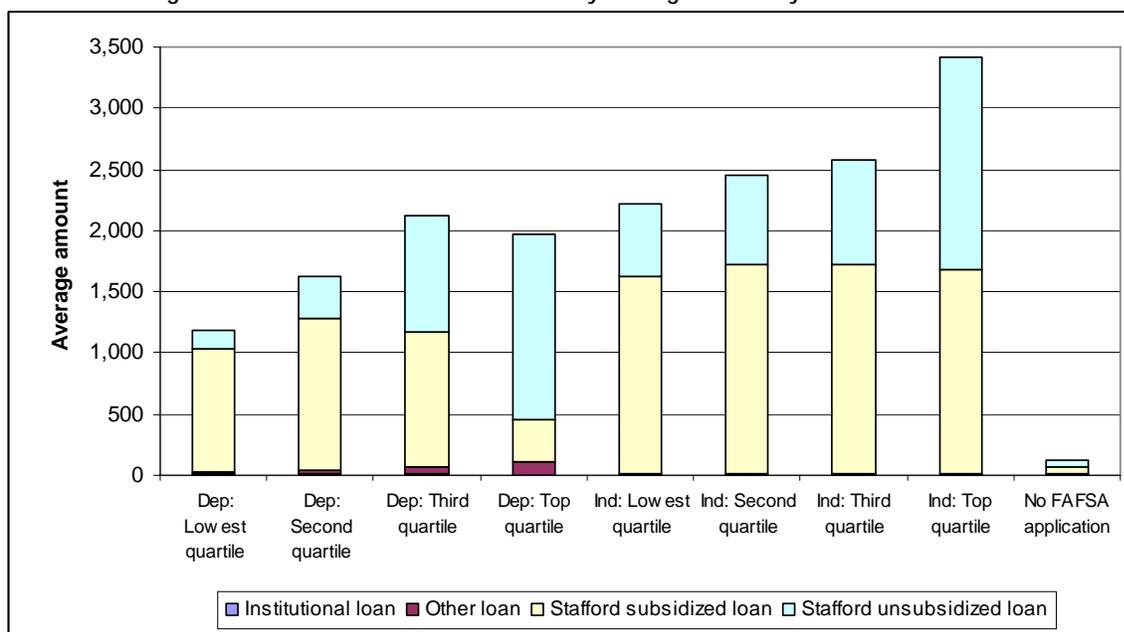
NOTE: Family net price cannot be computed for students with no FAFSA. (See Table C9 in Appendix C for data.)

Chart B shows the amount borrowed by Kentucky students in the different income groups. Kentucky students do not appear to borrow too much on average. Annual borrowing by Kentucky students falls below national averages. Since these results are based on averages, it should be noted that individual students may face very different circumstances than those suggested by the average. The results do not include private borrowing or credit card debt.

Middle- and upper-income students borrow the most among dependent students. The extra money may allow them to attend more expensive colleges or spread the cost of college out over several years (Chart B). Independent students are more likely than dependent students to borrow to attend college. The percentage of students borrowing and the amount they borrow is found in the appendix.

¹ Unless otherwise specifically noted, the source for all charts and tables presented in this report is a combination of one or more of the following: Project database created with Kentucky Council for Postsecondary Education student unit record data for 2004; financial aid data provided by participating Kentucky colleges and universities; FAFSA data provided by the Kentucky Higher Education Assistance Authority; and the U.S. Department of Education, Integrated Postsecondary Education Data System (IPEDS), Institutional Characteristics data file, AY2004.

Chart B.—Average loan amounts for all full-time Kentucky undergraduates by income: AY 2004



(See Table C7 in Appendix C for data.)

Are there gaps in relative affordability for certain students identifiable by institutional choice and by socio-economic, demographic or regional variables?

Independent students face the most daunting financial barriers when they enroll in college full-time. Generally, they are older, often have family obligations and are more likely to work full-time compared with traditional-age students. Most are not eligible for the KEES program because of age. The result is that independent students are more likely to attend college part-time than are younger students. Independent students are most likely to attend community colleges, but represent a significant share of enrollment in all three sectors.

African American students are generally at greater financial risk than other ethnic/racial groups in the state. State programs aimed at low-income students attempt to provide the financial safety net that African American students need to keep college affordable. Most other racial/ethnic minorities in the state represent such small statistical groups that it is hard to evaluate their need.

To what extent do these gaps influence access, continuing success, and completion?

It is not possible to isolate one policy when developing programs to improve access, retention and graduation. Kentucky needs to develop an integrated approach to solving these problems. Providing students with adequate resources to pay for college is necessary, but it is not by itself a sufficient solution. The state needs a systematic approach that will allow barriers to student access and success to be identified.

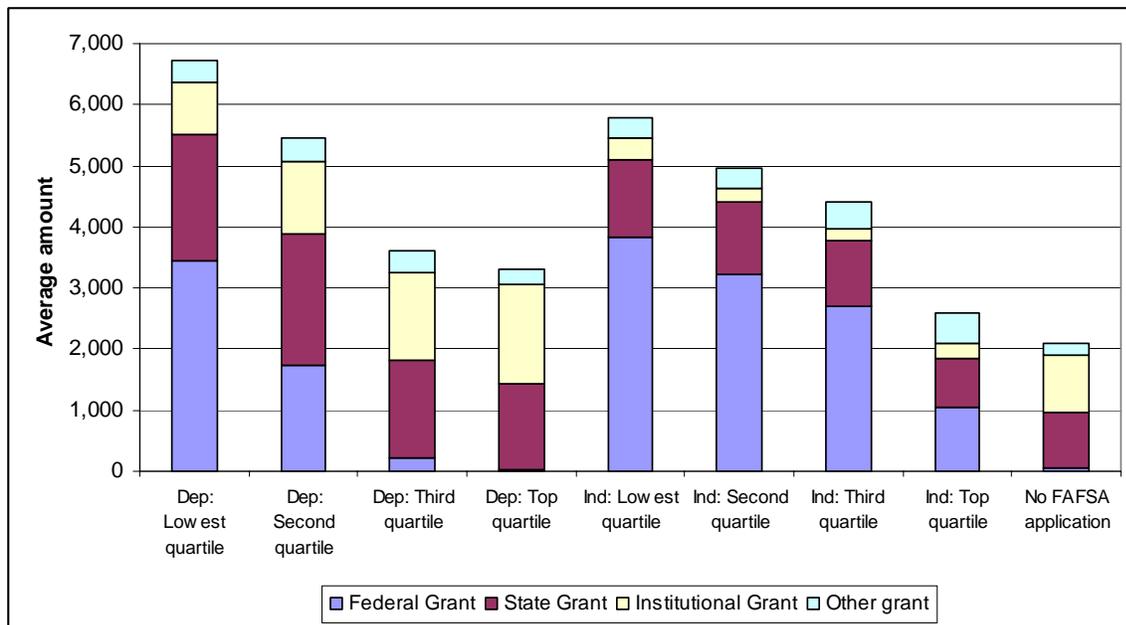
Solutions include reducing the financial barriers identified in this report, but it is also necessary to consider bureaucratic, academic and geographic barriers that reduce the chances for students

to enter college and succeed. Providing a clear and simple application process that is convenient for the student is one example of a step that can improve access. Providing adequate tutorial and advising support, especially for first-year students, will have a direct payoff in improved persistence. Using branch campuses and distance learning to bring a college education closer to students in rural areas can make college possible for more students. Institutions in the state are already reviewing many of these options with an eye to improving access. These areas of operation require continuous fine-tuning to make sure that students' needs are being met.

Aid is Distributed Equitably in Kentucky

Most of the equity in the price of attendance results from federal grants, which are largely in the form of Pell Grants that are awarded based on ability to pay (Chart C). Even though funds available through the College Access Program and the Kentucky Tuition Grant are awarded to students with financial need, Kentucky state grants are not distributed as equitably as are federal grants. This is largely due to the effects of the Kentucky Educational Excellence Scholarship (KEES), which tends to help higher-income students.

Chart C.—Average grant amounts for all full-time Kentucky undergraduates by income: AY2004



(See Table C7 in Appendix C for data.)

The chart does not include any of the tuition tax benefits that are provided by the federal and state governments. These benefits are most generous to middle-income students because low-income families pay little or no taxes and programmatic income ceilings prevent higher income families from participating. They could add several hundred dollars to a middle-income family's income while the student is in college.

What changes to current student financial aid programs could accomplish the system’s goal of access, continuing success, and completion?

One of the reasons that older students face higher net prices is because they are generally excluded from the Kentucky Educational Excellence Scholarship (KEES) Program. Consideration should be given to designing measures of educational excellence that would be appropriate for older students. Examples include the grades they receive in their first enrollment period in their current institution or grades received from previous periods of enrollment prior to their return to college.

What other financial aid programs would enhance effectiveness, efficiency and access for Kentucky’s students?

The evidence suggests that families that save for college are more likely to anticipate going to college. Kentucky should consider providing incentives for lower income families to save for college with a match of family savings.

College work-study programs provide effective connections between students and colleges. Kentucky should make every effort to help students find employment on campus as a way to keep marginal students connected with the college and improve their chances of persisting to a degree, while still giving them a chance to earn a living.

Financial aid programs should be modified to help part-time students. This will help older students who cannot afford to attend full-time, but find the costs of even a part-time program overwhelming.

What innovative approaches or ideas are available from other sources that provide insight to affordability issues in Kentucky?

We recommend that Kentucky take a close look at Minnesota’s Shared Responsibility Model. It provides a systematic way to link decisions about tuition and student aid with consideration for federal student aid programs and the ability of families and students to pay for college. It also provides a sensible policy for awarding financial aid to independent and part-time students.

This model provides a systematic way to connect decisions about tuition with support for student aid programs. When tuition increases, financial aid for low-income students should also increase to maintain affordability

As David Longanecker noted in our preliminary presentation: “If Kentucky wants to double the number of college degree holders in the state as stated in the strategic plan, it will be necessary to increase funding for higher education. Students and taxpayers will both have to pay more to realize this goal. However, if tuition is increased, it will be necessary to protect affordability for low-income students with adequate need-based student aid.”

Out-of-State Tuition

In general, enrolling undergraduates from other states is beneficial. But steps should be taken to make sure the tuition is fair to the taxpayers. One benchmark is the average tuition charged to Kentucky students attending college in neighboring states, which is \$11,900. This is higher than the average out-of-state tuition charged by Kentucky's four-year universities.

Future Study Recommendations

Issues of access and retention could be tracked using the current student unit record system with two additions:

- First, an access measure could be generated by producing a valid and reliable count of high school graduates by high school. Doing so would allow a college-going rate to be calculated for each high school.
- Second, continue to add financial information from the FAFSA to the student unit record. This will help evaluate the relationship between affordability and persistence and graduation rates for students who receive need-based aid. It is necessary to develop a longitudinal data set that will track students from the time they begin college through their graduation and entry into the labor market.

Agree on a Measure of Affordability

A standard, measurable definition of affordability should be agreed upon in Kentucky. For example, one such measure identifies a ceiling on the amount that a student and his or her family are left to pay after the distribution of financial aid and the expected family contribution. The ceiling would be defined as the amount a student can earn by working part-time at minimum wage – generally, \$4,000 annually. The \$4,000 could come from a combination of borrowing or work.

This measure has been criticized by some policymakers because very low-income students may utilize their part-time earnings to contribute to their family's expenses and thus cannot keep the money for their own use; however, even with this reservation, the measure provides an understandable and easily calculated definition of affordability.

I. Purpose

The purpose of this report is to determine whether Kentucky colleges and universities are affordable. The report provides the basic information needed to address the question posed in the “Public Agenda for Postsecondary Education in Kentucky 2005-2010” (March 21, 2005) -- “Is Kentucky postsecondary education affordable to its citizens?”

Specific directives guided the research:

- To what extent is college affordable for Kentucky students? Are there gaps in relative affordability for certain students identifiable by institutional choice and by socio-economic, demographic or regional variables? To what extent do these gaps alone influence access, retention and completion?
- How does the current array of Kentucky’s funding strategies (benchmark funding, tuition rate setting, external sources of funds and student financial aid, for example) affect postsecondary education access, retention and completion?
- Identify innovative approaches or ideas that are available from international, national, or regional studies or academic research and can provide insight into affordability issues in Kentucky. Identify innovative solutions that are already being adopted or considered by others and may be appropriate for Kentucky.

The report includes recommendations regarding the options that Kentucky might consider:

- Could changes be made to the state’s postsecondary finance policies (other than those specifically related to financial aid programs) to enhance access for lower-income or otherwise underserved populations of Kentucky students?
- Could current student financial aid programs be changed to better accomplish the system’s goals of access, continuing success and completion?
- What other student financial aid programs could be made available to Kentucky students that could enhance effectiveness and efficiency, thus improving access for Kentucky’s students, especially those with the least ability to pay, and encourage students to continue and ultimately to complete college?

Kentucky is not alone in its concern for maintaining college at an affordable price. Affordability has emerged as an important topic for policy makers across the country in response to the long-term shift of college costs from state and federal sources to students. According to the U.S. Department of Education’s *Condition of Education 2005*, tuition and fees per student increased 99 percent between 1969-70 and 2000-01 at public institutions (in constant 2000-01 dollars), compared with only a 3 percent increase in government appropriations per student (Wirt, et al, 2005). State funding for public colleges and universities covers a smaller share of costs than it has in the past, requiring students to pay a larger share.

Student aid policy

Higher education finance is evolving toward a market-driven format, with student aid as an increasingly important part of the funding picture. According to the College Board, \$122 billion were awarded to students in some form of loan, grant, tax benefit or work-study in 2003-04. That is up from \$43 billion a decade ago. Kentucky has followed that trend, increasing state-provided grant assistance by 450 percent between 1993-94 and 2002-03, according to the National Association of State Student Grant and Aid Programs (NASSGAP), with award dollars increasing from \$20.5 million to \$112.8 million.

Financial aid is awarded based on several different criteria. Need-based aid can be awarded to students based on their ability to pay (for example, the federal Pell Grant), or based on need, which is the difference between ability to pay and the price of attendance (the federal Subsidized Stafford Loan). Generally, these types of programs require a student to submit a form that includes tax records to demonstrate that the student qualifies as being needy. In most cases, this is the Free Application for Federal Student Aid (FAFSA) form.

Other aid is awarded in recognition of student characteristics, such as being a veteran or being handicapped. Aid programs can be designed to influence behavior, such as offering loan forgiveness for nurses or special education teachers. Finally, some aid programs are designed to recognize merit, such as academic or athletic excellence.

Financial aid can come in the form of a grant or scholarship, a loan that can be either subsidized or unsubsidized, or work-study. Some programs are hybrids -- a grant that converts to a loan if the recipient does not fulfill the requirements of the agreement, such as working in a high-need area. Additionally, federal and state governments provide tax breaks for tuition. The fact that the programs are provided by several different federal agencies, state offices and colleges and universities adds to the complexity of the eventual mix of aid and who is being aided. The estimation of the price of attendance needs to take all of these different aid programs into consideration, and it is difficult for potential students and their families to know what they will have to pay for college until they submit their financial aid application and their college entrance application.

II. Overview of Affordability in Kentucky

It is not possible to have a discussion about affordability from the student perspective without considering the larger financial picture. Students pay less than the full cost of their education in all higher education sectors in Kentucky. The following charts provide a rough picture of how funds flow to undergraduates and institutions in Kentucky from the major external sources. The schemas do not include revenue that comes from internal activities such as institutional sales and services. Neither do they include associated living costs and other expenses, such as books and transportation, which are paid by students. Graduate students and their student aid are not included in the calculations, but cannot be excluded from the institutional support totals. The charts provide a graphical view of how each share of educational costs is distributed among the various partners.

Federal funds to institutions are often restricted in their use, while state funds are usually general funds, which are unrestricted. Examples of restricted funds include research grants or other grants and contracts limited to a particular purpose. General funds allow institutions greater latitude in how they can spend the money.

Funds disbursed to students are shown separately for loans and grants. Loans represent self-help with a small implied subsidy. The tuition paid is the average paid per undergraduate full-time equivalent student (FTE is calculated by equating three part-time students to one full-time student) and does not represent the published tuition for a full-time student. Part-timers may pay less and out-of-state students may pay more. The data for these charts come from IPEDS and the state student aid data collected from the institutions. Separate charts are presented for public 2-year, public 4-year and private institutions.

The results show the complexity of higher education finance, and also help to illustrate the difference between the cost of providing education and the price paid by undergraduates in the different sectors. The sources of support are, in part, a function of institutional mission and tax status.

Figure 1. Flow of Finances for Kentucky Public 2-Year Institutions: AY2004

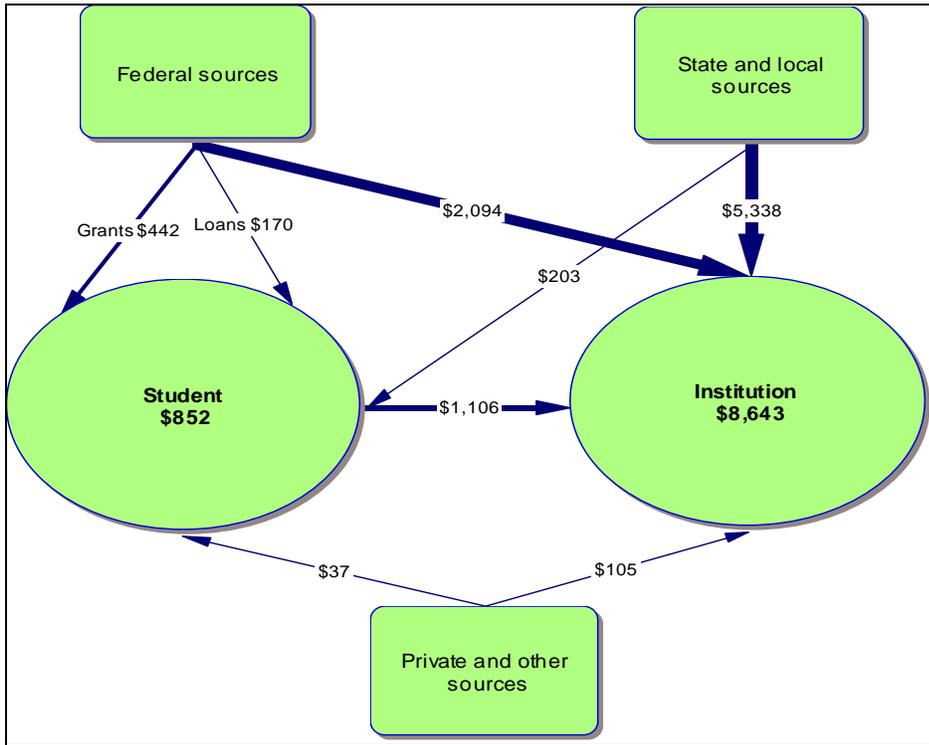


Figure 2. Flow of Finances for Kentucky Public 4-Year Institutions: AY2004

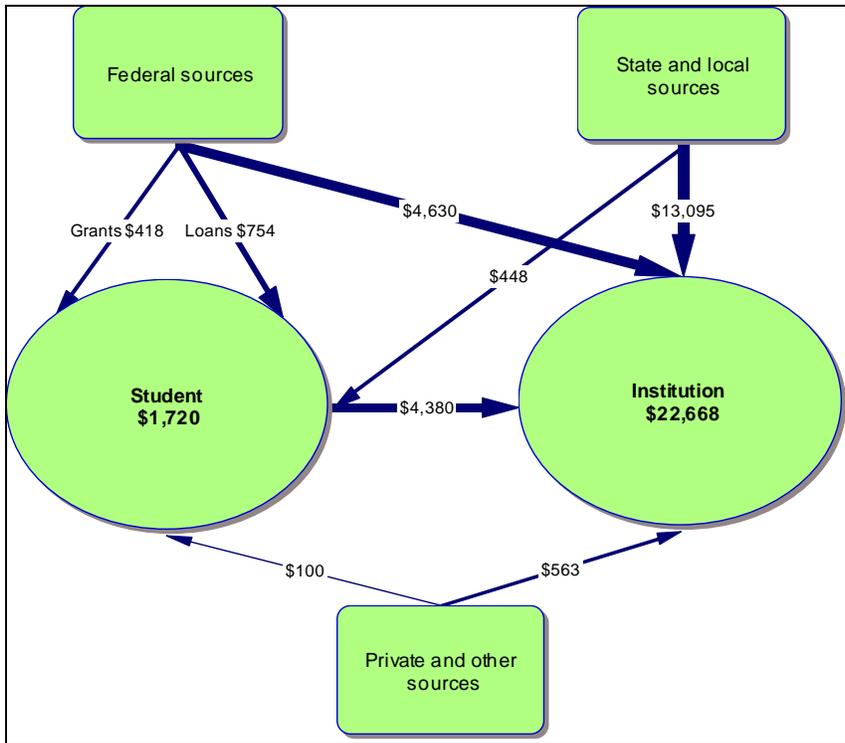
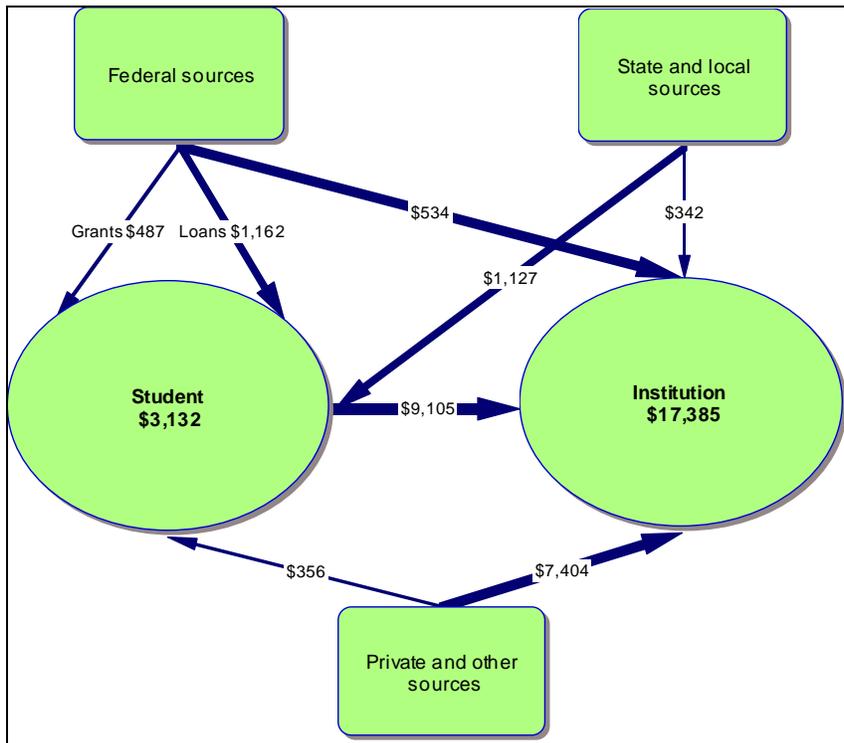


Figure 3. Flow of Finances for Kentucky Private Institutions: AY2004



These three charts show the interdependency of student and institutional financing. Affordability needs to be achieved while assuring that institutions have sufficient resources to deliver the quality programs needed in the state and have enough capacity to guarantee that every student who qualifies can enroll.

Appropriate measures

Given the complexity of funding and the differences in institutional mission and tax status, it is difficult to translate principles of affordability into practice. Many states use a set of general indicators to help evaluate the affordability of higher education. One example of such an indicator is *Measuring Up 2004: the State Report Card on Higher Education*, published by the National Center for Public Policy and Higher Education. Their ratings are based on the fact that it would take 32 percent of a low-income family's income (defined as those in the bottom 40 percent of the population, with an annual income at or below \$18,134) to attend a community college after aid was distributed and 33 percent to attend a public 4-year institution in the state. Overall, Kentucky received a D- on affordability in *Measuring Up 2004*. They also gave Kentucky a low score on their investment in need-based aid, but are positive about increases over time.

Another example is found in *Losing Ground: A National Status Report on the Affordability of American Higher Education* (National Center for Public Policy and Higher Education, 2002). The authors make several recommendations.

- First, they suggest that the net price of education should not exceed 20 to 25 percent of family income. According to *Measuring Up*, net price was one-third of family income in Kentucky.
- Second, they suggest that state need-based aid should match or exceed Pell Grant awards in the state. *Measuring Up* put Kentucky's financial aid program at about 40 percent of Pell Grants.
- Third, the lowest-priced colleges in the state should provide educational opportunities to even the lowest-income families.

These types of indicators provide general guidance on providing an affordable postsecondary education. In the following sections, we use more detailed data to illustrate the cost components of college attendance for Kentucky students from different income groups. This analysis results in a more positive assessment of the affordability problem in Kentucky. We also introduce some alternative measures of affordability.

III. To what extent is college affordable for Kentucky students?

A. EFFECTS OF AFFORDABILITY ON ACCESS

Income is associated with the decision to attend college and which college to attend (Gladieux & Swail, 1999): lower-income students are less likely to attend college than those with higher incomes and if they do go, they are more likely to attend lower-priced colleges than are their more affluent counterparts. The issue of affordability and access is complicated by the fact that academic preparation is associated with income. Students from higher-income families, especially students whose parents attended college, have an easier time paying for college and a better chance to succeed in the classroom.

In order to analyze the degree to which affordability is a barrier to attending college, we would need information about students' academic backgrounds, as well as their ability to pay for college. Such data do not exist in Kentucky, so we have approached the problem from a different perspective. First, we created a questionnaire and administered it to high school seniors in Kentucky. The questionnaire asked whether or not they planned to attend college, and if they did expect to go, how they planned to pay for it. Second, we have county-by-county information on the share of students who graduated from high school and went on to college with the help of grants awarded on the basis of financial need.

1. *What Do High School Students Think?*

We surveyed 1,908 high school seniors at 12 public Kentucky high schools, representing over 95 percent of the graduating class at those schools. The high schools were selected to be representative of institutions in the state. This is not a random sample, but it provides a sense of how high school seniors were thinking about their college opportunities. A full reporting of the survey results is available in Appendix E of this report. A summary of the main findings of the analysis follows.

Future Plans. According to our analysis, a majority of high school seniors planned on going to college, and most at the baccalaureate level.

- ◆ Two-thirds of graduating seniors planned to attend college full-time upon graduation, with an additional 14 percent planning on part-time attendance.
- ◆ Sixty percent of those planning on going to college also planned to start immediately after high school, with another third planning to start within a year.
- ◆ Forty-three percent of the college-oriented students planned to attend the University of Kentucky or the University of Louisville.
- ◆ Two-thirds of the students going to college expected to earn baccalaureate degrees or higher, and felt that their parents expected them to earn baccalaureate degrees. One quarter of students expected to achieve degrees below the baccalaureate level.

Most students had taken steps to prepare for college. Eighty-nine percent of students took ACT tests and 74 percent of students had visited college campuses. Eighty-eight percent of students had spoken with their parents about college admissions and 70 percent also spoke with teachers and counselors about college requirements.

College Costs. Many of the responding students overestimated the tuition and fee charges at local community colleges and the University of Kentucky, our proxy choice for university-level education in the state. On average, students estimated the cost of tuition and fees at their local community and technical college at \$5,191, a 73 percent overestimation of the \$3,000 average cost in Kentucky. Further, ninety-one percent of respondents estimated the cost to be at least \$1,000 more than the actual cost.

Table 1. Average amount of tuition and fees in Kentucky, by education sector

Sector	Tuition and fees
Public 2-year	\$2,326
Public 4-year	\$3,757
Private	\$12,497

At the university level, students estimated the tuition and fee charges for the University of Kentucky to be \$10,798, or double that of the actual 2005-06 estimated cost of \$5,164 (from the University of Kentucky website). Likewise, sixty-seven percent of students anticipated tuition at least \$1,000 over the actual tuition and fee level.

Paying for College. Over three-quarters of students talked with their parents about the costs of college and believe their parents are willing to help pay for college. One-half of students stated that their families have saved for college, 43 percent said that they themselves had saved for college and two-thirds felt that they would require student aid to afford college. Eighty percent of students planned on working while in college. Further, three-quarters were willing to borrow to pay for college, of which one-half were willing to borrow over \$2,000 a year.

The Importance of Family Background. Family background is a strong predictor of planning to go to college. Students whose parents had at least baccalaureate degrees were more likely to:

- Anticipate attending college full time
- Aspire to at least baccalaureate degrees
- Perceive their parents to expect them to earn at least baccalaureate degrees
- Perceive that they are academically prepared for the University of Kentucky and the University of Louisville
- Take more advanced placement and/or honor courses
- Take advanced placement tests
- Visit college campuses
- Take ACT tests
- Attend college information nights
- Discuss college admissions with parents
- Discuss college admissions with a counselor at least three times
- Talk to parents about college costs

- Perceive that their parents will help pay for college
- Indicate that they had saved for college
- Indicate that their parents had saved for college.

Our logistic regression model predicted the probability of aspiring to at least baccalaureate degrees correctly for 92 percent of the cases. We found that students whose parents had at least baccalaureate degrees had a 13 percent higher probability of aspiring to baccalaureate degrees or higher compared with students whose parents had high school diplomas or less.

Students whose parents expected them to earn at least baccalaureate degrees had a 31 percent higher probability of aspiring to baccalaureate degrees or higher than other students. Students who discussed college admissions with a parent at least once were 15.5 percent more likely to aspire to baccalaureate degrees than those who had not talked with their parents. Talking with a counselor at least three times increased the probability of aspiring to baccalaureate degrees by 13 percent. Additionally, taking three or more AP or honor classes increased the probability of aspiring to baccalaureate degrees by 22 percent.

These results underline the importance of developing programs that focus on providing information early to students about preparing for college, its costs and options for paying. Programs should be aimed at families without college experience. Merely providing financial support for college attendance without pre-college outreach and academic preparation will not fulfill all of Kentucky's long-term objectives.

Because the logistic model did not provide insight into the question of affordability, we developed a second multivariate model, a stepwise regression, to provide more sensitivity to the question of affordability. First, we recoded the following survey questions into one variable to create a more definitive outcome measure:

- What do you plan to do after high school?
- If you decided to attend college, when would you start?

The resulting dependent variable, the "college-going index," has values indicating each student's possibility of attendance:

- 4 = high likelihood
- 3 = mid-high
- 2 = mid-low
- 1 = low

In the regression analysis, we included survey questions that were predictors of students' estimates of tuition, and other items that had to do with how they thought they would pay for college as independent variables. Details of the model are in Appendix A. The results indicate that high school students were more likely to have higher college-going indices if:

- They talked with their parents about costs.
- The family saved money for college.

- Students did not plan to work when they went to college.
- Students saved money on their own.

The results suggest that families who anticipate college by saving for it have children who are more positive about their plans to attend college. These students were also more likely to say they did not think they would have to work to pay expenses while in college.

Two things need to be considered when interpreting the results. First, the R-square for this analysis was only .143, which suggests that these factors do not explain very much about college plans (14 percent). Second, we did not include academic or family background factors in the model because they are stronger predictors of planning to go to college, and are correlated with financial measures. Because of the correlation between family background characteristics, academic achievement and income, it is difficult to isolate the role that affordability plays in planning for college.

The results do suggest, however, that providing low-income families with incentives to save for college may help increase college-going rates. One of the criticisms of college savings plans is that low-income families do not have the resources to save when their children are young. And to confound the problem, tax-exempt savings plans are not meaningful to families paying little or no taxes. An alternative option could be a matched savings plan in which the state would match some portion of the amount that families contribute. This might provide an incentive for families to save, even if the amount matched is a relatively small one. If the funds are not used for college, the family keeps their portion, while the state share remains with the state.

2. *Variations in ability to pay for college among students in different Kentucky counties*

Students from different counties in the state vary in their ability to pay for college. In order to determine if there is inequality in access across the state, we measured the percent of students in each county who graduated from high school and attended college with federal grants. This information comes from the student unit record system that records the high school of last attendance for first-year students.

Receiving federal grants is an indicator of need among high school graduates, because the majority of federal grants are awarded based on ability to pay for college. The following table shows the top ten counties by this measure. The full list can be found in Appendix B.

Table 2. Top 10 Kentucky counties by percentage of students attending college with federal grants: fall 2004

County	Percent
McCreary	75.5
Owsley	70.6
Breathitt	70.6
Harlan	69.8
Wolfe	69.7
Bell	69.5
Knott	69.1
Cumberland	68.7
Martin	67.1
Letcher	66.9

A similar list is included in Appendix B for recipients of the Kentucky College Access Program (CAP), which is a state grant and is also need-based.

Next, we classified Kentucky high school students in each county by the college or university they attended (also listed in Appendix B). We compared the percentage of students from each county attending either the University of Kentucky or the University of Louisville—the two doctoral universities in the state—to act as a proxy of choice made by students graduating from high schools in different counties. The results in Table 3 show that enrollment at either one of the state’s research universities is not evenly distributed across the counties.

Table 3.—Percentage of Kentucky high school graduates attending university by county: Fall 2004

Highest	Percent	Lowest	Percent
Fayette	58.0	Casey	5.4
Jessamine	56.1	Allen	5.4
Jefferson	55.4	Wolfe	4.9
Oldham	53.6	Knott	4.8
Spencer	44.8	Morgan	4.6
Bullitt	44.5	Martin	4.2
Woodford	42.3	Lawrence	4.1
Shelby	37.9	McCreary	3.7
Nelson	37.0	Edmonson	1.5
Scott	33.4	Butler	1.2

The relationship between the percentage of students who went on to college with the help of federal grants and the percentage going to one of the two research universities was very high. The correlation coefficient (noted as r in statistical formulas) between the two measures was -0.715. A perfect negative relationship would be -1. Thus, our result indicates that as the proportion of low-income high school graduates attending college with the help of need-based grants increases in a county, the chances that they will go to one of the public research universities declines.

Due to the limitations of the existing data, it is not possible to estimate the college-going rate of students from the state's high schools, counties or regions, which would provide an indication of access. First, we have inconsistent information on the number of graduates from each high school. Second, we only know about students who went to college in Kentucky; we have no reliable information on the number of high school graduates who did not attend college.

In order to develop a better measure of access, it would be necessary to have a valid and reliable number of high school graduates that is consistent with the student unit record system maintained at the postsecondary level. Such a system would potentially not include data regarding students attending college in other states; however, that would be a manageable loss of data.

B. EFFECTS OF AFFORDABILITY ON RETENTION

Evaluating the effects of affordability on student retention in Kentucky would require a longitudinal data system that would allow tracking students over time. The basics for that system are in place, but the data system does not currently include information on how students finance their education. As part of this project, we added the financial information for one year. Continuing this data collection effort would provide a foundation for determining the effects of affordability on retention and graduation. Lacking these data, however, we provide below a review of what research tells us about affordability and retention.

Students drop out of college for any number of reasons: some find that they are not interested, a few have the opportunity for a good job, others find college too academically challenging, and some struggle with family problems, making it impossible for them to continue. This section pursues the narrower question of how price of attendance and financial aid influence the decision to continue with college once a student has started.

Isolating the reasons for leaving college is complex because academic preparation and income are closely related. Lower-income students do not always have the benefit of college-educated parents, or the better-quality high school preparation that is more often available to higher-income students. However, studies have shown that affordability affects retention in several ways: students may make choices that reduce the likelihood of completion, such as attending part-time or working more than 20 hours per week; students at the margin of affordability are more sensitive to changes in tuition, financial aid packages, or personal income—such as their car breaking down or the loss of a job.

Lack of variation in finances among students from similar economic backgrounds complicates the research on the relationship between affordability and persistence. A good deal of financial aid is awarded by formulas. This means that most low-income students receive Pell grants or state need-based grants, while higher-income students do not. In addition, students self-select themselves into college based on how much they think they can afford, which is one reason why the overestimation of tuition and fees cited before is such a critical issue. Lower-income students are more likely to attend low-tuition colleges, while students from families with more income are more likely to attend higher-priced colleges.

These limitations pose knotty problems for researchers who try to measure the relationship between variation in price of attendance and persistence. Given these caveats, a study of community college students concluded that student aid is a stronger predictor of retention than academic difficulty (Nora, 1990).

Over the past two decades, researchers have found that students are sensitive to changes in tuition and financial aid (Leslie & Brinkman, 1987; Kane, 1995, 1999; St. John, 1989; Heller, 1997, 1998; Hu & St. John, 2001; Paulsen & St. John, 2002). When Heller (1997) evaluated 20 studies on student price response, he found that a \$100 increase in tuition resulted in a 0.5 to 1.00 percentage point decline in postsecondary enrollment. Unfortunately, these studies are based on older sets of data and do not reflect the rapid increase in tuition experienced in the past decade.

A common finding on the effects of tuition and student aid on student persistence is that low-income and minority students are more likely than higher-income students to be dissuaded by high prices from starting college, or dropping out once they start. Kane (1999) found that black student enrollment decreased by 15 percentage points for every \$1000 increase in tuition (in 1998 dollars)—two percentage points more than the decrease in white student enrollment.

Heller (1998) found that continuing students were more likely to be affected by tuition increases than were incoming freshmen, especially at community colleges. Research on tuition changes and persistence at community colleges generally shows a negative correlation (Cofer, 2001). St. John and Starkey (1994, as cited in Cofer, 2001) found that for each \$100 increase in tuition, there was a drop of 1.4 percent in traditional-age student persistence at community colleges. Persistence was also negatively influenced by tuition charges for students over the age of 23 at 2-year colleges, to a greater extent than for younger students (Hippensteel, 1996).

1. *Federal and State Student aid*

The preponderance of research on the relationship between financial aid programs and student persistence and degree completion shows that financial aid has a positive effect, especially when aid packages include grants and work-study. A recent study found that grants, loans, and work-study awards improve persistence (Heller, 2003). Financial aid was found to increase persistence of two-year college and minority students (Hoyt, 1999; Cofer & Somers, 2000; Hu & St. John, 2001). The case for student aid is corroborated by the finding that decreases in need-based aid and increases in tuition result in more drop-outs (Hu, 2001).

Recent studies continue to confirm that students who receive grant aid are more likely to persist than those who do not (DesJardins, Ahlburg, & McCall, 2002; St. John, Musoba, & Simmons, 2003). A 2004 EdFund report found that California students who received the state's Cal Grant were more likely to continue their college education and attain a bachelor's degree, even when factors that affect persistence, such as family income, grade point average and parents' highest level of education, were controlled (Woo, et al, 2004).

Although most research shows that financial assistance is important in retaining low-income students (Nora, 2001; Tinto, 1993), the conclusion is not unanimous (Braunstein, et al, 2000; Pascarella & Terenzini, 1991, as cited in Astin, 2001). Changes in the amount of state and federal government appropriations and the growing complexity of aid packages may explain these mixed results (Astin, 2001).

2. *Pell Grants*

The Pell grant program is the largest federal student grant program. Pell grants generally go to students in the lowest income category. Even though Pell grants have been shown to promote persistence among low-income students, they are losing buying power as tuition increases (Gladieux and Swail, 1999; Redd, 2004). In 1982-83, a maximum Pell Grant covered 56 percent of the average cost of attendance at public four-year colleges. The share of cost covered slipped to 38 percent in 2002-03. This poses a challenge to states that need to determine whether their programs should add to Pell grants or help students who just miss out on funding due to the Pell grant award rules.

Looking at the relationship of Pell grants with persistence, a 2004 study of students at public colleges in Ohio found that Pell grant recipients were less likely to drop out of college than were those who did not receive Pell grants (Bettinger, 2004). An earlier study of Pell grant recipients found that they were no more likely than non-recipients to drop out even though they had more academic and personal characteristics that put them at risk (Wei, et al, 2002). The same was true for Pell recipients at public two-year and private for-profit less-than-four-year colleges and schools. This is a positive finding in that one would expect Pell grant recipients to be less well-prepared academically and thus more likely to drop out than higher-income students with better academic preparation.

According to the U.S. Department of Education, the average age of Pell recipients increased 29 percent between 1994-95 and 2002-03; almost 30 percent of all Pell recipients are over the age of 25 (Redd, 2004). As the average age of recipients increases, so does their likelihood of enrolling at lower-cost public two-year institutions. Research has shown students over the age of 25 are more likely to enroll part-time, have children and steer clear of higher-cost, four-year colleges and universities with longer degree programs.

3. *Institutional Aid*

Institutional aid has been found to be linked to student retention; according to Astin (2001), institutional grants are most effective in improving retention. McDaniel & Graham (2001) found that returning students at an open admissions HBCU were more likely to be grant or scholarship recipients than those who did not return. Institutional aid has positive effects when the student perceives the aid as a reward for personal achievement, unlike need-based federal aid, which low-income students expect to receive (Muraskin, et al, 2004). Also, students are less likely to leave an institution if they receive a significant amount of aid, which they do not want to lose, and because they feel a sense of loyalty to the institution which is the source of the aid. (Muraskin, et al, 2004)

However, the effects of institutional grants can vary by institutional type. Murdock (1987) found that financial aid influences persistence by making college affordable and reducing reasons for dropping out. The effects of aid on retention were stronger for students at two-year colleges, possibly because the sector enrolls more minority and low-income students who need aid. Institutional grants were also found to be important at private colleges and universities, where the students may need more aid to pay the higher prices.

4. *Student Loans*

One response to higher tuition is an increase in the use of loans. The proportion of loan aid a student receives increases as tuition climbs (Schuh, 2005). This raises the specter of students graduating with unmanageable debt, or even worse, students dropping out of college with limited economic prospects and the responsibility for repaying loans. Some observers suggest that the prospect of borrowing dissuades low-income students from enrolling or makes it difficult for them to continue their education as they worry about growing debt burdens.

Loan aid (from all sources) has increased dramatically over the past decade, rising 173 percent, compared with an 85 percent increase in grant aid (Redd, 2004). Even though grant aid increases as the price of attendance goes up, loans make up a progressively larger share of the total. Between 1992-93 and 1999-2000, the number of students borrowing money increased 13.1 percentage points, from 32.2 to 45.4 percent. According to a 2001 study (O'Brien & Shedd, 2001 as cited in Nora, 2001), student loans were the most common form of financial assistance used by low-income students.

Studies indicate that potential debt burden affects a student's decision to stay in college. One study found that as loans became a larger part of financial aid packages, students were more likely to leave college (St. John, 1998, as cited in St. John, 2000). Another study at a Midwestern research university confirmed that the receipt of loans was negatively related to retention (Li & Killian, 1999).

5. *Work-study*

Work-study has a more positive effect on retention than other types of aid. According to a study by the Department of Education, work-study is the only form of financial aid with a positive effect on degree completion (Adelman, 1999). Nora's 1990 study found a positive relationship between campus-based aid programs and retention, especially among Hispanic students (Metz, 2002). Although much of the early research was done at four-year colleges, more recent studies at two-year colleges have shown comparable results. Even with these positive results, work-study programs comprise only one percent of student aid funding (College Board, 2004).

Studies have shown that students who work part-time, especially those who work on campus, are more engaged in the college community and more focused on academics (King, 2002). Students who worked part-time and took out loans were more likely to persist than students who only worked part-time. Data also show that students who work more than 25 hours per week are more likely to leave college before graduating (American Federation of Teachers, 2003).

6. *Student Aid for Part-Time Students*

The relationship between financial aid and persistence of part-time students is not usually addressed in the research literature. According to a recent report by the American Council on Education, less than 30 percent of postsecondary institutions set aside institutional aid specifically for low-income adult students (Cook & King, 2005). Not surprisingly, community colleges are the most likely to allocate aid for these students. Although part-time students usually qualify for federal financial aid programs, they are often ineligible for other types of state and institutional aid, such as merit-based scholarships and grants.

Partial scholarships for a larger number of part-time applicants may be more effective than a small number of larger scholarships for full-time students. The funds awarded could effectively promote persistence of “at-risk” students if put into supplemental need-based grants. One study found that if the money put into large scholarships had been put into grants instead, more students would have persisted from the first to the second year (Somers, 1996).

7. *Implications*

Kentucky can use findings from this research to guide programs. First, it is important that students and families have a clear understanding of the eventual price of attendance they will face. Our research indicates that many students are not clear about the types and amounts of aid available to them and that a lack of money may cause them to make decisions that can jeopardize their eventual graduation. These choices include working too much, or attending part-time and continuing to live at home to save money. Second, institutions should make every effort to ensure that students apply for aid. Some students may not identify themselves as being eligible for aid and thus not apply, especially in community colleges—as the research shows, receiving aid will improve their chances of graduating. Third, colleges should make every effort to find on-campus employment opportunities for their students. This helps keep students connected with the institution and also provides them with income. Fourth, efforts should be made to moderate tuition increases once a student enrolls, as sharp increases in costs during their enrollment will result in some students leaving.

C. DEFINING AFFORDABILITY FOR ENROLLED STUDENTS

Affordability includes three components. First is the student’s and family’s ability to pay for college. Second is tuition and other costs associated with attending college. Third is the amount of student financial aid that is available to help students pay for their education. All three must be considered in any analysis of affordability.

There are some “rule-of-thumb” estimates of affordability that can be used. In developing an estimate, consideration should be given to deciding if the amount that a student and his or her family is being asked to pay after the distribution of all aid is realistic. The first measure is to determine if the student is able to pay his or her education costs after aid by working. In general, we assume that a student working part-time can earn an annual maximum of \$4,000; this amount could be contributed to the cost of their education. However, some policymakers express

concern that very low-income students have to contribute to their family's expenses and cannot keep all their earnings for their own use.

The tables on price of attendance presented later in this report show the published (or "sticker") price, the net price (the price of attendance after all grant aid is awarded), the family net price (the sticker price minus the combination of grant aid and expected family contribution) and the out-of-pocket price (the price the student pays after all loan and grant aid is subtracted). The remaining amount must be paid by the student and his or her family.

The most useful definition of affordability is family net price. The federal needs analysis system defines an expected family contribution (EFC) toward education costs. The calculation estimates the amount of discretionary income a family has based on income, assets, family size, number attending college and extraordinary expenses. A portion of a student's income is also included in the calculation of EFC. The EFC increases faster than actual income as discretionary income increases. The greater the family net price, the harder it will be for the student to pay for college.

IV. Methods

The data used in this study were collected from the financial aid offices of participating accredited public and private, not-for-profit colleges and universities in Kentucky and include only Kentucky residents attending a college or university in Kentucky. The financial aid data and price of attendance information were merged with the state student unit record information system data. The records were matched using a project ID generated by an encryption program that converted the student social security number to a unique project ID.

The price of attendance data were estimated from U.S. Department of Education, Integrated Postsecondary Education Data System (IPEDS) data. A standardized estimate that includes living costs, tuition and mandatory fees, and other associated costs of attending college, such as books and transportation, was computed. Different estimates were computed for part-time and full-time students as well as dependent and independent students.

Results are reported by three major higher education sectors: public 4-year, public 2-year and all private institutions. For-profit institutions are not included in the report. Not all Kentucky institutions participated. See Appendix D for the list of institutions included in this analysis. We do not think that this limitation significantly affects the results. Individual institutional results are not reported for confidentiality purposes.

Students are divided into two groups in the tables and charts -- dependent and independent. Both dependent and independent students are divided into quartiles. The income groups are shown in table 4 below. The categories indicate whether parental income is included with that of the student to determine family contribution, or whether the student is independent of his or her parent's income. Independence is determined largely by age (24 or older), but other circumstances can place a younger student into the independent group. Being a ward of the court, an orphan or a veteran, or being married and/or having a child may make a younger student independent of parental income for determining the need for student aid.

Income and dependency status are only available for students who applied for student aid by filling out the FAFSA form. High-income students may complete the needs analysis form even if they want an unsubsidized loan, which is not awarded based on need. Many students in Kentucky do not apply for any aid; therefore, we do not have income data for them. We assume that in most cases, these students did not believe they were eligible for student aid because their income was too high, but that may not be true in all instances. We do, however, know the age of students who did not apply for aid; students 24 or older were considered independent, and those under 24 were dependent for the purposes of this study.

The majority of the analysis is limited to Kentucky students attending as full-time undergraduates in the fall of 2004. Too few part-time students complete the FAFSA form to provide a meaningful analysis.

Data were provided for the fall 2004 term. Award and price of attendance amounts were computed for the fall enrollment period and then doubled to estimate annual values. This was

necessitated by the fact that the private colleges and universities in Kentucky only provide the state with student unit record information in the fall. In order to include private sector institutions in the report, we needed to limit the data collection to the fall term.

Table 4.—Income range and median income of Kentucky undergraduates who applied for student aid: Fall 2004

	Income range	Median income
Dependent students		
Lowest income quartile	Less than \$24,097	\$12,400
Second income quartile	\$24,098 - \$45,181	\$34,135
Third income quartile	\$45,185 - \$73,924	\$58,892
Top income quartile	\$73,924 and over	\$106,757
Independent students		
Lowest income quartile	Less than \$6,581	\$2,260
Second income quartile	\$6,581 - \$16,647	\$11,053
Third income quartile	\$16,648 - \$31,327	\$23,295
Top income quartile	\$31,328 and over	\$49,245

The expected family contribution for students in each of these income groups can vary depending on family size, number of family members in college and extraordinary expenses. Table 5 shows the average expected family contribution (EFC) for Kentucky undergraduates at participating institutions by income group. In each income group, students in public 2-year institutions have a slightly lower EFC than students at the other institutional types, which suggests that they tend to be lower-income and have other expenses compared with students in the same income group in the other two sectors.

EFC differs among the three higher educational sectors for families in the same income group. This represents the fact that factors such as assets or family size that can affect EFC affect students in all three sectors. For example, for students in the lowest dependent income quartile, families would be expected to contribute between \$400 and \$1,000 toward the student's educational expenses, depending on where they enrolled.

Table 5.—Average EFC of Kentucky undergraduates who applied for aid by income and institutional type: Fall 2004

	Dependent				Independent				No FAFSA application
	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	
Public 2-year	334	2,407	7,364	18,272	62	481	1,138	6,122	N/A
Public 4-year	732	2,820	7,933	20,834	68	965	2,451	7,949	N/A
Private	991	2,518	7,484	22,832	6	811	1,868	6,942	N/A
All	613	2,679	7,765	20,880	62	703	1,696	6,990	N/A

EFC has not been included in the calculations of net price or out-of-pocket costs. The EFC provides guidance on how much a family should be able to pay out of current income, savings and other assets. It is a useful measure in determining affordability for different groups of

students. The combination of grant aid and expected family contribution subtracted from the published price of attendance provides a measure of family net price.

The following list summarizes the limits of the data used in the affordability analysis:

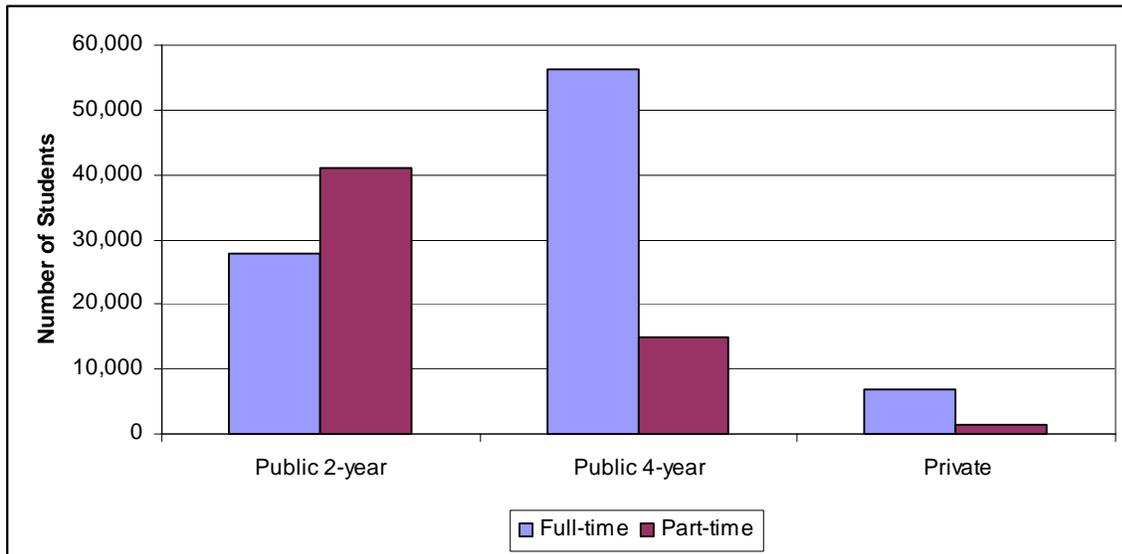
- Some colleges did not provide data.
- No proprietary (for-profit) institutions are included.
- No income or dependency status is reported for students who did not apply for aid; it has been estimated by the student's age.
- Any aid awarded outside the student aid office is not included.
- Limited information on part-time students.
- Affordability is reported for the fall 2004 semester and doubled to represent an annual figure.
- Limited to Kentucky students attending college in Kentucky.

V. Results

A. ENROLLMENT

Chart 1 shows the distribution of full-time and part-time Kentucky undergraduates in each of the three higher education sectors. Part-time students dominate in community colleges; the number of Kentucky residents enrolled in private institutions is relatively small compared with the other two sectors.

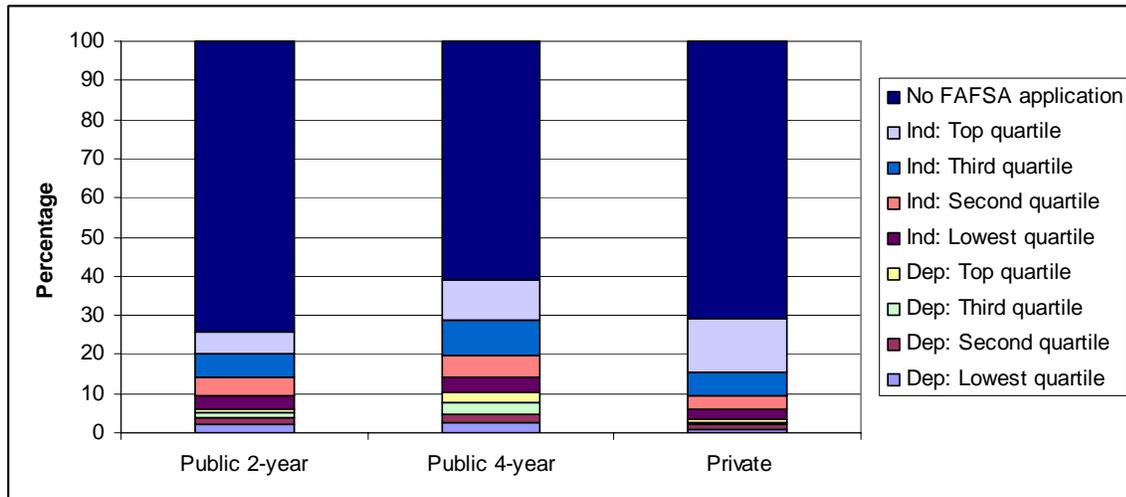
Chart 1.—Enrollment distribution of Kentucky undergraduates by attendance status and institutional type: Fall term 2004



(See Table C1 in Appendix C for data.)

Part-Time Students. Chart 2 shows the enrollment distribution of part-time undergraduates. As illustrated, very few part-time students (defined as less than 12 credits in the fall semester) applied for student aid in Kentucky. Independent students comprise the bulk of part-time applicants for which we have income information. Because we know so little about the income of this group and because they do not utilize very much student aid, they are not included in most of the report. We do compare full-time and part-time tuition paid in charts 22 to 27. Their exclusion does not mean that they do not have financial need, or that they would not have attended full-time if they had adequate financial resources to do so.

Chart 2.—Enrollment distribution of part-time Kentucky undergraduates by income group and institutional type: Fall term 2004

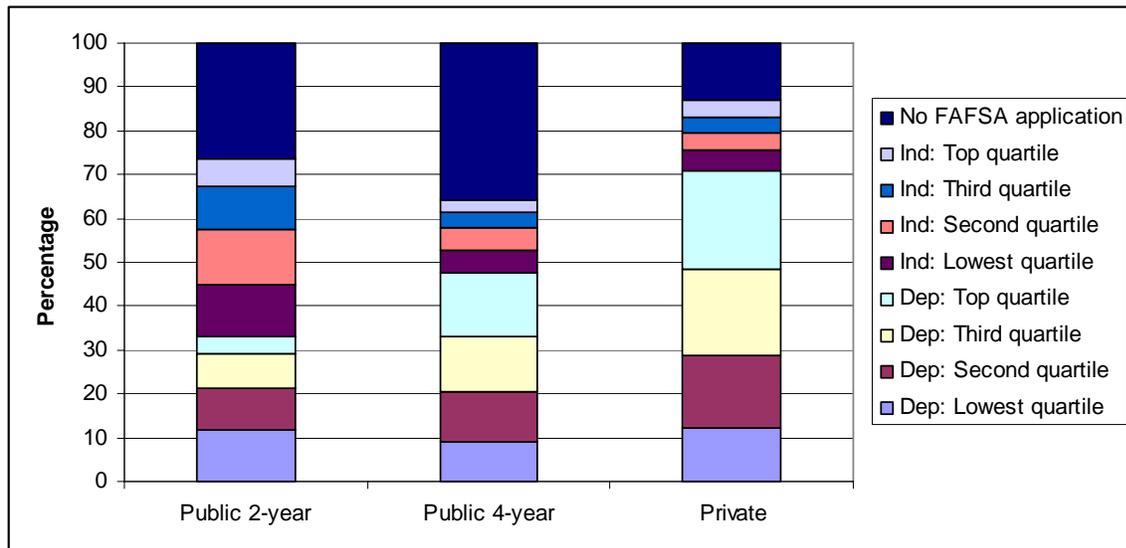


(See Table C2 in Appendix C for data.)

Full-time undergraduates are much more likely to apply for aid and complete the FAFSA. Chart 3 shows the distribution of students by income category and documents the fact that 36 percent of the full-time undergraduates in public 4-year institutions did not complete FAFSAs.

The results also confirm that independent students make up a large share of the enrollment in community colleges and that private institutions enroll a larger percentage of dependent students from the upper two income quartiles. This increase came from the relatively small share of independent students because, proportionally, the private sector more than holds its own in terms of enrollment of dependent students from the two lowest income quartiles. This distribution reflects the differences in the institutional price and mission.

Chart 3.—Enrollment distribution of full-time Kentucky undergraduates by income group and institutional type: Fall term 2004



(See Table C3 in Appendix C for data.)

B. MINORITY STUDENTS IN KENTUCKY

Chart 4 shows the racial/ethnic composition of Kentucky undergraduate students. Well over 80 percent of the students enrolled in Kentucky are white. African Americans comprise the largest non-white population. For this reason, the later analysis of affordability by race/ethnicity is limited to prices paid by African American undergraduates, with all other racial/ethnic groups combined as “other.” Community colleges have a higher percentage of unknown students in their enrollment than is reported by other sectors.

Chart 4. Racial/Ethnic Undergraduate Enrollment Distribution

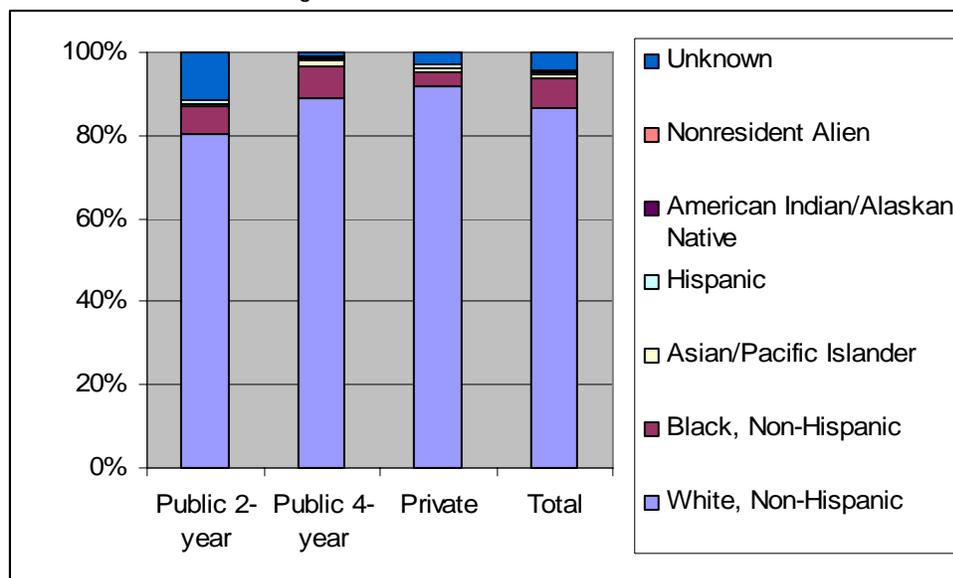


Chart 5 shows the distribution of students in the three racial/ethnic groups by income in each of the resulting sectors. The results indicate that African American students are disproportionately represented in the independent student groups in public 2-year institutions.

Chart 5. —Distribution of full-time Kentucky undergraduates by income and race, public 2-year institutions: Fall 2004

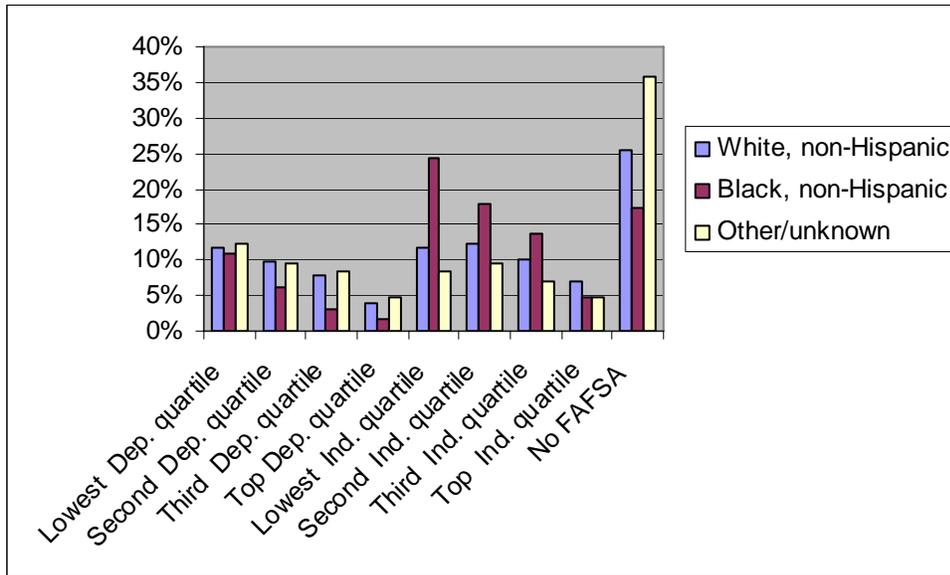
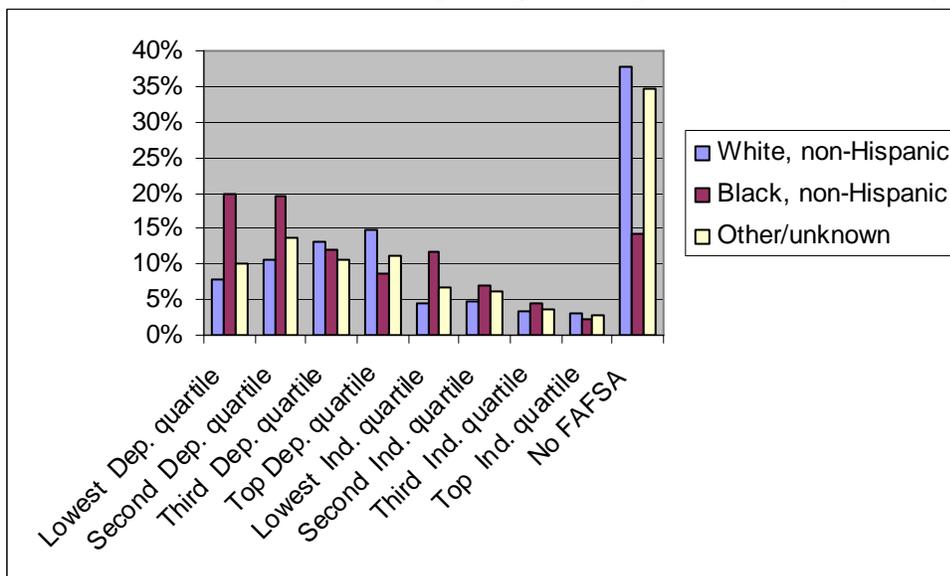


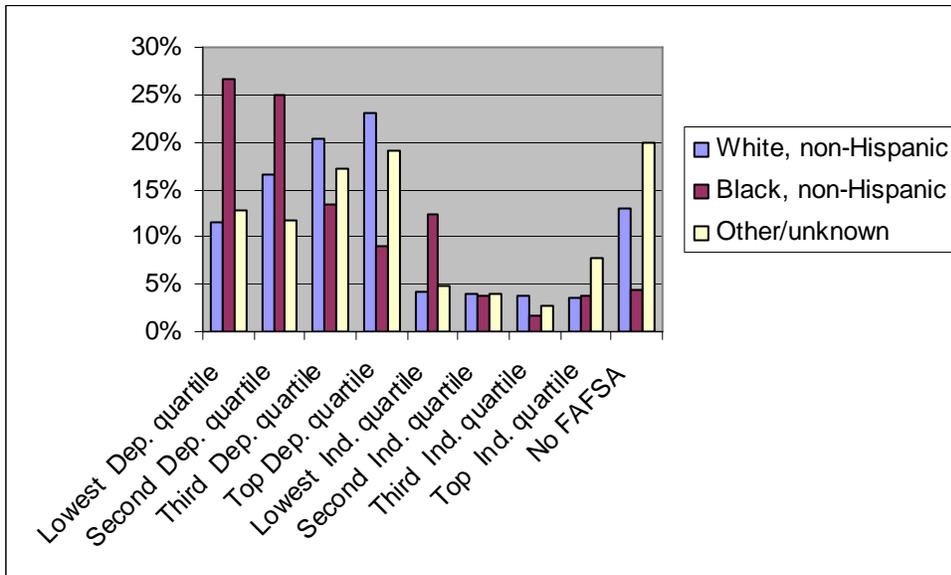
Chart 6 shows that in Kentucky public 4-year institutions, African American students are over-represented in the lower income quartiles for dependent students and in the lowest income quartile for independent students. African American students are much more likely to complete a FAFSA than either white students or students with an other or unknown ethnic/racial background.

Chart 6. —Distribution of full-time Kentucky undergraduates by income and race, public 4-year institutions: Fall 2004



Finally, at private institutions, African American students are much more likely to be in the lower income groups and more likely to complete a FAFSA than other students (chart 7). In all three sectors, African American students have lower incomes and greater need for aid than either white students or students with other or unknown backgrounds. A full set of tables showing the prices minority students pay to attend college in Kentucky can be found in the appendix (Tables A10 and A11).

Chart 7. —Distribution of full-time Kentucky undergraduates by income and race, private institutions: Fall 2004

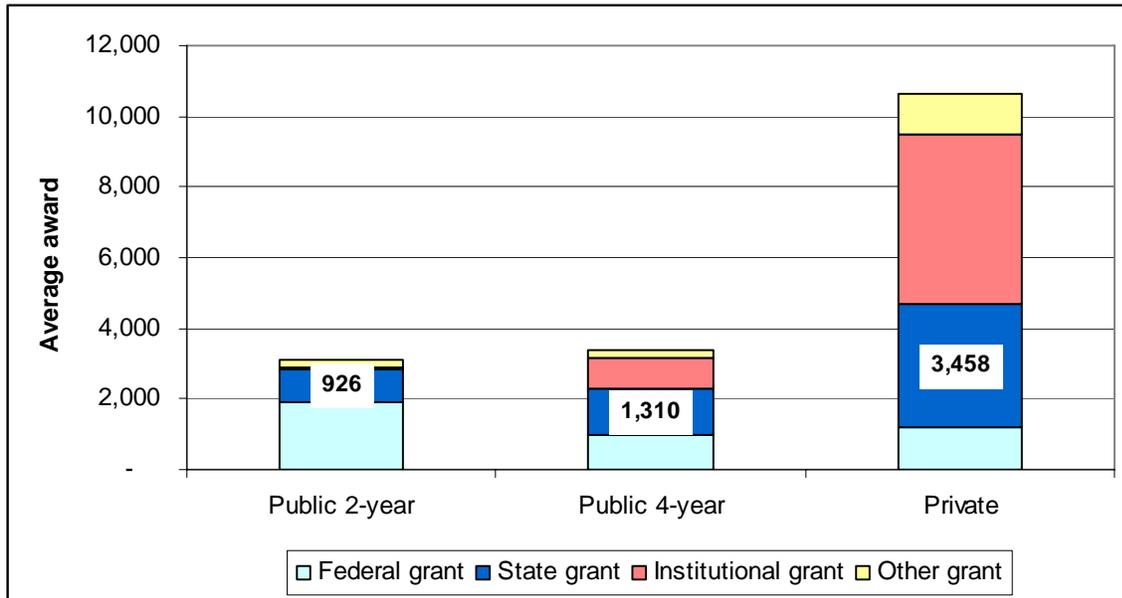


C. DISTRIBUTION OF STUDENT AID

Grant aid is the financial aid foundation that helps students pay for college. Grants can be funded by the federal government, the state, or institutional and private sources. Chart 8 shows the estimated annual award averaged across all full-time students enrolled, regardless of whether or not they received aid. This method allows us to compute an average award for all students in the income class or the institutional type. Tables showing the percent aided and the amount of aid received by recipients can be found in table C9 in Appendix C.

The results show that there was not much difference in the total award amount received by students in public 2-year and public 4-year institutions. There is a difference in the source of the aid. Community college students are more dependent on Pell grants, while public 4-year students get larger state grants and more institutional aid. Students in private institutions receive much larger state grants and institutional grants than those in public sector institutions.

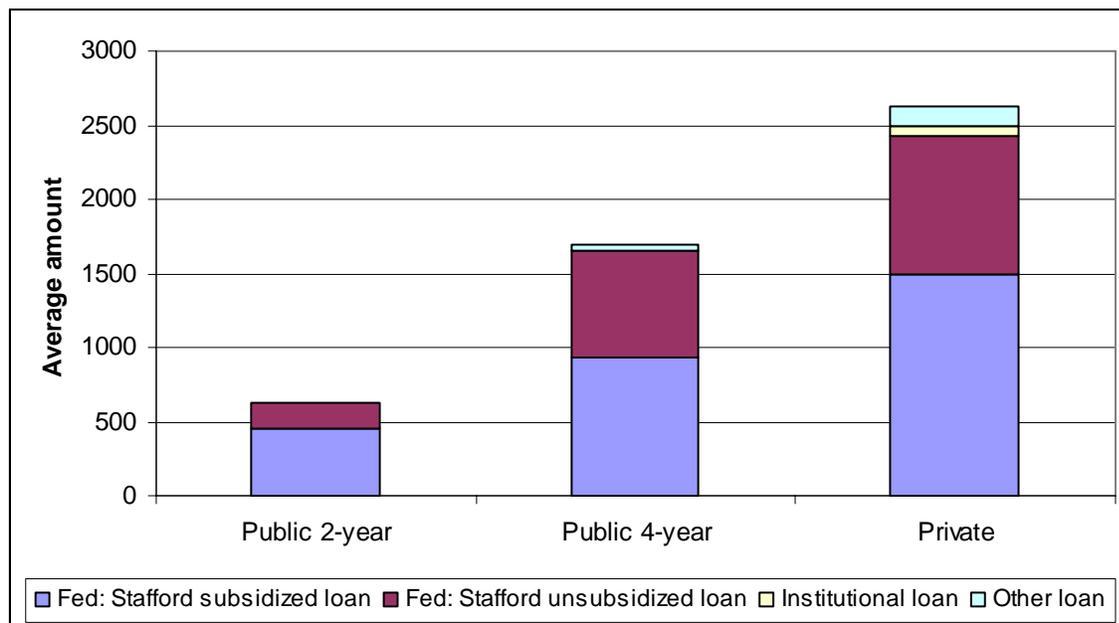
Chart 8.—Average grant award for all full-time Kentucky undergraduates by source of grant and institutional type: AY2004



(See Table C4 in Appendix C for data.)

Loans play a smaller role than grants in helping Kentucky undergraduates pay their college expenses (Chart 9). Again, this represents the loan amount averaged across all full-time Kentucky undergraduates. Students in public 2-year institutions do not use many loans, and if they do, they receive a subsidized loan, which is needs-tested. Unsubsidized loans may go to students with no need, but they must complete FAFSAs in order to qualify. Most loans are federal. Other loans may come from private sources; they are not an important source of cash for Kentucky students. A student could, however, apply for a private loan without going to or informing the student aid office.

Chart 9.—Average loan amount for all full-time Kentucky undergraduates by source of loan and institutional type: AY2004



(See Table C5 in Appendix C for data.)

Current sources of data do not provide information on tax credits and tax deductions that reduce taxes for families with a student in college. The federal programs include the Hope Credit, the Lifetime Learning Credit and tuition and fees deductions.² Table 6 estimates the distribution of these federal tax benefits in Kentucky.

Beginning with Kentucky tax returns for 2005, Kentuckians may deduct a credit of 25 percent of the federal Hope or Lifetime Learning Credits (up to \$500) for tuition or related educational expenses for themselves, their spouses or other dependents. To take advantage of the state tax credit, the tuition or other expenses must be for undergraduate enrollment at an eligible Kentucky higher education institution that qualifies for participation in federal Title IV student financial aid programs. This amount is not included in the estimated awards, but when implemented, it will increase the amount of savings for middle-income students.

A tax credit or deduction does not help low-income families who pay no or limited taxes. Also, the program has an income ceiling, so higher-income families cannot benefit from the savings. We do not have income information available to estimate this benefit for students who did not apply for financial aid, but we would expect the benefit to be in the range of the middle quartiles of dependent and independent students. These estimates have not been applied to the following tables, but should be considered while evaluating affordability in the state. These amounts would be added to the grants and scholarships awarded to students.

² See IRS publication 970 (2004), Tax Benefits for Education.

Table 6.–Estimated federal tax savings for Kentucky full-time students: 2004

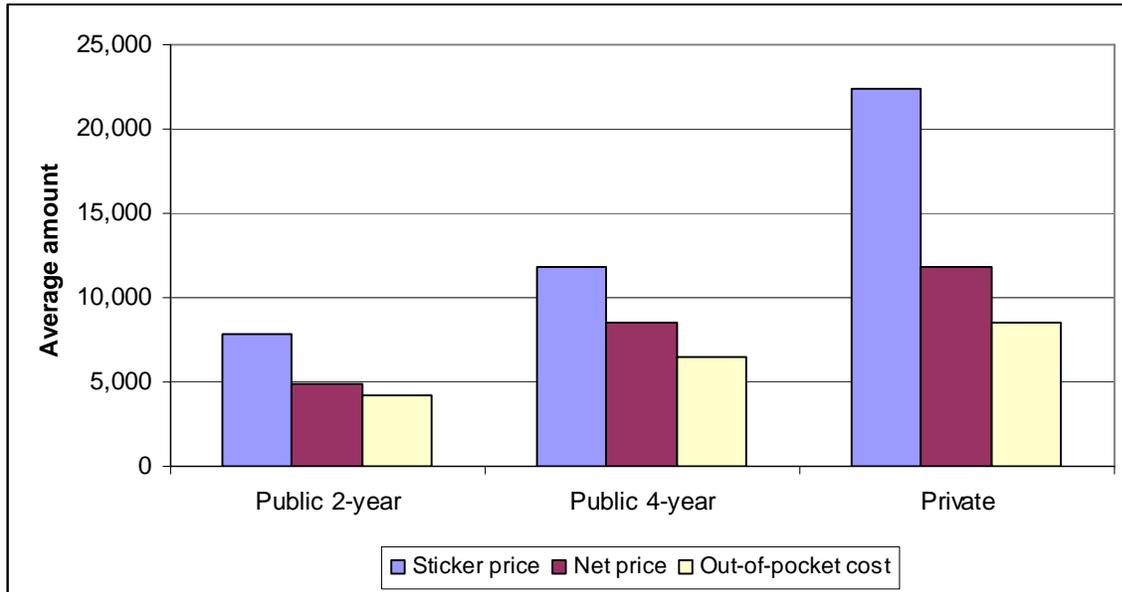
Dependent Quartiles				Independent quartiles				No FAFSA	ALL
Lowest	Second	Third	Top	Lowest	Second	Third	Top		
\$148	\$490	\$996	\$570	\$25	\$197	\$375	\$768	N/A	\$323

D. PRICE OF ATTENDANCE MEASURES

Net Price and Out-of-Pocket Costs. Very few students pay the published cost of attendance. Most students in Kentucky receive a grant or scholarship which reduces the amount they pay to attend. By subtracting the average grant from the student’s price of attendance, we calculated an average net price for each type of institution. Loans have to be repaid, but they allow students and their families to spread the costs of college over several years. Loans reduce the amount of money that they have to pay at the time of enrollment. Out-of-pocket price is the total the student and his or her family have to pay at the time they enroll. Non-tuition costs are those estimated by the institution for each student who received student aid. We used the IPEDS estimated cost of attendance for all students who did not complete a FAFSA. Pricing estimates that when calculated returned a negative value were corrected to zero; for example, if a student’s average grant amount is higher than the estimated sticker price, the resulting net price would be negative, and was corrected to zero.

The net price for full-time community college students was \$5,000 and the out-of-pocket cost was about \$4,000, on average, to attend college for one year (Chart 10). The net price for students in public 4-year institutions exceeded \$8,000, but was reduced by nearly \$2,000 when loans were considered (out-of-pocket). Finally, Kentucky students in private institutions had a net price just under \$12,000, but an out-of-pocket cost of just over \$8,000, which was roughly the same as the net price paid by students at public 4-year institutions in the state. As tuitions increase, loans play a more important part in helping students pay for college.

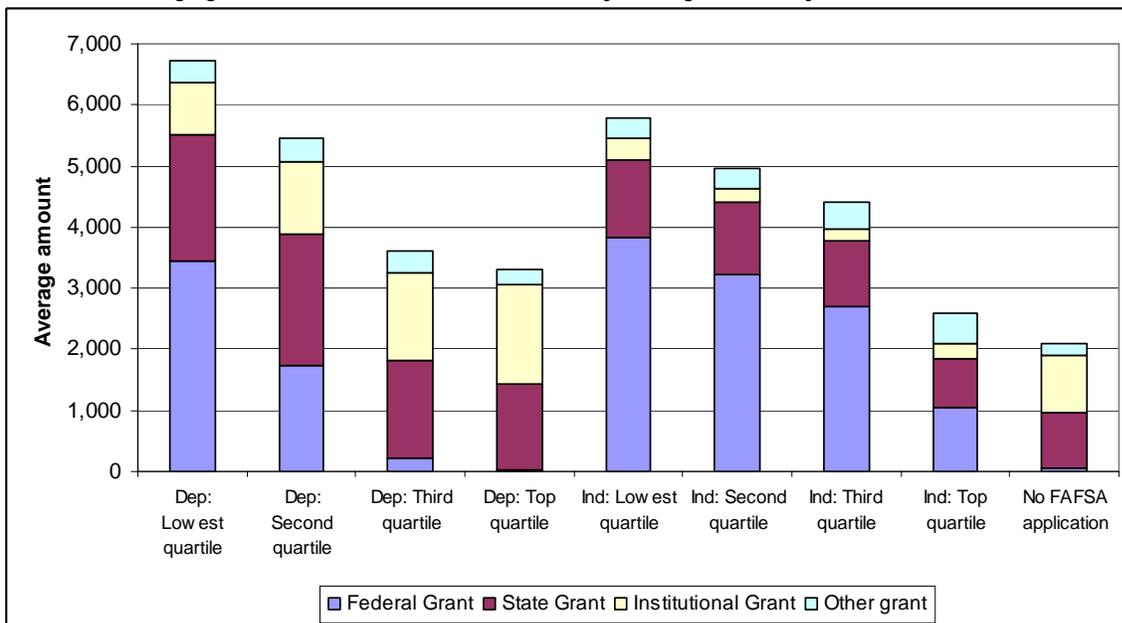
Chart 10.—Average sticker price, net price (sticker price - grants) and out-of-pocket costs (sticker price - grants - loans) for all full-time Kentucky undergraduates by institutional type: AY2004



(See Table C6 in Appendix C for data.)

The average grant and scholarship awards going to students in the different income groups, regardless of the type of institution attended, are shown in Chart 11. The data show the progressive nature of the need-based federal grants. Institutional grants play a progressively greater role as dependent student income increases. Independent students receive large federal grants and very little institutional grant assistance. State grants are relatively consistent across the income groups, with independent students receiving a smaller share than dependent students.

Chart 11.—Average grant amounts for all full-time Kentucky undergraduates by income: AY2004



(See Table C7 in Appendix C for data.)

The majority of Kentucky full-time undergraduates receive grants (Table 7). In private institutions, the student's income group makes almost no difference; nearly everyone receives grants. In the public sector institutions, the percentage of students receiving grants drops off by income group, but the majority of students in the highest income quartile receive grants, almost all from either state or institutional sources.

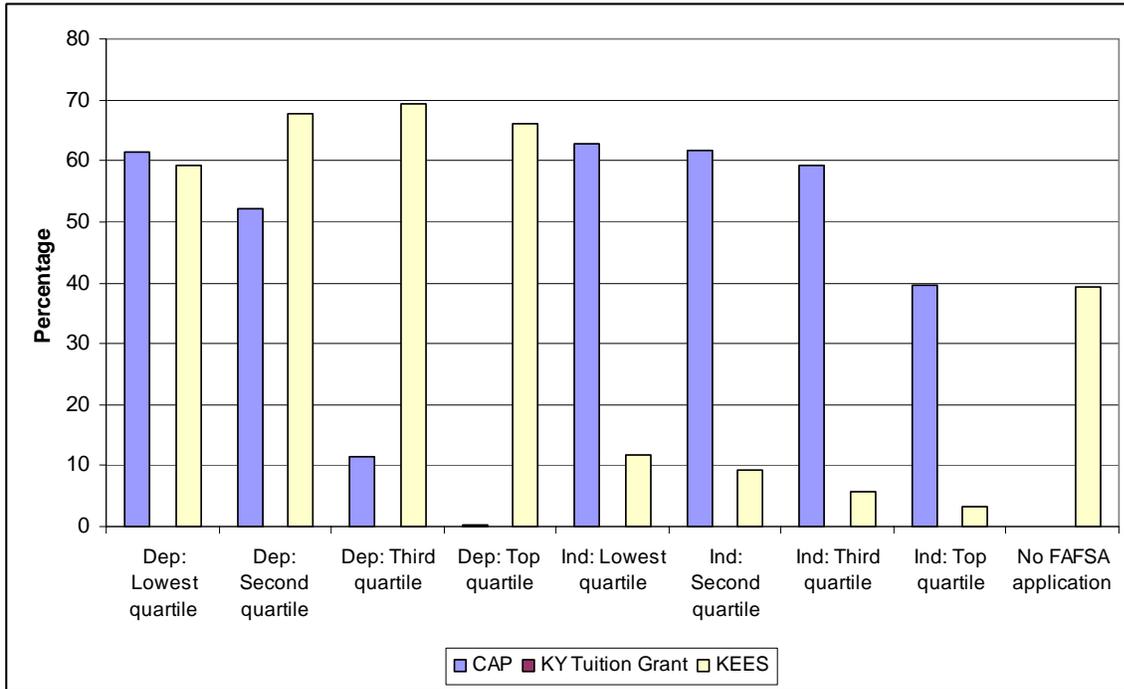
Table 7.—Percentage of full-time Kentucky undergraduates receiving any grants by income and institutional type: Fall term 2004

	Dependent				Independent				No FAFSA application
	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	
Public 2-year	96.9	91.9	76.0	68.1	96.9	96.9	89.8	71.3	46.1
Public 4-year	97.1	92.1	82.8	80.9	95.7	93.3	74.9	51.5	69.5
Private	98.6	99.4	99.3	98.4	96.3	94.9	93.7	85.5	84.0
Total	97.1	92.9	83.6	82.2	96.4	95.3	84.0	63.5	63.9

Kentucky has several state grant programs, but three of them provide the overwhelming majority of aid dollars. The College Access Program (CAP) Grant provides grants to students based on need. The Kentucky Educational Excellence Scholarship (KEES) provides aid to students based on academic achievement. The Kentucky Tuition Grant (KTG), a need-based program, helps Kentucky students pay tuition if they decide to attend a private institution in the state.

Given that the three programs serve different purposes, it is instructive to see how they work together. The percent of students receiving the different grants varies by income within each sector. Chart 12, for community colleges, shows that between 60 and 70 percent of the students receive KEES awards, but very few independent students receive them. The CAP grant helps more low-income dependent and independent students. If a student does not complete a FAFSA, he or she cannot receive a CAP grant.

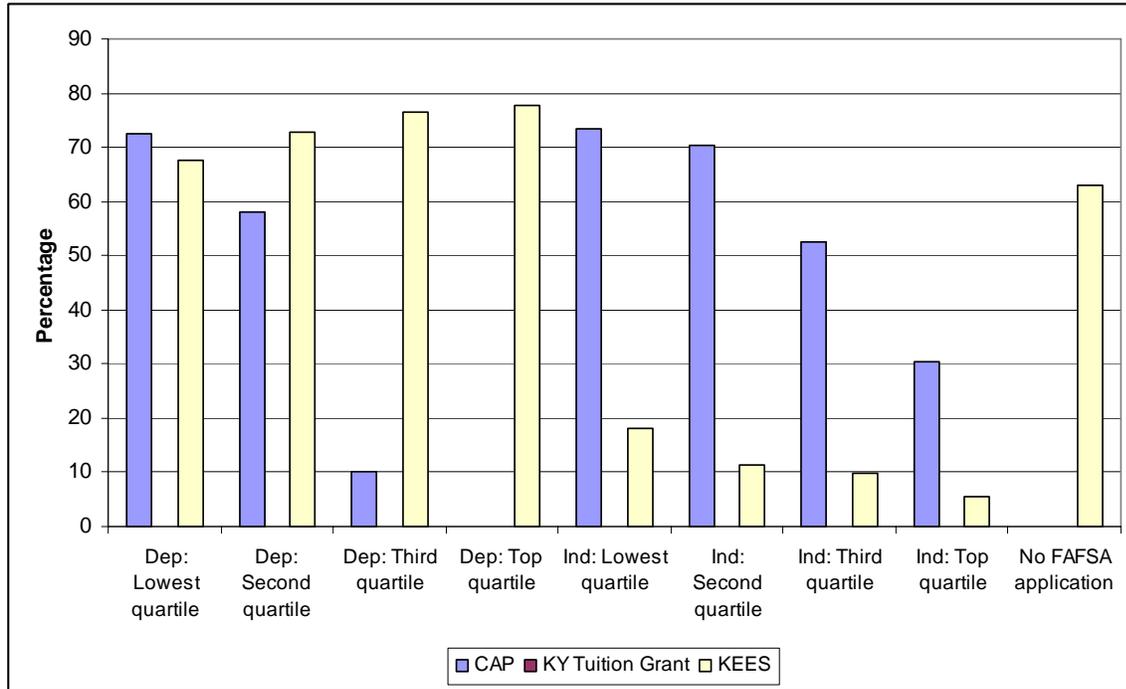
Chart 12.—Percentage of full-time undergraduates who attended public 2-year institutions and received state grants, by type of grant and income: Fall 2004



(See Table C8 in Appendix C for data.)

The data from public 4-year institutions (Chart 13) in the state show a similar pattern to the community college results, except that the range for the percent of students receiving KEES awards by income varies between 70 and 80 percent. Again, relatively few independent students receive KEES awards.

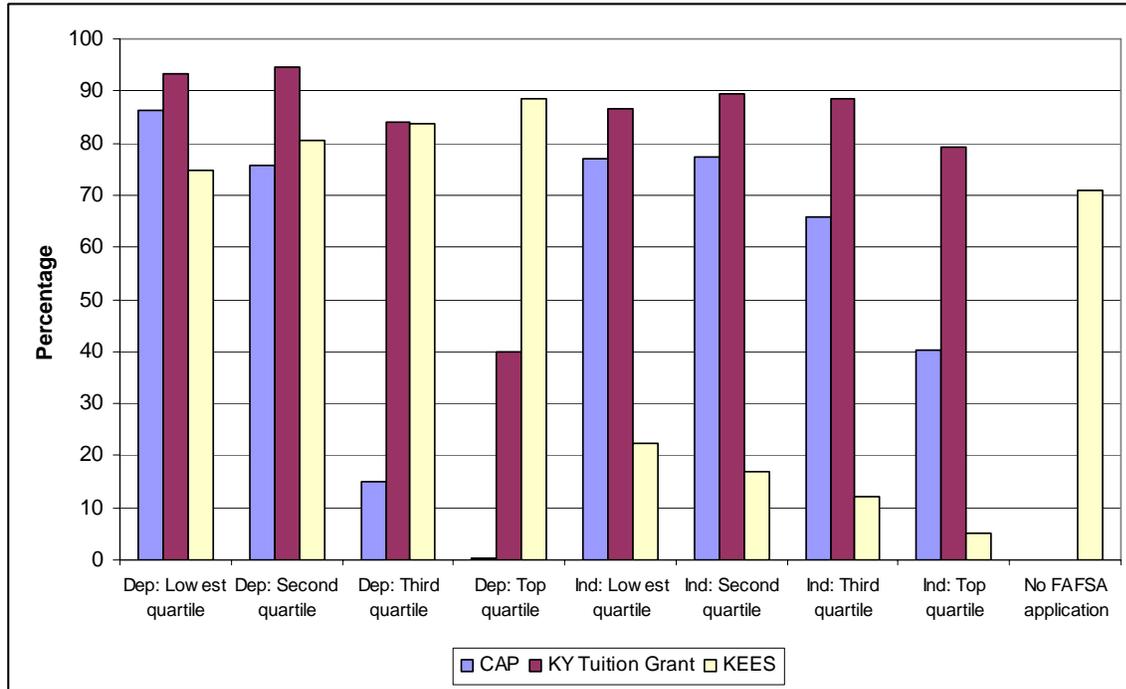
Chart 13.—Percentage of full-time undergraduates who attended public 4-year Institutions and received state grants, by type of grant and income: Fall 2004



(See Table C8 in Appendix C for data.)

The award pattern for Kentucky students in private institutions is complicated by the introduction of the KTG, which is income-sensitive and helps independent students as well as dependent students. Again, the percent of dependent students receiving KEES awards increases with income and does not provide much help for independent students.

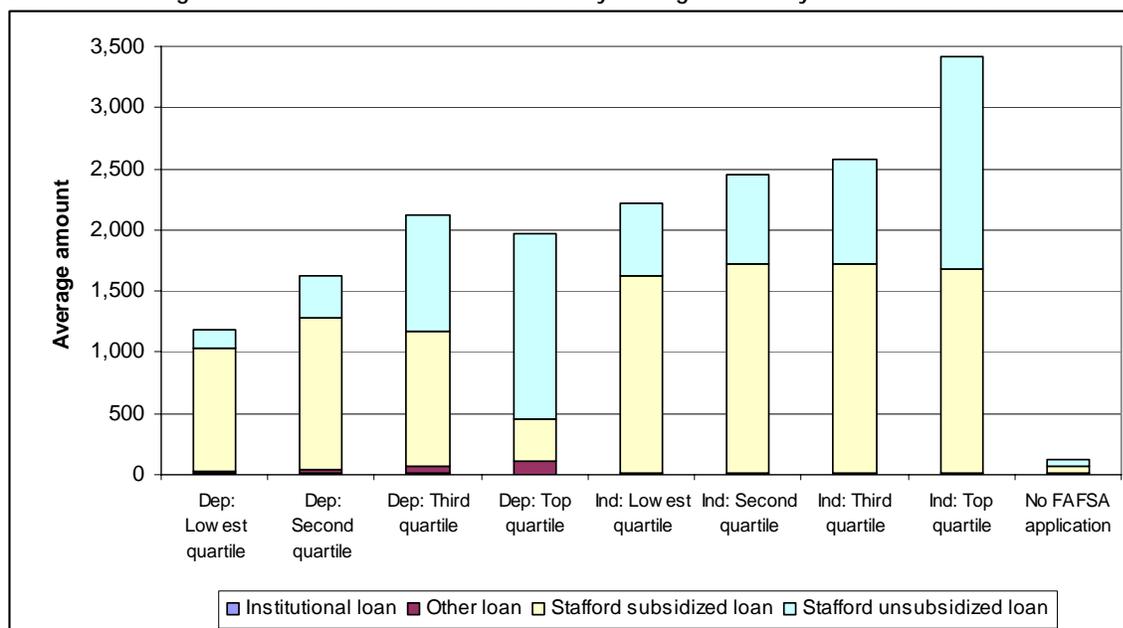
Chart 14.—Percentage of full-time undergraduates who attended private institutions and received state grants, by type of grant and income: Fall 2004



(See Table C8 in Appendix C for data.)

Loan use is greater among independent students compared with dependent students (Chart 15). Dependent students in the highest two income categories borrow more than dependent students in the two lower income groups. Further, students in the highest dependent income group make extensive use of unsubsidized loans. This is perceived as a loan of convenience, not necessity. Unsubsidized loans allow students to spread some of the college expenses over time.

Chart 15.—Average loan amounts for all full-time Kentucky undergraduates by income: AY 2004



(See Table C7 in Appendix C for data.)

Table 8 shows that, on an overall basis, students in the higher income groups are more likely to borrow money to attend college than are those in the lower income groups. The exception is for both dependent and independent students at private institutions. Since tuition is generally higher at private institutions, lower-income students must borrow more in order to pay the cost of attendance. Students in higher income groups are more likely to use unsubsidized loans; these loans are not needs-tested and can be used to help pay the expected family contribution in cases where the parents cannot get PLUS loans.

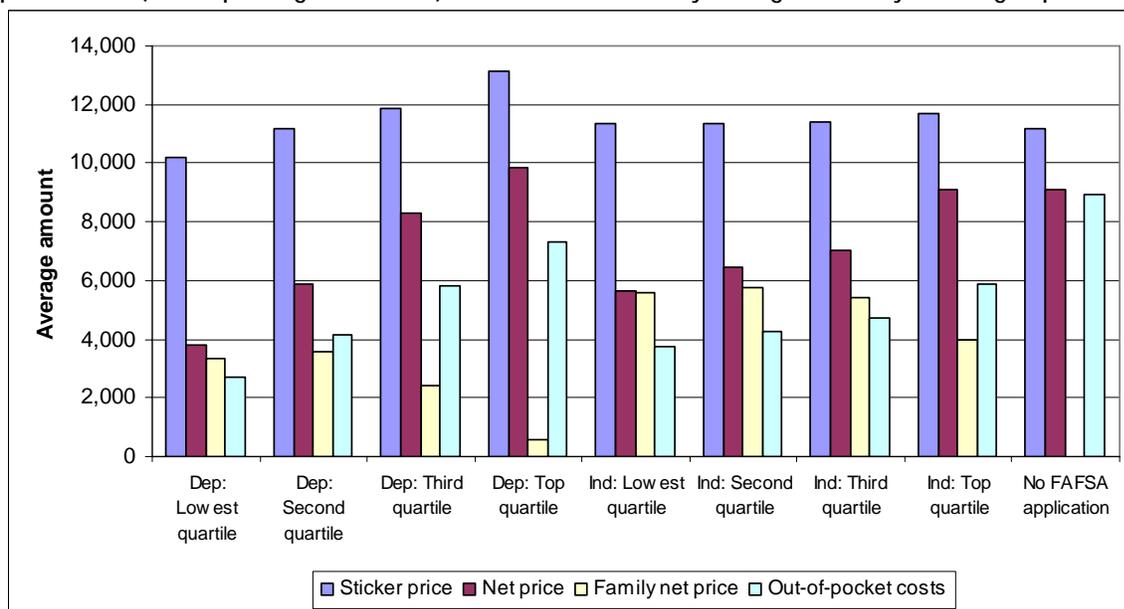
Table 8.—Percentage of full-time Kentucky undergraduates receiving any loans by income and institutional type: Fall Term 2004

	Dependent				Independent				No FAFSA application
	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	
Public 2-year	11.6	16.5	29.5	28.6	29.7	34.2	34.4	39.4	1.7
Public 4-year	47.2	53.1	61.8	53.1	69.0	71.6	73.6	78.1	2.8
Private	65.6	65.9	65.7	55.4	68.1	59.6	59.5	60.2	5.8
Total	36.1	45.1	55.9	50.9	48.8	51.4	51.2	58.0	2.6

Chart 16 shows the average sticker price, net price, family net price and out-of-pocket costs paid by students in the different income groups. In general, net price and out-of-pocket costs increase progressively by income group for dependent students. This is a result of both distribution of student aid and the type of institution attended. Family net price declines as the expected family

contribution, in combination with grant aid, increases with income. We cannot calculate family net price for students who did not complete FAFSAs, but the results show that they receive state and institutional grants that reduce their price of attendance.

Chart 16.—Average sticker price, net price (sticker price - grants), family net price(sticker price-grants-EFC) and out-of-pocket costs (sticker price - grants - loans) for all full-time Kentucky undergraduates by income group: AY2004



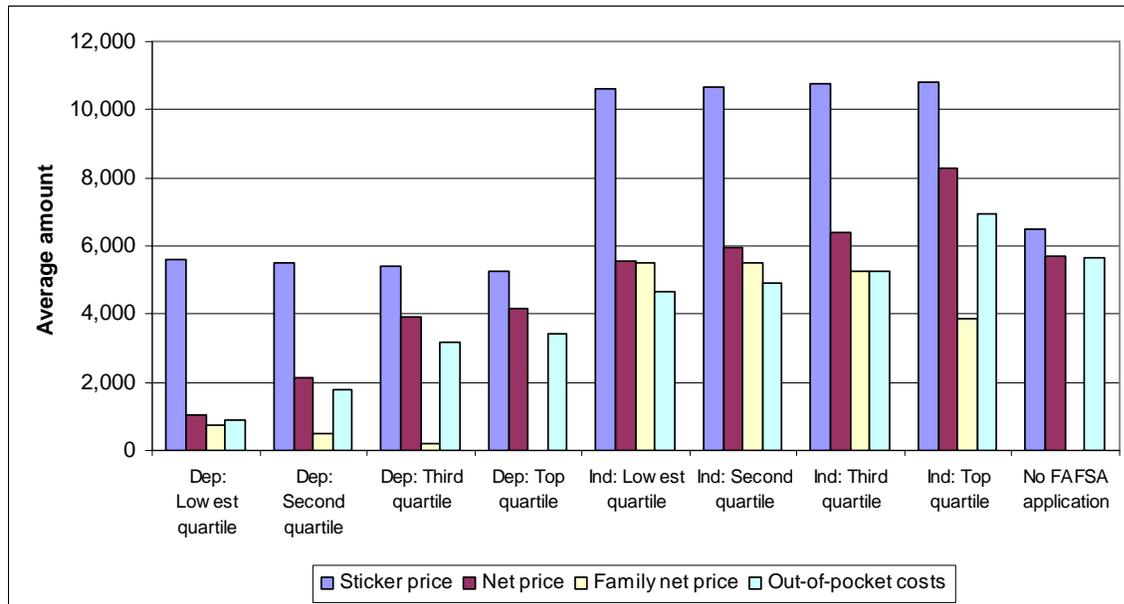
(See Table C9 in Appendix C for data.)

A more detailed look at the prices paid by students according to income in each of the sectors reveals how students with different incomes are paying for college.

First, we look at public 2-year institutions (Chart 17). The data suggest that the average dependent undergraduate has a manageable net price. The net price is beyond their expected family contribution, but it is within their capacity to work part-time to pay the full net price with no help from their parents.

Independent students face the highest net price in public 2-year institutions. In part, this is a function of their higher living costs. Independent students in the lowest income quartile are expected to be able to contribute over \$4,000 out-of-pocket and nearly \$6,000 after grants. By that measure, they may be facing difficult financial pressures.

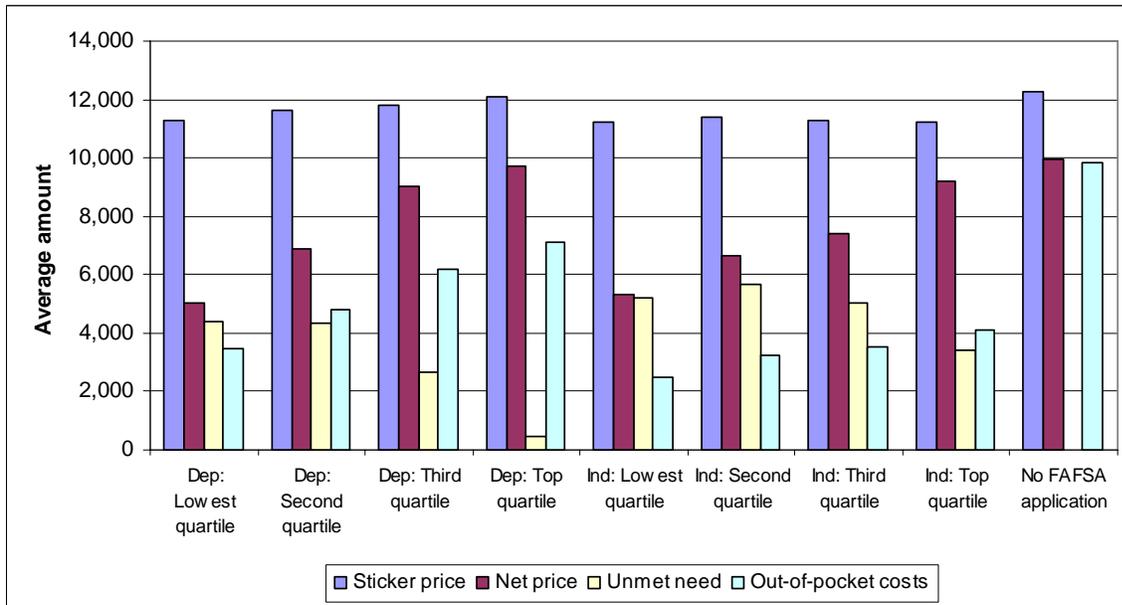
Chart 17.—Average sticker price, net price, family net price and out-of-pocket costs for full-time Kentucky undergraduates in public 2-year institutions, by income: AY2004



(See Table C10 in Appendix C for data.)

The pattern in public 4-year institutions shows higher net prices for full-time undergraduates in every income group compared with community colleges and a larger difference between the net price and the out-of-pocket cost (Chart 18). It also shows that the higher sticker prices faced by independent students increases their net prices even with generous grants and borrowing. Independent students in the lower income group have an average net price of attendance that is not significantly different from the same group in public 2-year institutions. The out-of-pocket costs are significantly lower for both independent student groups compared with those attending public 2-year institutions.

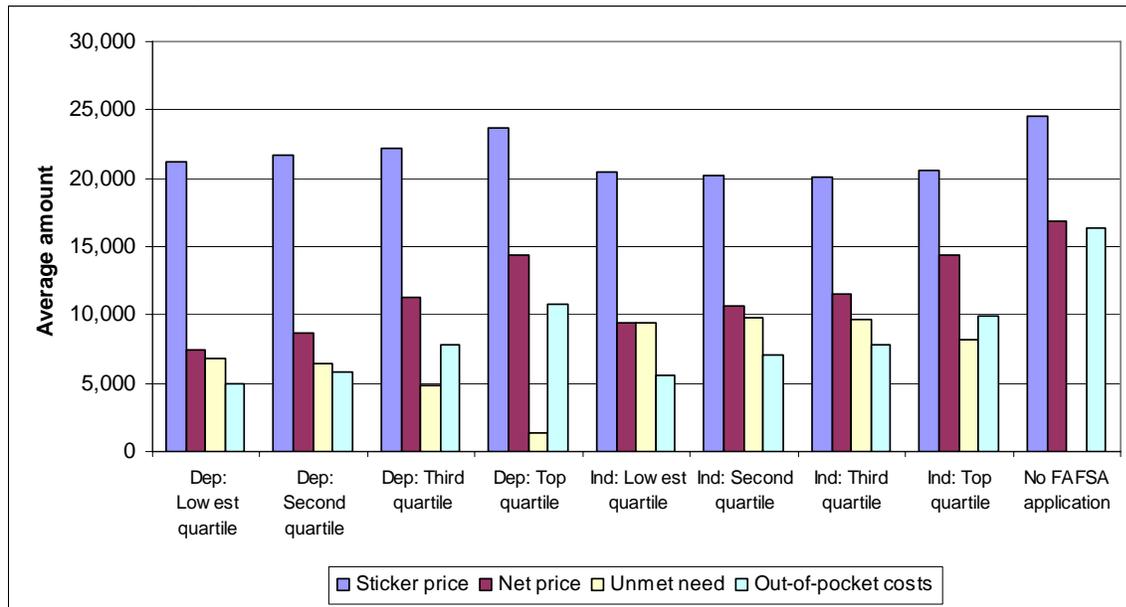
Chart 18.—Average sticker price, net price, family net price and out-of-pocket costs for full-time Kentucky undergraduates in public 4-year institutions, by income: AY2004



(See Table C10 in Appendix C for data.)

In private institutions, the average net price for the lowest-income dependent student is over \$7,000, with an average out-of-pocket price of \$4,000 (Chart 19). That would allow a low-income student in a private institution to work enough to pay their costs, with very little left over. Attending a private institution in Kentucky would be out of reach for students in the lowest income quartile without loans.

Chart 19.—Average sticker price, net price, family net price and out-of-pocket costs for full-time Kentucky undergraduates in private institutions, by income: AY2004



(See Table C10 in Appendix C for data.)

Table 9 shows the net price for each income group compared with the average income for the students in that group. The percent of income that is necessary to pay the net price is shown in the last row for each institutional sector. We have used the Census report of median family income for a family of four for the comparison for all students because we have no FAFSA income for non-filers. The results show areas of concern based on the *Measuring Up* criteria that net price should not exceed 30 percent of family income.

The most obvious concern is with lower-income independent students. Without borrowing, they need to commit nearly all of their income to the costs associated with attending college. Low quartile dependent students are over the 30 percent standard in both public 4-year and private institutions in the state.

Table 9.—Average net price compared with annual income for all full-time Kentucky undergraduates by income and institutional type: AY2004

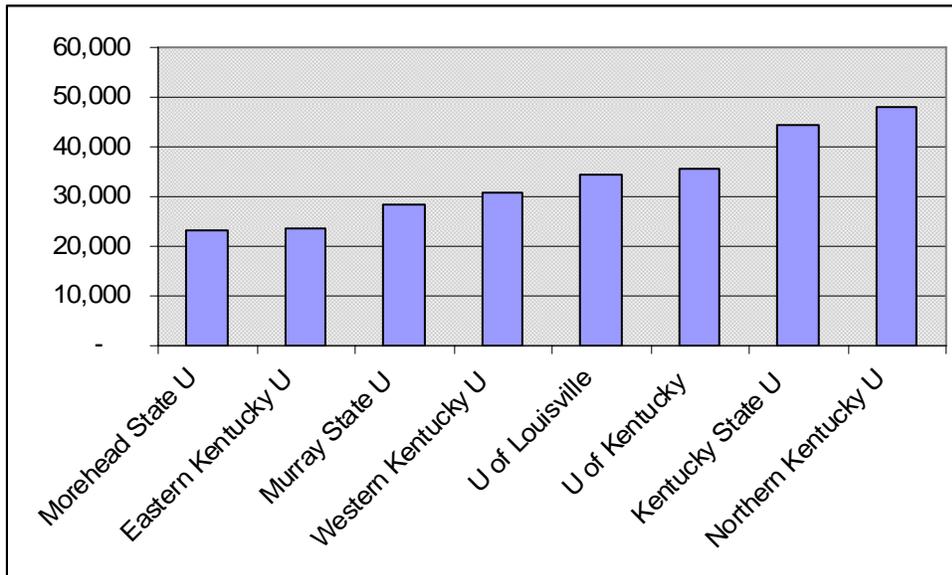
	Dependent				Independent				No FAFSA application	ALL
	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile	Lowest income quartile	Second income quartile	Third income quartile	Top income quartile		
	Total									
Net price	3,790	5,864	8,318	9,845	5,651	6,450	7,055	9,131	9,092	7,646
Annual income	12,400	34,135	58,892	106,757	2,260	11,053	23,295	49,245	N/A	53,198
Net price/Annual income	30.6%	17.2%	14.1%	9.2%	250.0%	58.4%	30.3%	18.5%	N/A	14.4%
	Public 2-year									
Net price	1,018	2,119	3,893	4,146	5,568	5,968	6,412	8,291	5,724	4,869
Annual income	12,665	33,806	57,735	97,083	2,553	11,110	23,242	46,988	N/A	53,198
Net price/Annual income	8.0%	6.3%	6.7%	4.3%	218.2%	53.7%	27.6%	17.6%	N/A	9.2%
	Public 4-year									
Net price	5,006	6,905	9,040	9,728	5,321	6,633	7,387	9,208	9,963	8,502
Annual income	12,304	34,214	59,195	106,759	1,981	10,962	23,271	51,663	N/A	53,198
Net price/Annual income	40.7%	20.2%	15.3%	9.1%	268.6%	60.5%	31.7%	17.8%	N/A	16.0%
	Private									
Net price	7,427	8,685	11,287	14,389	9,468	10,641	11,495	14,319	16,806	11,824
Annual income	11,934	34,456	59,076	113,440	1,695	11,272	24,065	49,595	N/A	53,198
Net price/Annual income	62.2%	25.2%	19.1%	12.7%	558.6%	94.4%	47.8%	28.9%	N/A	22.2%

E. REGIONAL DIFFERENCES

The service regions for the universities in Kentucky represent differences in income, numbers of students and prices paid to attend colleges or universities. The following charts and tables show some of the critical regional differences in the state. The analysis is based on the students living in the service region, not the students attending institutions in the service region.

Chart 20 shows that Kentucky has large variations in median family income by service region. According to the U.S. Census, the median income in the Northern Kentucky University service region is twice as high as in the service regions served by Morehead State University and Eastern Kentucky University.

Chart 20. Median Family Income by Service Region in Kentucky, Fall 2004



Source: US Bureau of the Census, 2002 median family income, corrected to reflect 2004.

Chart 21 shows the number of students in each service region enrolled in colleges or universities in Kentucky. The smallest service region has an enrollment of 5,000 in college, compared with over 28,000 in the Western Kentucky service region.

Chart 21.--Enrollment distribution of Kentucky students attending 4-year institutions, by service region of residence (regardless of institution attended): Fall 2004

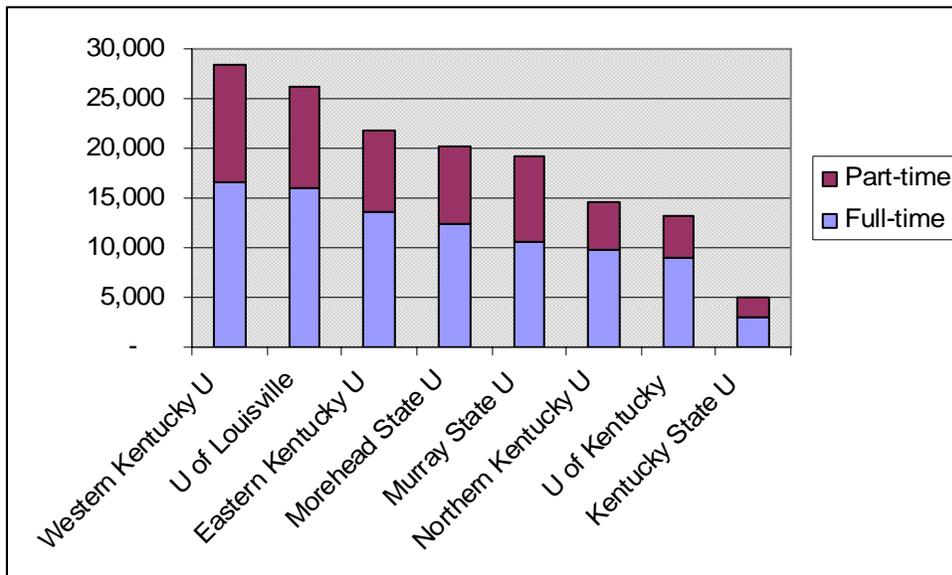


Table 10 displays several cost measures for full-time students in each of the service regions. The regions are listed in descending order of cost of attendance, which ranges from \$9,970 to

\$12,926, about a \$3,000 difference. The difference in net price varies from \$9,655 for students in the University of Louisville service region to \$5,484 in the Morehead State University service region, which is a difference of over \$4,000. These differences represent the combination of choice of institution, receipt of grants and scholarships and family ability to pay.

When family contribution is taken into consideration, the range among service regions in net family price is closer to \$1,000 with students in the Eastern Kentucky University service region paying \$2,900 after all grant aid and expected family contribution are taken into account. Students in the Northern Kentucky service region end up with only an extra \$1,883 to pay after aid and family contributions are taken into account.

Table 10.--Cost variable averages for full-time Kentucky students by service region of residence (regardless of institution attended): AY 2004

Service region	Cost of attendance	Net price	Net family price	Out of pocket costs
University of Louisville	\$12,926	\$9,655	\$2,407	\$8,203
University of Kentucky	\$12,678	\$9,108	\$2,311	\$7,450
Kentucky State University	\$12,664	\$8,529	\$1,994	\$6,649
Northern Kentucky University	\$12,261	\$9,334	\$1,883	\$7,490
Western Kentucky University	\$11,135	\$7,074	\$2,515	\$5,554
Eastern Kentucky University	\$10,831	\$6,450	\$2,900	\$4,853
Morehead State University	\$10,000	\$5,484	\$2,325	\$4,208
Murray State University	\$9,970	\$6,494	\$2,041	\$5,384

The families in the Eastern Kentucky University service region represent a relatively low median family income community and face the highest net family price for students enrolled in college. Families in the Northern Kentucky University service region represent the highest median family income and the lowest family net price. The burden of paying college costs appears to fall most heavily on families in the lowest income service region in the state

F. TUITION AND STUDENT AID

One of the limitations in measuring the price of attendance is that we utilized estimates from IPEDS data; therefore, the estimates provided may not reflect the actual expenses of individual students. Limiting the costs to tuition and fees provides an empirically verifiable measure. It is also the one expense that can be modified by policy.

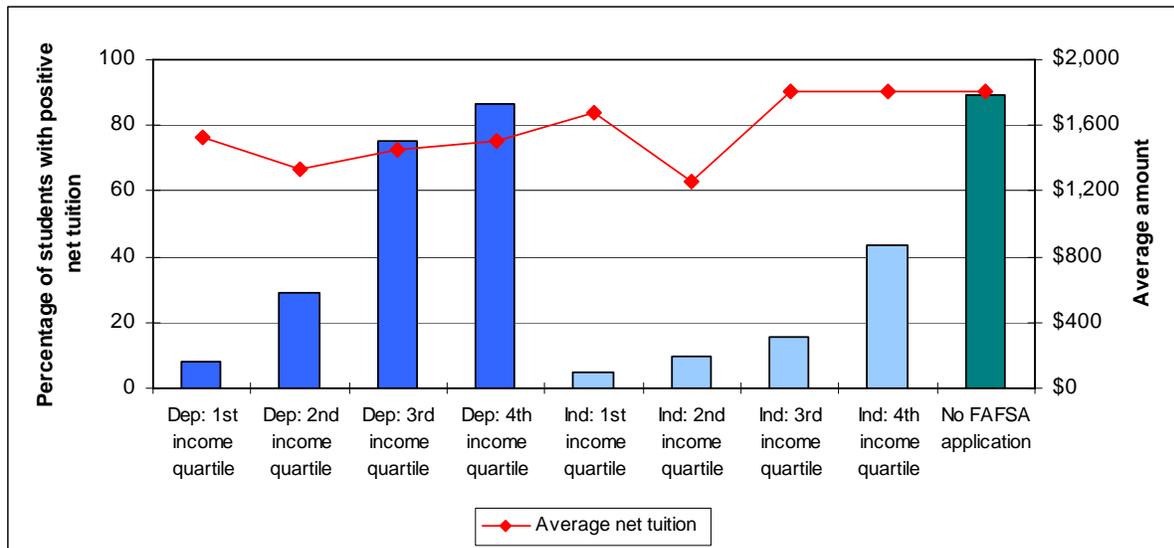
The following charts show the percentage of students in each income group that effectively pay no tuition after grants and scholarships are awarded, as well as the average tuition paid by those who did pay tuition after grants were distributed. The charts use bars to show the percent of full-time and part-time students that paid no tuition after grant aid. The average amount paid by those with a positive amount after grant aid was awarded is indicated by the line.

Because student aid covers more than tuition, the following charts show only part of the affordability picture. However, they provide the ability to evaluate the prices paid by part-time

students who could not be included in the previous charts because we lack financial information about the majority of part-timers who did not complete FAFSAs.

Chart 22 shows that, with respect to tuition, progressively more full-time community college students paid tuition after all grants were distributed. This supports the finding that student grants introduce equity in the pricing of higher education. Independent students were less likely to pay tuition after grants, but earlier charts showed that they had higher living costs than dependent students.

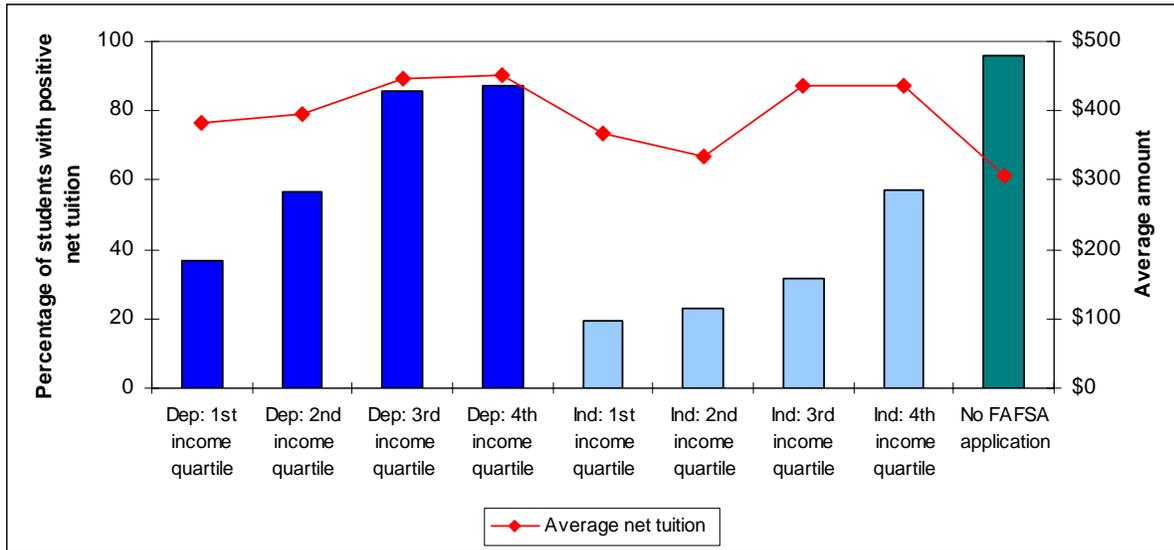
Chart 22.--Percentage of full-time students with positive net tuition and average tuition amount, public 2-year institutions: 2004



(See Table C12 in Appendix C for data.)

Part-time students are less likely to apply for or receive financial aid, so a larger percent pay some tuition after grants are awarded (Chart 23). Those that do pay tuition pay less than full-time students. At community colleges, the average tuition paid by part-time students ranged between \$300 and \$450 per year.

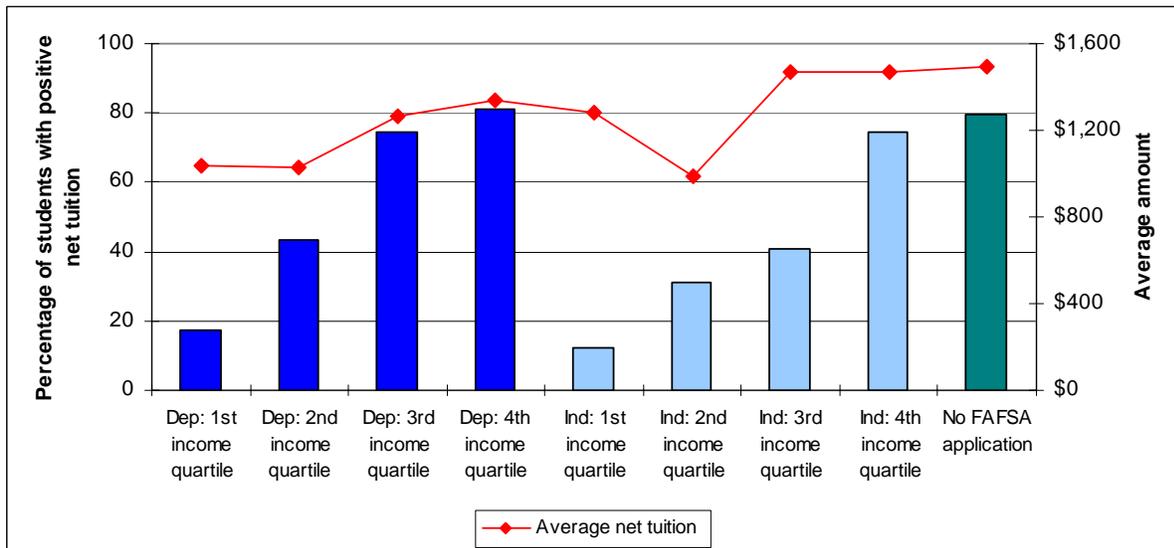
Chart 23.--Percentage of part-time students with positive net tuition and average tuition amount, public 2-year institutions: 2004



(See Table C12 in Appendix C for data.)

The results for undergraduates attending public 4-year institutions show that less than 20 percent of the full-time dependent students in the lowest income quartile paid tuition after grants were awarded (Chart 24). Those that did pay tuition paid just over \$1,000 per year. The percent paying tuition increased with income. Approximately 20 percent of the highest income students paid no tuition after grants.

Chart 24.--Percentage of full-time students with positive net tuition and average tuition amount, public 4-year institutions: 2004

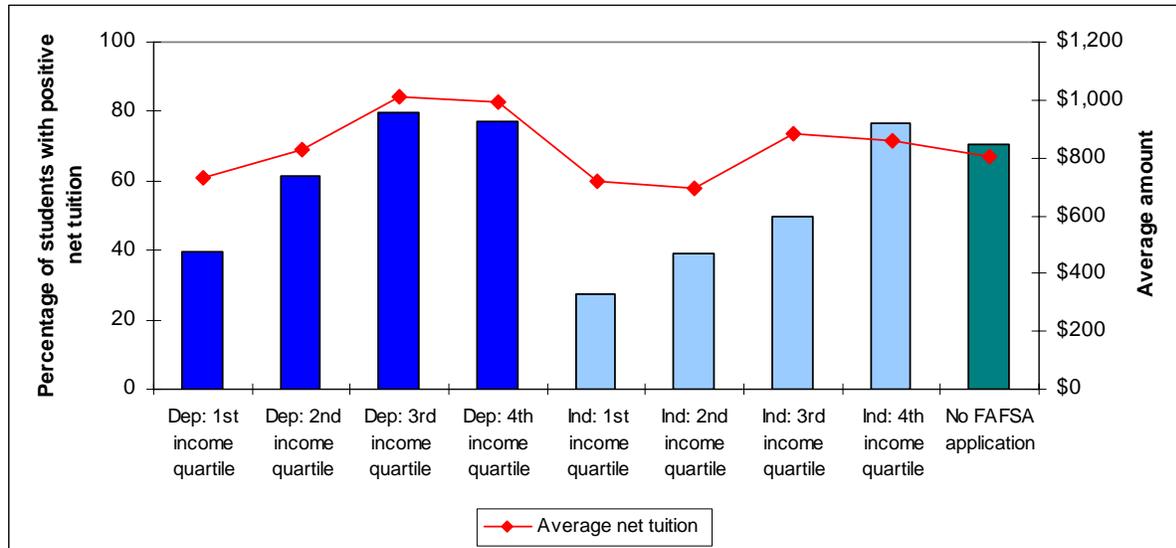


(See Table C12 in Appendix C for data.)

Part-time undergraduates in public 4-year universities in the state paid between \$700 and \$1,000 a year on average after grants were awarded (Chart 25). Again, grants reduced the share of part-

time students with any tuition more for low-income students than they did for higher income students.

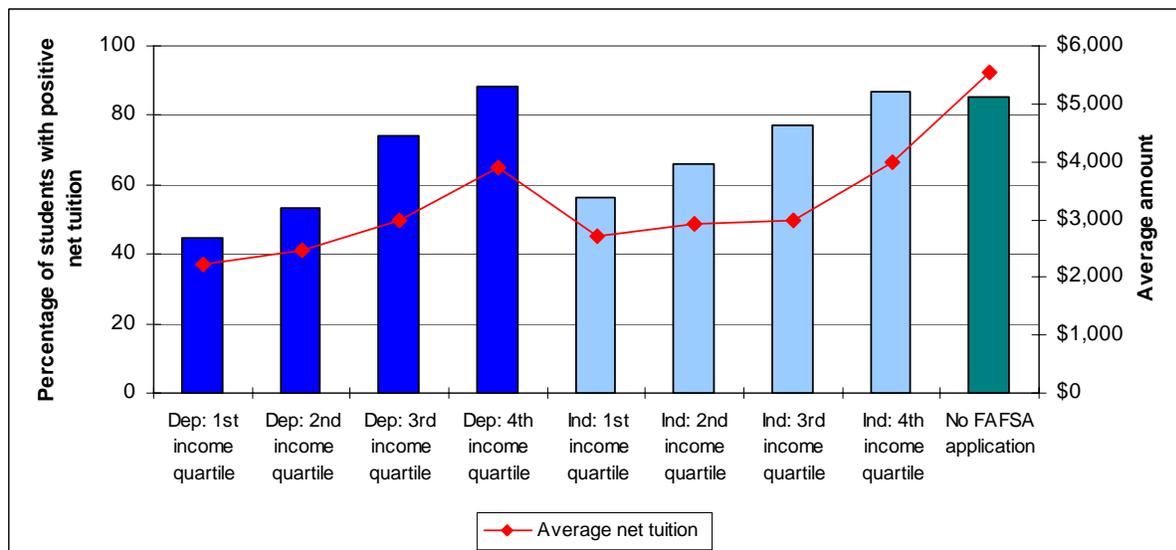
Chart 25.--Percentage of part-time students with positive net tuition and average tuition amount, public 4-year institutions: 2004



(See Table C12 in Appendix C for data.)

Even private colleges in the state had a significant share of undergraduates who received enough grant aid to erase their tuition (Chart 26). And, again, the percent paying tuition in private institutions increases with income.

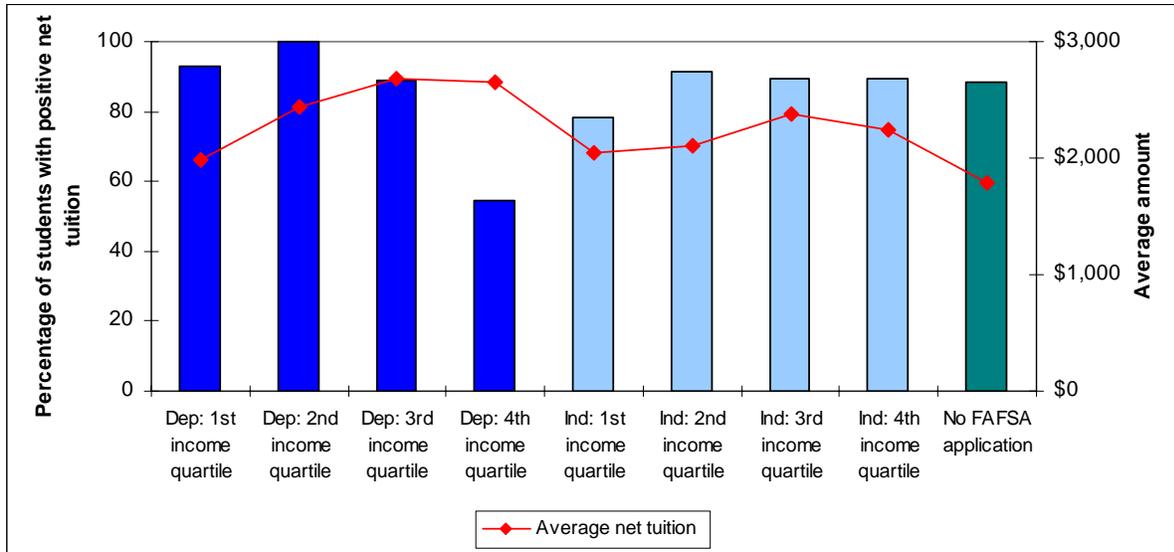
Chart 26.--Percentage of full-time students with positive net tuition and average tuition amount, private institutions: 2004



(See Table C12 in Appendix C for data.)

The story is not as equitable for part-time students attending private colleges in the state (Chart 27). Part-time dependent students in the highest income group were less likely to pay tuition than were those in the lower income groups. This may reflect variations in institutional aid available to students in different institutions. Higher-income students may attend institutions with more resources than lower-income students. These results may also reflect that this chart represents a small number of students.

Chart 27.--Percentage of part-time students with positive net tuition and average tuition amount, private institutions: 2004



(See Table C12 in Appendix C for data.)

VI. Approaches in Other States

The higher education prices paid by students and their families are a function of a series of decisions that often are not coordinated. A public agency in each state has responsibility for setting tuition and fees in public institutions; individual private institutions set their own. Often, decisions about funding for state student aid programs are made without consideration for tuition. The federal government provides grant assistance to low-income students and supports a rapidly growing student loan program. Complicating the picture is a network of private and institutional scholarships and student assistance programs from a number of sources.

The resulting price that students pay, called net price, is often a mystery to all concerned. Net price is the student's price of attendance after grant aid is distributed. Out-of-pocket cost is the price the student pays after all grant and loan aid is distributed. An alternate measure is family net price, indicating the student's remaining cost after grants and expected family contribution (EFC) are subtracted from the price of attendance. These measures provide a better indicator of the price paid by students and the effort required to attend college than does the published price of attendance.

A. AFFORDABILITY REQUIRES A PARTNERSHIP

Assuring affordability in this system requires a partnership between students and their families, the federal government, state government, institutions and the private sector (The College Board, January 2003). Kentucky needs to consider the role of each participant to assure that all students can afford to attend college if they are qualified. Additionally, Kentucky needs a clear set of principles to guide day-to-day decisions. According to the College Board, the purpose of student aid is to assist financially needy students in closing the gap between the price of college attendance and the family's ability to pay. That should be a foundation for maintaining an affordable higher education system.

Perhaps the most difficult achievement is to provide the consistent funding necessary to maintain affordability throughout the business cycle. When state funds are limited, student aid appropriations are frozen or cut and tuition often increases. An important part of a commitment to affordability is making sure that increases in tuition are linked to increases in need-based aid. Two states (Louisiana and Florida) are considering legislation to link increases in need-based aid to increases in tuition (Schmidt, May 13).

1. Keep student aid concentrated on low-income students

Given the political pressure to broaden eligibility for financial aid, keeping funds concentrated on low-income students is difficult to do. The College Board recommends that growth in merit programs should not be at the expense of need-based funding. Further, according to the Civil Rights Project Report (2002), state merit aid programs have done little to improve affordability. Over 90 percent of expenditures on HOPE scholarships in Georgia went to students who would have attended college anyway. In Florida and Michigan, grants were disproportionately awarded

to racial majority students and students in wealthier communities. New Mexico's program had no impact on access, but it did shift some students from two- to four-year institutions. Eighty percent of the recipients in New Mexico's plan were above the state median income.

2. *Measure progress*

In order to monitor the changing financial mix, Kentucky needs useful data that provide a measurement of college affordability for students with varying ability to pay. Regular summary reports of the prices paid to attend college in Kentucky will allow policymakers to track changes in affordability in a meaningful way.

3. *Defining the Partnership*

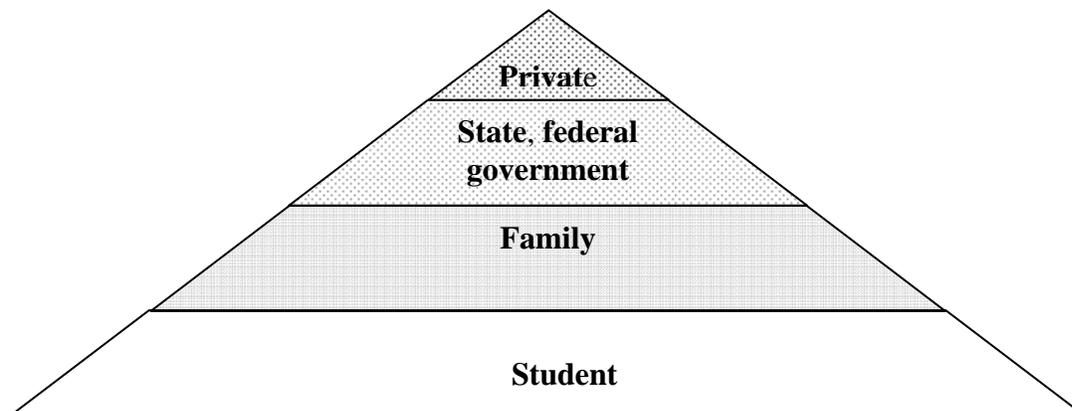
In addition to government and private sources, students and families have a responsibility to pay for college. The goal is to determine the fair share of the price of education that should be paid by each participant:

1. Student
2. Family
3. State government
4. Federal government
5. Private and institutional resources

One way to think about responsibility is deciding who benefits. Higher education has both personal and public benefits.

The pyramid of financing depicted in Figure 4 shows the sequence of responsibility for the different entities.

Figure 4.--Financial support pyramid for undergraduates



a) Family Share

Students are the primary beneficiaries of education and should pay a reasonable amount toward their own education. Parents are traditionally expected to support students within their capacity to help. The federal needs analysis system allocates a share of discretionary income to pay for college costs.

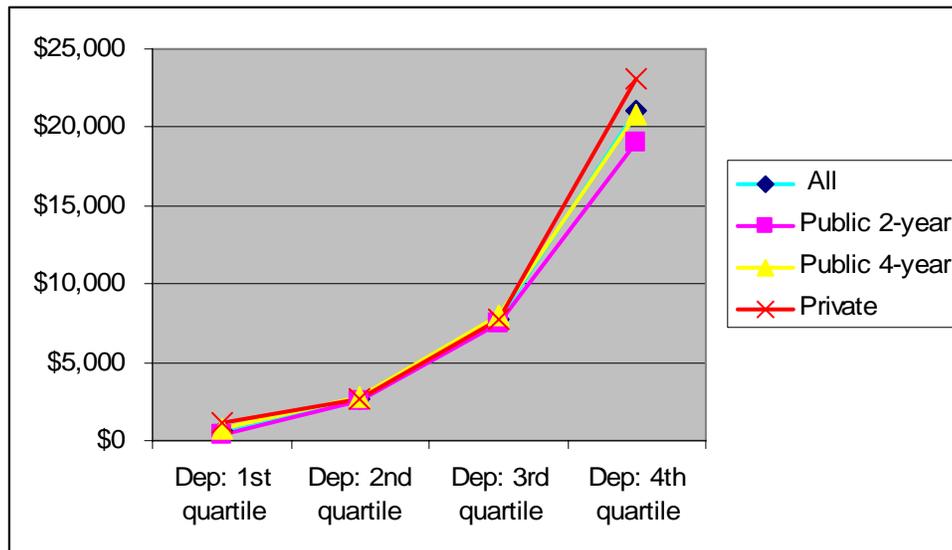
Family ability to pay for college increases more quickly than income. Table 11 shows the income ranges of by income quartile for full-time dependent students in Kentucky who applied for student aid. The income calculation is that used in the federal methodology.

Table 11.—Income Range for full-time dependent Kentucky students who applied for aid: Fall 2004

Income quartile	Income Range
Lowest quartile	Less than \$24,100
Second quartile	\$24,101 to \$45,200
Third quartile	\$45,201 to \$73,899
Top quartile	More than \$73,900

The EFC is based on the amount of discretionary income available to families after basic expenses are met. The EFC calculation takes into account income, available assets, family size, number of family members in college and extraordinary expenses. Most students and families in the fourth income quartile can pay their own expenses. The majority of those in the lowest income quartile can contribute very little from family resources and need the most help to attend college. Chart 28 displays the average EFC within each range.

Chart 28.—Average EFC for full-time dependent undergraduates in Kentucky, by income quartile: Fall 2004



b) Public share

States and local tax agencies support institutions so they can provide education at a discounted price. Some of this support goes directly to institutions, some goes to the student and some is available through the tax code in terms of foregone taxes (tuition tax credits, property taxes, corporate taxes and tax-exempt contributions). We do not have any direct measure of the value of the tax subsidy, so it is not included in any of the analyses.

Federal government agencies provide grants to institutions; such grants are usually limited to a specific purpose. Most of the federal money, however, goes to students in the form of grants or guaranteed loans.

c) Private share

Private entities may provide funds to institutions or to students. These funds are usually discretionary. Private student aid may come from general institutional funds (unfunded) or from earmarked sources (funded).

Examples of state approaches to affordability vary, largely based on state history. Generally there is a continuum between low-tuition, low-aid states and high-tuition, high-aid states. There are few examples of coherent policy integration to guide state decisions about affordability. Some states have worked on a specific approach that helps them coordinate resources to assure that all students can pay for education. Two specific and very different examples in Minnesota and Colorado are discussed below.

B. MINNESOTA

Minnesota uses perhaps the most coherent state model of managing affordability. An example of their approach helps explain how they integrate funds from different sources to assure affordability. The approach is called the *Design for Shared Responsibility*, and it defines an appropriate share of support to be provided by each of the funding sources.

The Student: Shared responsibility starts with the student's investment in his or her own future:

- Amount is a percentage of the recognized price of attendance.
- Students who choose more expensive institutions or programs have larger student shares.
- Students can pay their share out of earnings, savings, loans, scholarships and privately-funded grants.

The Family: The family's responsibility is based on ability to pay:

- Low-income families may not be expected to help pay.
- Higher-income families may be assigned all costs not assigned to the student.

The Taxpayer (if required): Federal and state taxpayers fill any gap between the recognized price and the student and family shares:

- Pell Grant
- Minnesota State Grant

Example

- Actual tuition and fees are used as a base amount, up to a recognized maximum.
- A standard allowance is provided for living and miscellaneous expenses.

Price of attendance

Tuition and Fees.....	\$ 4,795
<u>Living & Miscellaneous Expenses....</u>	<u>\$ 5,205</u>
Recognized Price of Attendance	\$10,000

Determining the Shared Responsibility to Pay

Assigned Student Share (46%)	\$ 4,600
<u>Assigned Family Share (EFC)</u>	<u>\$ 1,500</u>
Total student and family share	\$ 6,100

Eligibility for Federal Pell Grant	\$ 2,000
<u>Student’s State Grant</u>	<u>\$ 1,900</u>
Total Taxpayer Share	\$ 3,900

The value of this approach is that it defines a role for each participant. The formula, once it is explained, can be understood by the participants, and they can see how funds are distributed. The most resistance comes from the fact that it asks for a sizeable contribution from students. This contribution assumes that a student could work at minimum wage and earn a sufficient amount over the course of the year. At the same time, the large expected student contribution helps generate support among legislators who may be uncomfortable with a program that does not ask enough from students.

In its current form, the formula provides the majority of state aid to low- and middle-income students attending four-year institutions. The combination of student contribution and Pell grants covers most of the costs of attendance for most community college students.

In summary, the method accomplishes the following:

- Considers all expenses that students must pay, not just tuition.
- Assumes that students bear the *significant* and *first* responsibility for paying for college.
- Controls the costs that are assigned to students so that they can be managed with work, loans, savings and other grants.
- Protects students from low- and moderate-income families from the effects of price increases.
- Allows the state to adapt to changing conditions by establishing in law:
 - The amount of living and miscellaneous expenses recognized.
 - The maximum tuition and fees recognized.
 - The percent of costs assigned to students.
 - Modifications to the federal needs analysis used to determine the family’s ability to pay.

Minnesota policymakers have been willing to provide adequate funding for the program for 20 years. One reason for the legislative support is the assignment of first responsibility to students, which is consistent with public opinion that students are the prime beneficiaries of postsecondary education. The method produces a defensible distribution of responsibility among students, families and taxpayers, and policymakers are inclined to support it.

The Minnesota model supports student choice by taking price into account. Sufficient options exist to allow state policymakers to make decisions within the model based on funding availability and an assessment of current affordability. The only application needed is the FAFSA. The program supports both full- and part-time students. The cost of the program is predictable in the short run based on enrollment assumptions.

The specific assumptions used in Minnesota could be adapted to accommodate circumstances in Kentucky.

C. COLORADO

Starting this summer, Colorado will begin spending two-thirds of total state higher education appropriations directly on students. The remaining one-third will go to institutions. The program, called the *College Opportunity Fund*, awards up to \$2,400 per semester to each student for up to five years of college. It works like a voucher: a student registers for the stipend and enrolls in school, the school then collects the money from the state and applies it toward tuition.

Colorado is the first state in the nation to establish a stipend plan for higher education. The new law requires colleges and universities to sign performance contracts with the state in order to continue to receive state funding. In part, institutions support this approach as a way around sharp reductions in state support mandated by the rules of the Taxpayers' Bill of Rights (TABOR). As part of the new agreements, colleges and universities will be freed from much of the current state regulatory oversight. Low-income residents who enroll at some private colleges in the state could be eligible for one-half of the stipend amount that public college students would receive.

- **Tuition Increases Limited to Inflation.** This section of the contract creates a presumption that tuition should not be raised by more than the rate of inflation. Colleges and universities will be required to identify mandatory costs and to limit tuition and fee increases to no more than the inflationary amount by which those costs increase. The state will only consider tuition hikes above this amount if a school specifically identifies how the increased tuition will be used to improve quality and access for students.
- **Rigorous, Streamlined Core Curriculum.** The contracts will require that schools implement the Colorado core curriculum, which is designed to ensure that students can graduate in four years having completed a rigorous core curriculum of math, science, history, writing and critical thinking. It is anticipated that the implementation of the Colorado core curriculum will improve access and retention by helping students who transfer among Colorado's public colleges each year.

- **Faculty Pay-for-Performance.** Colleges and universities will be required to establish for faculty members a pay plan that emphasizes teaching and research performance and then report to the state how performance is measured and the type of differential pay awarded to faculty based on performance.
- **Combating Grade Inflation.** The contracts require each school to put in place measures to address grade inflation and to publicly report data on the distribution of grades in each department.
- **Increased Student Access & Success.** Colleges and universities will be required to increase recruitment, retention and graduation rates for students, especially under-represented low-income, male and minority students. Each institution's contract will include specific numerical targets to improve retention and graduation rates.
- **Better-Prepared Teachers for K-12 Schools.** The contracts require that teacher candidates understand and use the data from the Colorado Student Assessment Program, work as student teachers in lower-achieving schools and study the differences in how boys and girls learn and behave. All faculty members who teach courses in content areas, such as math and science, are required to be fully-qualified professors in the school or department offering the courses.

Among the current state regulations that will be waived once a college is operating under a performance contract:

- **Taxpayer's Bill of Rights Restrictions.** Once a contract is signed, a school is allowed to accept stipends. By participating in the stipend program, institutions will qualify for enterprise status, thereby freeing the institutions from many of the requirements of TABOR.
- **Academic Programs.** Once the contracts have been signed, institutions are free from the regulatory approval process for new programs. This allows colleges to respond more quickly to workforce and other needs. The Colorado Commission on Higher Education's only review will be after the fact to ensure a program does not exceed an institution's role and mission.
- **Quality Indicator System.** Colleges will negotiate contracts with the Department of Higher Education and the governing board of each college and university system in the state. Each institution will have a performance contract that emphasizes statewide goals while acknowledging each institution's unique role and mission.

In a supplementary move, Colorado has passed legislation establishing a \$50-million trust fund that will annually award \$2.5 million in aid to low-income college students. To qualify for the awards, students must complete a college-preparatory curriculum in high school and be eligible for federal Pell grants. The scholarships awarded by the state trust fund will be capped at the

difference between each receiving student's Pell grant and his or her total college costs (Schmidt, 2005). A similar plan is under consideration in Oregon.

Proponents of the program believe that the approach will provide more political support than could be garnered for institutional funding. If the Legislature wants to cut higher education funding, they would have to reduce student stipends. The resulting change in families' lives would make the political consequences more immediate. Students and their families could become a vocal constituency encouraging the state to keep investing in higher education. On the other hand, critics worry that the funding will be inadequate.

At least two other states, Arizona and Michigan, are proposing that tuition cannot increase more rapidly than inflation (Fischer and Hebel, 2005). Michigan and Texas are considering tying the institutional freedom to raise tuition to the achievement of institutional performance goals.

These approaches speak to the concern of universities that, although they receive less help from the state, they still must abide by state regulations. Several other issues should be considered before moving in this direction.

- First, this approach only addresses one aspect of the affordability problem. It does not include federal and state responsibilities for student aid.
- Second, community colleges and regional four-year campuses do not have the same opportunities to develop alternative revenue sources or raise tuition as larger research universities.
- Third, the conditions of any contract between the institution and the state agency are negotiated and have the potential to become political. Recent debate between the University of Colorado and the Governor of Colorado on how much the University can increase tuition exemplifies this problem.

D. OTHER STATE APPROACHES

Other states and institutions have taken less inclusive approaches to addressing affordability. In most cases, states are looking for ways to moderate tuition increases. Tuition policy varies within states over time, so policies may change from what is described in the following list. However, the examples provide a good overview of the options for managing tuition in the public sector. Most of these examples can be found in the SHEEO publication *State Tuition, Fees and Financial Assistance Policies, 2002-03*.

1. Freeze Tuition for Each Incoming Student Cohort

The University of Kansas is proposing to set a single tuition rate for each incoming class. The rate would remain the same for each of the four years, similar to a fixed-rate mortgage. This approach is comparable to a tuition plan already in effect in Illinois.

2. Tie Tuition Increases to Inflation

Another tuition constraint, currently under consideration in Arizona, Mississippi and New York ties tuition increases to inflation. In New York, 2-year public tuition did not increase for eight years until a 28 percent jump in 2003, which was a shock to students and parents. The proposed policy would tie SUNY freshman tuition to the Higher Education Price Index (considering inflation of a market basket of goods that represent higher education purchases). This would result in more moderate increases over time for enrolled students.

Another measure being considered in some states would index tuition to the average family's ability to pay. *Measuring Up* defines "affordability" by the share of annual family income needed to pay for a year of college tuition. By this measure, college has become less affordable over recent years. Only the income of the wealthiest 20 percent of Americans families has kept pace with tuition increases. Over the past decade, tuition rose faster than median family income at four-year public colleges and universities in 41 states, and at two-year colleges in 36 states.

3. Incentives to Keep Tuition Low

Missouri has explored the possibility of offering incentives to institutions that keep tuition low and expand need-based aid. Florida and Georgia have tied funding of their merit aid programs to tuition. Raising tuition forces them to increase funding for the aid programs. State support for the aid program increases if the state reduces institutional support and raises tuition. In New Jersey, the state may audit institutions if tuition increases at an annual rate greater than 10 percent. Utah requires institutions to publicly announce their plans and hold hearings with students to discuss tuition increases and how the additional money will be spent.

4. Peer Comparisons

Most states use comparisons with other states as a consideration in setting tuition. For example, Nevada indexes tuition to the three-year median tuition in Western states.

5. Educational Expenditures

One possible option is to determine tuition based on a percentage of the total educational expenditures at an institution. Historically, planners have used 25 percent of total expenditures as a guideline. However, the percentage covered by tuition is higher than that. In 1991, tuition revenues covered 26.2 percent of total education expenditures at public institutions. By 1993, this had risen to 31 percent of revenue, and remained at that level for a decade. Since 2002, the share has grown to 35.8 percent. (*State Higher Education Finance, FY2004*, SHEEO)

6. Differential Tuition

The most frequent differential in tuition is between undergraduates and graduates and between degree credit and non-degree credit. Further, states have one tuition amount for in-state students

and a higher amount for students from out of state. Some states are charge differential tuition for expensive, high-demand programs. Distance education classes are sometimes priced differently than campus classes. And, other states charge a premium for enrolling in extra units. Allowing flexibility in the differentials can help maintain lower tuition for full-time undergraduates.

7. Summary and Implications for Tuition Policy

Leaders in public higher education institutions want the flexibility to increase tuition to protect themselves from fluctuations in state support. State political leaders are the focal point of criticism from discontented families when tuition begins to climb. This results in a natural tension between the desire to keep college affordable and having adequate resources to operate the institutions. In Kentucky, it is possible to increase tuition and protect lower-income students with offsetting increases in need-based grants. This approach would provide options for increasing tuition while protecting access for students with limited means. As it stands, Kentucky is a high aid, medium tuition state, which makes it more affordable than most others.

VII. College Savings Plans

A 2003 report from the Center for Social Development at Washington University in St. Louis, entitled *College Savings Plans and Individual Development Accounts: Potential for Partnership*, reviewed options for providing incentives for families to save for college.³ Most of these plans provide a state match for low-income families who save for college.

College savings plans, or “529” plans (named after the Internal Revenue Code section), are designed so individuals can make after-tax deposits for future higher education expenses (tuition, fees, books, supplies, and equipment) at colleges, universities, vocational schools or other post-secondary educational institutions. All 50 states and the District of Columbia have college savings plans. The problem with these plans is that low-income families may not have the resources to contribute to them on a regular basis.

One option is to provide an incentive for families to save for college. As of 2003, five states addressed this inequality by offering a savings match within their college savings plans. Match rates, match caps, and other plan features vary by state. For example, some states offer matches only in the first year of participation, while others impose an age requirement for match eligibility. Savings matches based on income may represent a growing trend, as Rhode Island and Maine have recently added this feature to their plans. Following is a brief summary of the five states offering matches as of 2003.

Rhode Island: Beginning in 2003, Rhode Island’s college savings plan, *CollegeBoundfund*, matches contributions up to \$500 per year based on family size and income. A 2:1 match (\$1,000 maximum per account) is offered to state-resident families with an adjusted gross income (AGI) at or below 200 percent of the poverty level, and families with an AGI between 201 percent and 300 percent of the poverty line are eligible for a 1:1 match (\$500 maximum per account) annually for five years. To be eligible for a match, the college savings plan account must be opened when the child is 10 years of age or younger.

Maine: In order to qualify for a match in the *NextGen College Investing Plan*, the AGI of state-resident families must be \$50,000 or less. Any new account with an initial contribution of at least \$50 may apply to receive a *NextGen Initial Matching Grant* of \$200. In addition, any existing account receiving contributions of at least \$200 may apply to receive a *NextGen Annual Matching Grant* of 25 percent of all amounts contributed, up to an annual maximum grant of \$100 for any one beneficiary.

Michigan: The *Michigan Education Savings Plan* provides a matching grant of \$1.00 for each \$3.00 contributed by state residents to their college savings plan. The lifetime maximum state match is \$200, available during the first year of enrollment only, if the beneficiary is six years

³ Margaret Clancy, *College Savings Plans and Individual Development Accounts: Potential for Partnership*, Policy Report, Center for Social Development Washington University, March 2003

old or younger. To be eligible for the match, the beneficiary must reside in a household with a family income of \$80,000 or less.

Minnesota: The *Minnesota College Savings Plan* provides an annual matching grant to eligible state-resident families contributing at least \$200 to the college savings plan during a calendar year. Maximum matching grants are \$300 per year and the match rate is linked to AGI: families with a federal AGI of \$50,000 or less may receive a matching grant of up to 15 percent of their contributions during the year, and families earning between \$50,000 and \$80,000 may receive up to 5 percent of their contributions. Account owners must apply for the grant no later than December 31 of each year.

Louisiana: The *Louisiana Student Tuition Assistance & Revenue Trust (START)* college savings plan matches a portion of deposits made by all state residents, with the match rate dependent on the AGI of the account owner. The savings match rate ranges from a high of 14 percent of contributions for those families with an AGI up to \$29,999 to a low of 2 percent for incomes of \$100,000 and above.

According to the report, other states offer variations on providing incentives for families to save for college through Individual Development Accounts. In the long run, matched savings plans may provide a budget-friendly way to help families send their children to college and help reduce borrowing.

VIII. Examining International Strategies

It is well to keep two key facts in mind when examining international practices aimed at increasing participation in higher education. The first is that America is a leader in providing access. Its higher education system has been providing mass higher education longer than any other country; moreover, it has always done so where students were paying tuition and fees. It has, therefore, faced these issues longer than most and has set the standard to which other most other countries aspire.

The second is that the quality of “evidence” about the effects of policies and programs in other countries is inferior to that available in the United States. Most countries have not evaluated the effectiveness of their programs, and to the extent they have, the research is less sophisticated than that in the United States.

As a result, a look at international practices for widening participation does not reveal a great deal that is not already available in the United States. It does, however, identify strategies that translate into other settings and which are, if not “proven” effective, then at least believed by practitioners to be effective.

Several countries have used tuition and financial aid strategies to improve participation, particularly for lower-income students. These strategies can be categorized into four major groups.

A. REDUCING/ELIMINATING TUITION

Reducing or eliminating tuition is the most obvious strategy for increasing access to postsecondary education, but it is not always a successful one. Three international jurisdictions have implemented this strategy in the past decade: Ireland and the Canadian provinces of Manitoba and Newfoundland.

Ireland

Ireland abolished tuition and fees in 1996 for first-time, full-time students due to widespread concern about the equity of their grant programs. The initiative aimed to remove psychological and financial barriers to participation.

Prior to the introduction of tuition and fees, participation in higher education was rising sharply, and this trend continued after the elimination of fees. It is difficult to conclude that the elimination of fees was the cause of any subsequent increase in enrollments. Neither did the post-1996 increase in enrollment change the socio-economic composition of college entrants; students from all backgrounds increased their participation rates in roughly the same proportion.

Manitoba

In the early 1990s, tuition and fees at Manitoba’s universities rose precipitously, with annual increases averaging 20 percent between 1990–91 and 1992–93, after which they rose 5 to 6 percent annually. A further double-digit increase in 1999–00 led to student protests. However, in

1999 the New Democratic Party won the provincial election. Tuition was lowered by 10 percent in 2000–01 at all universities and colleges in the province, and has remained frozen at that level (Swail, 2004).

There was a correlation between enrollments and tuition in Manitoba. During the period of tuition increases, between 1992-93 and 1999-00, enrollment fell from 37,575 to 30,695, almost entirely due to a drop in part-time enrollment (full-time enrollment stayed constant at 22,000). However, in the years following the tuition reduction, enrollment surpassed its earlier levels, reaching an estimated 39,367 by 2003-04, with gains split more or less evenly between full- and part-time students (Junor & Usher, 2004). Because enrollments all across Canada rose by about 20 percent over the same period (Junor & Usher, 2004), tuition reduction alone cannot be considered the cause.

Newfoundland

University tuition rose for many years in Newfoundland and Labrador until a provincial government was elected, promising to reduce tuition by 25 percent over three years. The first decrease of 10 percent was introduced in 2001–02, followed by a second 10 percent reduction in 2002–03. A final cut of 5 percent was implemented in the 2003–04 academic year.

As in Manitoba, enrollments at Newfoundland’s university were declining in the years prior to the tuition cut; from 17,850 in 1992-93 to 15,700 in 2000-01 (although given the province’s rapidly declining population, the participation rate was actually staying constant). In the three years following the tuition cut, enrollment rose to an estimated 17,092 in 2003-04.

While a superficial correlation exists between reduced tuition and increased participation, the increase in participation may reflect a nationwide phenomenon. Newfoundland’s enrollment increase was in fact smaller than that seen in the rest of the country, which suggests that claims about the relationship between tuition changes and enrollments must be viewed with some caution.

Summary on Reducing/Eliminating Tuition

The three experiments in lowering tuition occurred at a time of rising enrollment and therefore have been credited with at least some success in improving access to education. However, in one case (Ireland) the increases in the participation rate began prior to the tuition decrease, thus calling into question the role of tuition as a catalyst of the enrollment shift. In the other two cases, broader national forces may have influenced the increase in enrollments. Moreover, none of these cases demonstrate any “widening” of participation— increases in enrollment left the socio-economic composition of the student body essentially unchanged.

B. INCREASING THE AVAILABILITY OF GRANTS

Few countries have increased grants to promote access to education. The three exceptions to this are Sweden, Germany and Canada.

Sweden

The Swedish system started out as a loan program and became more grant-based over time. A small hybrid need-and-merit based loan program existed prior to WWI, and grants were introduced in the 1960s to create a 75-25 percent loan-grant award (1965). The grant share of assistance diminished considerably in the 1980s (to a low of 6 percent) but increased over the 1990s to its present level of 34.5 percent.

Swedish grants are not needs-tested; 100 percent of students receive them (Vossensteyn, 2004). This means that postsecondary education is inexpensive in Sweden – indeed, more affordable than anywhere else in the world. But this does not mean that Sweden has an especially accessible system of education; our literature search was unable to find any studies relating to the effect of student financial assistance on participation or access in Sweden.

Germany

Germany passed a law to promote education in 1971 and created a means-tested student assistance program that required parental contributions. The program has a federal-provincial funding arrangement similar to Canada's. The federal government provides 65 percent of funds and the provinces provide the other 35 percent. In the beginning, the program provided a grant. In 1974, the award was made part-loan, part-grant, and in 1983, in response to budgetary pressure, awards became interest-free loans.

Oberg (1997) investigated the “natural policy experiment” of the period from 1983-1991, when grants were eliminated and then re-introduced. Oberg's data suggest that the abolition of grants was followed by a decrease in participation rates for students from all socio-economic backgrounds and that the re-introduction of grants resulted in a large increase in participation across all socio-economic groups. In other words, grants and participation rates moved in tandem: when one increased, so did the other. Oberg's analysis provides strong evidence that, in the German case, grants had a significant effect on participation.

Canada

In 1998, the Government of Canada created the Canada Millennium Scholarship Foundation, which was endowed with \$2.5 billion to dispense grants of roughly \$3,000 to 100,000 students annually for a period of 10 years. This \$300 million/year injection should have increased non-repayable aid in Canada by 33 percent. However, in Canada, the provincial governments are responsible for “packaging” aid, so the introduction of a new source of aid led to displacement of existing grant dollars (a version of the “last dollar” problem in student aid in the United States). A review of the effectiveness of the Foundation concluded that this program had limited effect on access to education.

Summary on Increases in the Availability of Grants

The international evidence does not contradict the assumption that increasing grant assistance increases and widens participation in higher education. On the other hand, the international evidence supporting the position is not very convincing. Grants may have an effect, but the effect appears to depend substantially on the context in which they are introduced and how they are targeted.

C. INCREASING LOANS

Several countries have recently implemented increases in loan limits; however, since these often occur in conjunction with changes in tuition policy, they will be considered separately. Here we review Canada's experience with increased loan ceilings without raising tuition.

Prior to 1994, Canada would meet the first \$105 of need per week of study (effectively, \$3,570 per academic year) through a student loan. Need above this was the responsibility of provincial governments, and was generally met through grants. In 1994, the Government of Canada began providing up to 60 percent of *all* assistance, up to a maximum of \$165/week. This new cost-sharing rule meant that all provinces now had to share in meeting need from the first dollar, which substantially increased their program costs. Many provinces faced rising deficits, so they changed their grant programs into loan programs. In many provinces, the loan limit went from \$105/week to \$270/week, some of which was offset by the elimination of provincial grants. This led to a large increase in borrowing.

This jump in borrowing had no effect on enrollment, which remained stable between 1992 and 1999 (Junor & Usher, 2004). The increased borrowing coincided with an increase in the participation of lower-income students (Corak, Lipps, & Zhao, 2003). However, the evidence suggests that the increase in low-income students' participation rates may have begun prior to the change in loan policy. The results are intriguing, but circumstantial.

D. INCREASES IN TUITION AND FEES COMBINED WITH LARGE INCREASES IN LOANS.

Australia, New Zealand, the United Kingdom and China introduced fees and student loans (hitherto unknown in either Australia or the United Kingdom) as a compensatory measure. In each country, the loan programs were income contingent repayment (Usher, 2005), though this repayment issue is a side note to the main point, which is the increased availability of loans.

Increasing fees to increase participation may seem counter-intuitive, but the logic is straightforward. In many countries, the barrier to increasing participation is institutional capacity rather than cost (Swail & Heller, 2004). Where public finances are strained, the only way to increase capacity is through tuition and fees (Johnstone, 2002). Capacity building is funded by increased fees with student loans to help students pay the higher price. The following describe the experiences of the four countries.

Australia

In 1988, Australia introduced a tuition known as "HECS," a charge of about \$1,800 Australian per year, which could either be paid "upfront" or on an income-contingent basis. If paid on an income-contingent basis, the debt carries no interest; if it is paid up front, students receive a 15 percent discount. In 1996, HECS charges were changed so that there was differential charging by program of study, with all programs being categorized as belonging to one of three "bands" (currently set at approximately A\$4,800, A\$6,800 and A\$8,000).

The introduction of fees and loans in Australia was associated with increases in higher education participation. From 1989 (the year the program was introduced) to 1994, participation in Australian universities increased by 33 percent, and between 1994 and 1999 it increased by another 17 percent, for a decade-long increase of 55 percent. This compares to growth of 23 percent in the five years prior to the introduction of tuition (Abbot & Doucoliagos, 2003). HECS did not result in a decrease in participation for prospective students from relatively poor families, although the absolute increases were slightly higher for relatively advantaged students (Andrews, 1999).

New Zealand

Inspired by Australia, New Zealand introduced tuition and fees in 1990 and a companion student loan program in 1992 (Chapman, 2005). Tuition was set initially at about NZ\$1,200, but has since increased to between NZ\$3,500 and NZ\$4,500, depending on the program.

Participation rates in New Zealand increased after the introduction of tuition and fees. In 1990, shortly before the introduction of fees, the participation rate in higher education among the 18-24 age group was just over 20 percent. By 2001, the figure had risen to nearly 35 percent (McLaughlin, 2003).

New Zealand uses indirect measures of SES status (race, income decile of the service area of the high school attended, income of community of origin, etc.) rather than direct measurement of parental income or socio-economic status. Between 1997 and 2000, the proportion of students from low-income communities who went on to tertiary education rose from 18 to 26 percent and the proportion of students from decile one (the lowest decile) schools who went on to university rose 50 percent. Among Maoris, participation doubled between 1997 and 2003 (LaRocque, 2004).

United Kingdom⁴

The British government introduced tuition and fees (initially £1,000 annually) in the 1998–1999 academic year. The plan was a response to strong demands for new resources for higher education after years of declining support (Walker, 1997). Initial enrollment data following the introduction of tuition and fees suggest that the increase in tuition did not influence enrollments, apart from a slight increase in the number of part-time students. The evidence shows that the introduction of fees has had minimal effect on the participation of students from lower-income neighborhoods (Higher Education Funding Council for England, 2005).

China

In 1996, the Government of China decided to increase the size of its universities. The goal was to treble enrollments by asking institutions to increase their incoming classes by 50 percent for three years over the period 1997-1999 (Shen and Li, 2003). This was funded in part by tuition and fees of approximately 5,000 renminbi, which, in addition to living expenses (students in China are required to live on campus) meant that educational costs were approaching 100 percent of GDP/capita, a much higher level than anything seen in OECD countries.

⁴ Technically, England and Wales, as the Scottish Executive has followed a somewhat different policy on tuition.

Since the introduction of this policy, enrollments in China have risen from roughly 6-7 million students to around 20 million students. Much of this expansion was possible because of income from fees.

The introduction of student loans does not account for this increased enrollment. Over the five years the student loan program has been in operation, fewer than 1.5 million students have borrowed to finance their education (Bangyan, 2005). Unlike in most OECD countries, most private higher education expenditures are financed directly from family savings. Chinese families, on average, pay roughly 65 percent of total student costs through savings (Li, 2005).

In three of the four countries examined, the raising of tuition and fees accompanied by the introduction of loans was associated with an increase in participation (although in one case, the effect of student loans was negligible). New Zealand increased participation of previously unrepresented students, although the connection to the increase in fees and loans is tenuous. In the other two countries with data, Australia and the UK, no change in participation by socio-economic group was found. This result does not mean that the goal of widening participation was not met; given that participation from these groups *may* have increased in the absence of tuition and fees, we cannot say with certainty that the policy may not have hindered participation.

E. WHAT DO WE LEARN FROM OTHER NATIONS?

It is difficult to generalize from other nations because their histories and traditions differ from ours. There is not the same diversity of education nor the same relationship between state and federal government responsibility for education. On a macro level, it appears that increasing capacity of institutions to reach out to students may be more important in increasing access than manipulating the price of attendance through grants, loans and tuitions.

IX. Other Approaches to Improving Affordability

Examples of outreach programs from other states in making college affordable do not always include direct financial support. Ann Coles (2003) makes several suggestions about college affordability that do not include direct financial support. Generally, this type of approach concentrates on reducing costs by improving efficiency. Her recommendations include:

1. Reducing the time it takes for students to earn a college degree by expanding opportunities for students to earn college credits while in high school and aligning high school curricula with the first-year expectations of colleges.
2. Providing families with better information and guidance before students enroll in college.
3. Facilitating movement of students between lower-cost and higher-cost colleges.
4. Rewarding college readiness and college persistence.

A. INDIANA

Indiana's P-16 Plan for Improving Student Achievement is an inclusive effort to bring academic standards in line and provide information for students, parents and counselors to help students anticipate college costs and requirements. It includes a section on the affordability of college. Again, this set of suggestions defines strategic goals; unlike the Minnesota plan, it does not include specific rules. The greatest success in Indiana has been realized through improved counseling and academic preparation.

The language in the affordability section of Indiana's strategic plan reads as follows:

“Ensure that access to higher education is not challenged by cost of attendance by adopting a coherent student assistance and institutional funding policy that is coordinated with expectations regarding resident undergraduate tuition and fees.

- Sustain institutional funding for state universities at levels that will allow for increased quality without resulting in significant increases in residential undergraduate tuition and fees.
- Ensure tuition and fees at Indiana's two-year colleges are no higher than the national average.
- Adopt a long-range policy for providing need-based assistance to academically-prepared resident undergraduate students reflecting the financial needs of those in different sectors of higher education.”

These outreach programs are vulnerable to budget cuts. Even though Indiana had an exemplary approach to pre-college preparation, the support for the program has been sharply reduced. In part, this is because these programs fall between sectors and do not have the necessary institutional support for funding when times get tough.

Kentucky has already made progress on this front. The GoHigher Kentucky website and the state's commitment to GEAR UP and other outreach programs provide an opportunity for a

coordinated state effort to make sure that parents, counsellors and students have the college-related information they need, when they need it.

B. ARKANSAS

The Arkansas Career Pathways Pilot Project represents an effort to reach out to adult and working students. The project has two key goals.

The first goal is to improve access to college-level training for working adults. Adults face unique challenges in terms of applying to and preparing for college. Those challenges include:

- A lack of knowledge about available training and related career opportunities;
- How to successfully apply for college;
- How to prepare to succeed in college coursework;
- How to connect to resources such as financial aid, child care and transportation, which are critical to helping working adults balance the responsibilities of school, family and work.

The second key goal is to improve the number of adult students who complete a college-level training program, whether it be a short-term Certificate of Proficiency program or an Associate or Bachelor Degree program. Adult students face unique challenges in terms of completing college. Chief among them is a lack of opportunities to get preparatory assistance in a manner that is suited to adult students, particularly those working full-time.

Students who are unprepared and lack basic academic skills and other college-relevant skills often struggle to complete their coursework, as indicated by the fact that only 16 percent of students requiring remedial education complete their studies in three years.

Other key challenges to completion that adult students often face include:

- Inconvenient course scheduling, especially a lack of evening and weekend course offerings which are convenient for working adults
- Few programs can be completed in a semester or two and articulate with advanced training options, such as Associate or Bachelor degrees, to create a seamless pathway of continuing higher education opportunities
- Too many programs are not directly connected to labor market needs or real job opportunities, which is the key reason many adults pursue additional training
- A lack of effective and continuing student counseling and mentoring, which helps adult students to:
 - Determine required courses and continuing education opportunities;
 - Identify and address unexpected barriers to completion of their studies;
 - Understand and connect to the job opportunities available to them during and/or upon completion of their studies.

The Career Pathways Pilot Project helps adult students overcome all of the above challenges. The project provides an alternative higher education service geared toward working adults. The prevalent approach at most colleges serves traditional-age students who enroll in college full-time immediately after high school. If successful, this alternative model will help two and four-year colleges increase enrollment and completion among adults.

C. INTERNATIONAL EXAMPLES OF NON-FINANCIAL AID STRATEGIES

Few foreign government programs tackle non-financial barriers to education among traditional-age students. Efforts to overcome non-financial barriers among traditional students are generally left to institutions. The exception to this rule is Great Britain where some national goals have been set. The national initiatives most often address the needs of older learners or, in a few cases, for specific minority populations (notably Aboriginals).

To the extent that other countries see barriers to postsecondary education in the way Americans do, the proposed solutions are not always the same. Take, for instance, the issue of cultural capital – that is, the deficits of motivation, family encouragement, and guidance that low-income youth have (on average) when compared with higher-income youth. In the United States, the response to this problem has been the creation of early intervention programs to make it easier for them to enter college.

In Europe, the problem is often viewed from the other perspective – that *institutions'* expectations are too high, and that institutions have to be made less elitist to make it easier for individuals with lower levels of cultural resources to have access to higher education (what one commentator refers to as “in-reach” as opposed to “outreach” – see Osborne, 2003). Specific plans to make institutions less elite have been limited, with the exception of the creation of new institutions in England in the early 1990s when a large number of former polytechnics were given university status.

To the degree that foreign governments are designing early intervention programs, they are using American research and American programs as guides. This can be seen from the following short overview of major programs in each country.

United Kingdom

The main early intervention program in the United Kingdom is *Aimhigher*. The purpose of *Aimhigher* is to raise aspirations and raise the academic attainment of traditionally excluded youth. The program provides information, advice, and guidance to potential HE students, their teachers and parents. The methods include organizing summer schools, taster days, master classes and mentoring schemes to raise the aspirations and attainment of young people with the potential to enter HE. Employers, trainers and training partners are engaged to bring students from vocational careers into higher education and, more generally, encouraging those in the workplace to undertake distance learning.

Funding and project “themes” are determined and distributed nationally, but specific projects are undertaken regionally and delivered by individual schools. Some examples of national themes include:

- “AchieveAbility,” which is intended to help youth with dyslexia move into higher education;
- “Chemistry - the Next Generation;”
- “Higher Education Gateway for the Gifted and Talented;”
- “Raising Aspirations into Science and Engineering;” and

- “Raising Attainment, Awareness and Aspirations Through Football.”

Institutions have also devised approaches to widen participation. Successes include the “Step-Up to Science Project” at the University of Ulster, which encourages low-income youth to pursue science-related higher education by raising educational attainment and aspirations (see O’Kane & Trotman, 2001) and the use of “Higher Education Foundation Courses” at Northumbria University to improve the transition — and hence the retention rates — of mature students to higher education (see Crane & Harrison, 2001).

Australia

For much of the 1990s, the Australian Government targeted its participation-widening efforts on six disadvantaged groups:

- people from socio-economically disadvantaged backgrounds;
- aboriginal and Torres Strait islander people;
- women;
- people from non-English-speaking backgrounds;
- people with disabilities; and
- people from rural and isolated communities (see DEET, 1990).

Specific targets and deadlines were set for achieving greater participation of these groups in higher education. In addition, institutions were required to develop individual equity plans which took account of the national plan, integrated equity objectives into their financial plans and monitored and reported progress. The Federal Government provided Equity Funds competitively to encourage institutions to propose innovative programs.

Despite this effort, a 1996 review found that with the exception of women, none of the identified groups had made significant progress (HEC, 1996). This may have been because the programs were ineffective or the introduction of tuition and fees exerted a countervailing effect. A change of government in 1996 resulted in no new initiatives being supported and reduction of monitoring and reporting on under-represented groups.

In Australia, underrepresented groups are targeted through specific admissions programs such as reserving a certain number of spaces at an institution, much more like an affirmative action quota, and given extra financial and non-financial support. These programs are local-level initiatives, not national.

One example of this is the University of Technology Sydney’s (UTS) InpUTS program. This program is open to students regardless of whether or not they have finished high school and allows some applicants (see below) to enter a UTS course with a below-acceptable entry score, in recognition of their educational disadvantage and limited opportunities to prepare for university entrance. Criteria for inpUTS include:

- interrupted schooling,
- severe family disruption,
- excessive family responsibilities,
- English-language difficulty,

- attending a disadvantaged or isolated school,
- financial hardship,
- adverse study conditions,
- personal illness or disability.

The university reserves 5 percent of undergraduate places for eligible inpUTS applicants and provides interest-free loans and small cash grants for those with severe financial hardship, along with remedial study support.

New Zealand

In New Zealand, under-representation is defined racially, with Maori and other Pacific Islanders identified as marginalized groups. The programs provide Maori students with “culturally appropriate” university experiences, either through Maori-controlled institutions called “Wananga,” or through special Maori-related programming at the country’s eight universities.

New Zealand has no national programs to improve participation among under-represented groups based on anything other than race. One institutional-level program of note, however, is the *Pathways to University* program at Auckland University. The program provides intensive social and academic support for a single “bridging” year to adult or “second-chance” learners who have already had some type of government-funded training at a Private Training Establishment and wish to move on to University study. Students in the program receive a special government scholarship during this year. After the bridging year, students are “mainstreamed” and receive no further special assistance (see Terrell, 2004).

Ireland

Ireland does not have any national outreach programs for students from under-represented or disadvantaged backgrounds. It does have the Higher Education Equality Unit, which is responsible for raising awareness and promoting national communications about equity in higher education, publishing research and developing recommendations on equality practices.

Limited government funding supports the hiring of program officers to run institutional programs (Carpenter, 2004). The most interesting of them is the University College of Dublin’s (UCD) New Era Program. Similar in conception to the Australian inpUTS approach, the New Era Program reserves places for students from 30 high schools that serve low-income populations. UCD also has an outreach program to these schools, which includes:

- career information workshops
- direct financial support to pupils for attendance at educational courses
- institutional visits by parents, teachers and pupils
- student shadowing
- student tutoring.

An additional feature of the outreach program is the Discovering University Course, which is a one-week university-based summer school for pre- and post-junior certificate students. Prior to entering the institution, New Era students are required to take a two-week summer bridging course which helps develop learning and study skills appropriate to higher education. Additional

tutorials and academic mentoring is available after entry to the university. Finally, there is a means-tested grant which is funded through private philanthropy (Carpenter, 2004).

Canada

Because education is a provincial jurisdiction in Canada, the country has no national-level early-intervention programs, with one exception. Canadian provinces have avoided introducing any early intervention programs and universities have only recently begun to consider outreach programs for under-represented groups (though first-year bridging programs have a reasonably long history). The idea of early intervention does not seem to be an attractive one for provincial governments. This may in part be due to the fact that gaps in participation between richer and poorer Canadians are not as acute as they are in the United States (see Frenette, 2005).

The early intervention program for aboriginal students provides the one exception to the rule. Of the provincial and institutional programs, Manitoba's ACCESS program is considered to be the "gold standard," combining significant financial assistance with social and academic support. Some ACCESS programs have a specific academic bent, such as the one for native students entering the Faculty of Medicine or Faculty of Engineering at the University of Manitoba.

Sweden

With free tuition and a generous set of non-means-tested loans and grants, few financial barriers to higher education exist in Sweden. To the extent that the Swedes perceive any barriers to education, they are the result of either distance (students from rural and remote areas) or culture (new immigrants). These problems have been dealt with through the creation of new institutions that are mandated to serve either particular areas or particular under-represented groups. Widening opportunities for students with disabilities is also an issue; institutions have been mandated to spend .15 percent of their income on special arrangements for these students (Forneng, 2003).

D. CONCLUSIONS

This review of government policies that address non-financial barriers to access shows that little is occurring in other nations that is not already being done in the United States. Involvement of US states in this area is far higher than it is among governments abroad.

Other countries practice "in-reach" rather than "outreach" – that is, they provide extra services to students from underrepresented groups who are already in the system, rather than devote resources to seeking out youth from these groups and raising their aspirations and academic performance. Only the UK has anything approaching an "outreach" strategy through its *Aimhigher* program. As a result, Kentucky is probably better advised to look at other models within the US, rather than abroad.

X. Comments by External Experts

David Longanecker reviewed all of the documents regarding Kentucky higher education finance issues, and identified five conditions that described the Kentucky situation.

- Kentucky has reasonably good and intentional finance policies within the system of higher education, but has rather poor intentionality with the many "partners" that help finance higher education in the state.
- There is no intentional consideration of how Kentucky's financing strategies, particularly tuition and state financial aid policies, interact with federal student aid policy, federal tuition tax credits or federal employer tax benefits.
- There is no intentional consideration of how Kentucky's finance strategies, particularly tuition and state financial aid policies, interact with private philanthropic scholarships. When private scholarships are used to "replace" state aid, you provide a strong disincentive for private giving. The Minnesota *Design for Shared Responsibility* intentionally encourages private giving, by considering it as a portion of what is expected from student earnings.
- Even within the system, there is little intentional relationship between how institutions and the state award merit aid and need-based).
- There are no intentional relationships with state employers, except for the "exceptional" programs, such as the one with UPS.

Kentucky has a strong ethic of support for financial aid, which is reflected in the three aid programs, but there is no strong logical basis for this ethic.

- Kentucky relies on the federal definition of "financial need," without really understanding what that means or whether it fits the state's needs.
- Unintentionally, wealthy students attending public universities are more likely to receive state financial aid than are financially needy students. This would be fine if it were the intention of state policy, but there is no indication that such is the intention.
- Again, the Minnesota *Design for Shared Responsibility* provides a logical, transparent policy that all the partners who *share responsibility* can understand and can accept as reasonable. It is neither liberal or conservative; it is simply quite practical and rational.

Looking back won't help Kentucky much when it wants to look forward to the future.

- Using the traditional financing mechanisms – that is, all else being equal – Kentucky can't afford the access and success goals it has established. There simply aren't enough dollars in the system, or efficiencies to be squeezed out, to *double the numbers*, which is the goal. The only way current practice could achieve the goals would be for higher education to get a larger share of current state resources or to have the overall level of state resources increase (through tax increases) to support more higher education. Neither of these is likely to happen.
- So future practice must differ from today's; and that almost certainly means that tuitions will have to increase, probably precipitously, need-based financial aid will have to

increase to provide an adequate safety net, and, yes, the state will have to kick in more, as well. Said differently, Kentucky can't get something for nothing.

- One huge gap in current policy is the failure to intentionally address the unique circumstances of independent students.
- Now, the answer for independent students isn't necessarily "lots more aid," as many contend. It may be simply better targeting of aid. This is an area that begs for intentional logical thought about how Kentucky wants to assist this population of students.
- Employers should be a significant part of the solution in addressing the needs of independent students.

It also may make sense with this population, which tends not to persist to completion, to focus on strategies that reward persistence and completion.

The absence of a sense of crisis in the general Kentucky population makes reform difficult.

Most Kentuckians are proud and reasonably comfortable. They believe in the state's system of higher education. And life is pretty good, even if the state's "comparative statistics" often look a little embarrassing. It is tough without a sense of criticality to rally support for substantive change. Kentucky needs a transparent, fetching message.

Dave Breneman was also at the preliminary presentation. His three major recommendations include simplifying the student aid application; defining affordability in terms of Kentucky family's ability to pay; and finally, making sure that adult students have access to adequate aid.

1) As states, the federal government, private agencies, and institutions struggle to provide access to low-income students, we have created an extraordinarily complicated financial aid system, more complex in many ways than the federal and state income tax forms and procedures. Thus, when Kentucky considers policy changes, it should keep this complexity in mind, and strive to find the most transparent methods of providing financial aid, even if the cost of transparency is somewhat less-focused targeting of aid. In many ways, the policy of high tuition, high aid has severely complicated student financing compared to the days long gone of universally low public university tuition.

2) We applaud the efforts in Kentucky to measure affordability relative to the incomes of families and students within the state, rather than indexing costs against charges of comparable institutions in nearby states. The National Center for Public Policy and Higher Education, which publishes the 50 biennial state report cards known as *Measuring Up* (2000, 2002, and 2004), has developed and used this framework for measuring affordability, and it is having an impact on the policy discussion in many states, including Kentucky. The effort is to focus on citizens rather than on the competing demands of the state institutions, in essence shifting the state policy discussion away from an institutional finance conversation to an access and affordability conversation regarding state citizens. The report from JBL Associates follows in this trend, and we applaud Kentucky for adopting this framework.

3) In order for Kentucky to achieve its goals for human capital, emphasis must be placed on the adult population, ensuring that older citizens who need and desire further education have the

opportunity to gain it. This means examining all forms of financial aid for their availability and applicability to older, part-time working students.

XI. Out-of-State Tuition

Emigration and immigration of students across state lines complicate the enrollment picture and adds a policy question about what public colleges and universities should charge undergraduates from other states. The following charts show the percent of the freshman class in each state that left the state to attend college in another state and the percent that immigrated from another state in 2002. Kentucky falls in the middle of the immigration/emigration range with slightly more students entering than leaving.

Figure 5. The percent of students emigrating from each state, Fall 2002

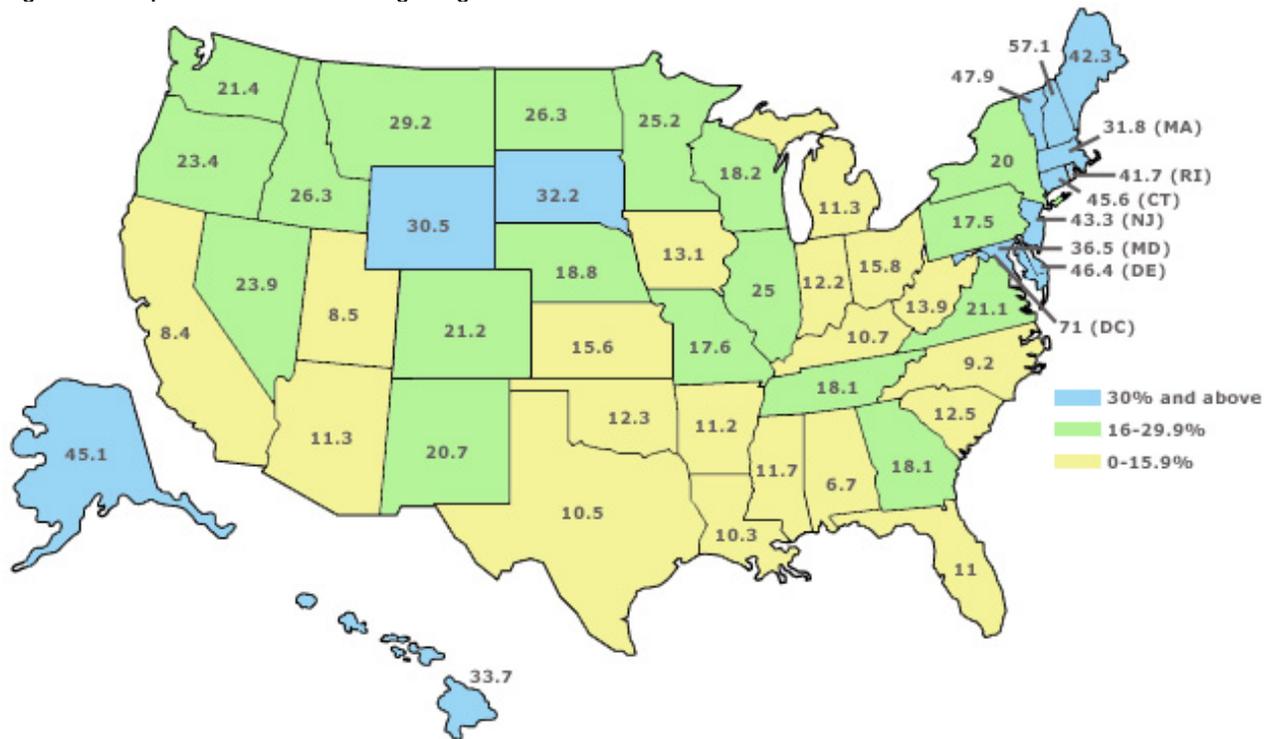
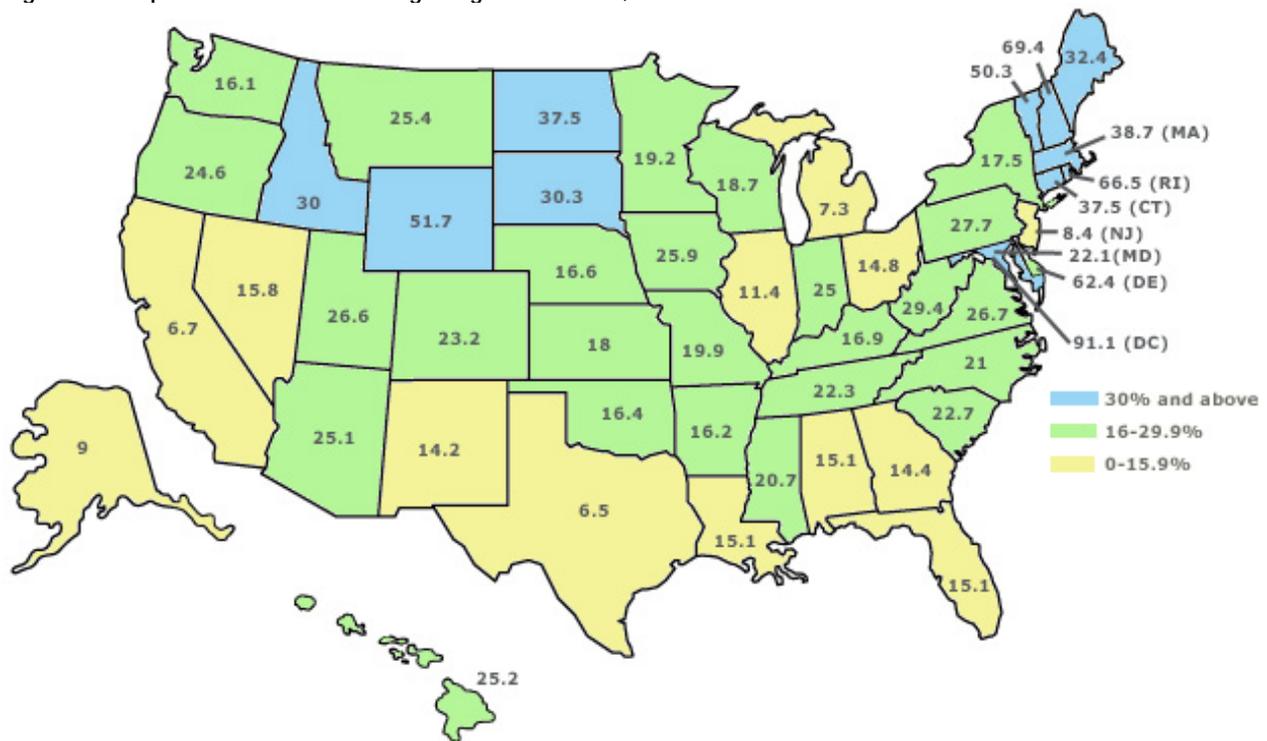


Figure 6. The percent of students immigrating to each state, Fall 2002



Generally, enrolling students from other states represents positive gains for Kentucky. Students from other states bring revenue to the institutions and may enrich and diversify the student body. They may also decide to stay in Kentucky after graduation. Assuming that out-of-state students are not displacing Kentucky students, their enrollment involves no real negative financial drain or loss of opportunity for Kentucky citizens. Out-of-state students represent a marginal increase in cost because the infrastructure and overhead costs of the institution are simply averaged over more students.

The arguments against enrolling out-of-state students are concerned with the possibility that Kentucky taxpayers are subsidizing students from other states. In order to meet this concern, Kentucky should charge a tuition that covers the direct costs of providing the education.

The following table shows the percent of incoming students at each Kentucky public university that are from Kentucky, along with the tuition charged to Kentucky residents and to students from other states. The enrollment data are from IPEDS.

Table 12. Out-of-State Tuition in Kentucky's Public 4-year Universities

Institution	Tuition		
	% in-state	In-state	Out-of-state
Kentucky State University	42%	\$3,668	\$9,312
Murray State University	63%	\$3,436	\$9,324
Western Kentucky University	72%	\$3,650	\$8,498
Northern Kentucky University	73%	\$3,744	\$7,992
University of Kentucky	79%	\$4,547	\$11,227
Morehead State University	79%	\$3,364	\$8,948
Eastern Kentucky University	83%	\$3,198	\$8,790
University of Louisville	88%	\$4,450	\$12,166

The following table shows the out-of-state tuition charged by surrounding states. With the exception of West Virginia, the surrounding states have higher average tuition for out-of-state students than does Kentucky. The average tuition of the surrounding states is \$11,874.

Table 13. Average Out-of-State Tuition Charged by Public 4-Year Institutions in Surrounding States

State	Tuition
Kentucky	\$9,686
Indiana	\$13,395
Missouri	\$11,279
Tennessee	\$12,070
W. Virginia	\$8,445
Illinois	\$12,392
Ohio	\$13,661

XII. Summary and Recommendations

A. DO CURRENT KENTUCKY FUNDING STRATEGIES INFLUENCE POSTSECONDARY EDUCATION ACCESS, RETENTION AND COMPLETION?

We are not able to comment on the effect of affordability on access and retention in Kentucky. Longitudinal data does not exist that would allow us to estimate the choices that students with different ability to pay made about attending college or continuing in college once they enroll.

Access: Our survey of high school seniors shows that finance is an important part of students' planning for college. Over three-quarters of students have talked with their parents about the cost of college and believe their parents are willing to help pay for college. One-half of the students indicated that their families have saved for college and 43 percent said that they themselves had saved for college. Two-thirds of students anticipated that they would require student aid to afford college. Four in five students planned on working while in college. Three-quarters of students were willing to borrow to pay for college, of which half were willing to borrow over \$2,000 a year.

Retention: Many students are not clear about the types and amounts of aid available to them to help pay for college; this anticipated lack of money may cause them to make decisions that can jeopardize their eventual graduation. These choices include working too much or attending part-time and continuing to live at home to save money. Institutions should make every effort to ensure that students apply for aid. Some students may not identify themselves as being eligible for aid and thus not apply, especially in community colleges—as the research shows, receiving aid will improve their chances of graduating. Colleges should make every effort to find on-campus employment opportunities for their students. This helps keep students connected with the institution and also provides them with income. Efforts should be made to moderate tuition increases once a student enrolls, as sharp increases in costs during their enrollment will result in some students leaving.

B. WHAT CHANGES TO THE STATE'S POSTSECONDARY POLICIES OTHER THAN FINANCIAL AID PROGRAMS WOULD ENHANCE ACCESS FOR UNDERSERVED POPULATIONS OF KENTUCKY STUDENTS?

Pre-College Outreach. Access to college is not evenly distributed around the state. Outreach efforts should make sure that parents and counselors have timely information about the cost of attending college in Kentucky and how student aid can help them pay the bill. Special efforts should be made to supplement information for families without college experience. Findings from our high school survey lead us to believe that outreach and information are important factors in helping students and families make postsecondary plans.

Federal/State programs, such as Kentucky GEAR Up, provide students, especially those from lower-income backgrounds, with the type of resources and information to help them better understand the nature of higher education and what is involved in academic preparation, paying for education and succeeding at the college level. Helping families save for college and helping

parents understand that their children can succeed in college and should aspire to getting a bachelor's degree could help more students make the transition to college.

Special efforts should be made to make sure that information for adult students speaks to their needs. Colleges, especially community colleges should provide enrollment options that are appropriate for adult students who need to balance work, family and school. Institutions should provide short-term certificate programs that can be used as steppingstones to associate and baccalaureate degrees.

Arkansas is taking leadership in finding ways to bring a larger share of adult students into postsecondary education. They have identified structural and personal barriers to education that go beyond student aid to help bring adults into education and help them succeed. Community colleges in Kentucky should take leadership in designing an integrated approach to serving the educational needs of adults.

C. IS COLLEGE AFFORDABLE FOR KENTUCKY STUDENTS?

By most measures, Kentucky higher education is within reasonable range of affordability for most full-time students. The biggest exception to this is independent students in the lowest income group, who do not receive as much state aid as dependent students. In addition, independent students face a higher net price that requires more borrowing. Some dependent students in the lowest income quartile attending 4-year public or private institutions are at the margins of affordability. With the exception of low-income independent students, community colleges are well within the affordable range for students in all income groups.

The results suggest that the basic conditions of equity have been met. Lower income students have lower net prices than those with higher incomes. Most of this difference is due to federal grants; state and institutional grants do not contribute as much to equity. Students attending higher-priced institutions are paying more than those attending lower-priced institutions. Kentucky students do not appear to have an unreasonable debt load. Since these results are based on averages, it should be noted that individual students may face very different circumstances than those suggested by the average.

D. ARE THERE GAPS IN RELATIVE AFFORDABILITY FOR CERTAIN STUDENTS IDENTIFIABLE BY INSTITUTIONAL CHOICE AND BY SOCIO-ECONOMIC, DEMOGRAPHIC OR REGIONAL VARIABLES?

Students of Color. African American students are at greater financial risk than other ethnic/racial groups in the state. State programs aimed at low-income students provide the financial safety net that African American students need to keep college affordable.

Independent Students. The group that faces the most daunting financial barriers are independent students. Generally, they are older, often have family obligations and are more likely to work full-time compared with traditional-age students. The result is that they are more likely to attend college part-time. These students are most likely to attend community colleges, but represent a significant share of enrollment in all three sectors.

E. TO WHAT EXTENT DO THESE GAPS ALONE IMPACT ACCESS, CONTINUING SUCCESS, AND COMPLETION?

It is not possible to isolate one policy in a discussion about access, retention and graduation. Kentucky needs to approach the issues holistically. Having adequate resources to pay for college is necessary, but not a sufficient solution. The state needs a systematic approach that will allow barriers to student access and success to be identified. Solutions include reducing financial barriers identified in this report, but it is necessary to consider bureaucratic, academic and geographic barriers that reduce the chances for students to enter college and succeed.

F. WHAT CHANGES TO CURRENT STUDENT FINANCIAL AID PROGRAMS COULD ACCOMPLISH THE SYSTEM'S GOAL OF ACCESS, CONTINUING SUCCESS, AND COMPLETION?

Develop a Systematic Policy. Kentucky should find a systematic way to connect decisions about tuition with support for student aid programs. When tuition increases, financial aid for low-income students should increase. As David Longanecker noted in our preliminary presentation, "If Kentucky wants to double the number of college degree holders in the state it will be necessary to increase funding." There is no denying this truth. It will take funding from students or the states to realize this goal, which can only be done by increasing either state appropriations (public) or tuition and fees (private). The solution will probably include both. However, when tuition is increased, it will be necessary to protect affordability for low-income students with adequate need-based student aid."

Include Older Students in the KEES Program. One of the reasons that older students face higher net prices is because they are generally excluded from the KEES Program. Consideration should be given to designing measures of educational excellence that would be appropriate for older students. Examples include the grades they receive in their first enrollment period or grades received from previous periods of enrollment prior to their return to college.

Stabilization of Pricing Structure. The research on persistence suggests that once students start college, sharp changes in price can dissuade them from continuing. Sudden increases in tuition or drops in student aid make it difficult for low-income students to continue college, especially when these changes happen mid-year between semesters. To the degree possible, the price of attendance should be predictable over the educational career of a student and his or her family.

G. WHAT OTHER FINANCIAL AID PROGRAMS WOULD ENHANCE EFFECTIVENESS, EFFICIENCY AND ACCESS FOR KENTUCKY'S STUDENTS?

Family Savings. The evidence suggests that families that save for college are more likely to anticipate going to college. Kentucky should consider providing incentives for lower-income families to save for college with a match of family savings.

Increase Student Work Opportunities. Work-study programs provide effective connections between students and colleges. Kentucky and the institutions should make every effort to help

students find employment on campus as a way to keep marginal students connected with the college and improve their chances of persisting to degree while still giving them a chance to earn a living.

Financial aid for Part-Time Students. Financial aid programs should be modified to help part-time students. This will help older students who cannot afford to attend full-time, but find the costs of even a part-time program daunting.

H. WHAT INNOVATIVE APPROACHES OR IDEAS ARE AVAILABLE FROM OTHER SOURCES THAT PROVIDE INSIGHT TO AFFORDABILITY ISSUES IN KENTUCKY?

We recommend that Kentucky take a close look at Minnesota's *Design for Shared Responsibility*. It provides a systematic way to link decisions about tuition and student aid with consideration for federal student aid programs and the ability of students and their families to pay for college. It also has provisions for distributing financial aid to independent and part-time students.

Modifications in Out-of-State Tuition are Warranted. In general, enrolling students from other states is beneficial. But steps should be taken to make sure the tuition is fair to the taxpayers. The average tuition charged to Kentucky students attending college in neighboring states is \$11,900, which is higher than the out-of-state tuition charged by Kentucky's four-year universities.

I. FUTURE STUDY RECOMMENDATIONS

Improve Data System. Issues of access and retention could be tracked using the current student unit record system with two additions. First, an access measure could be generated by producing a valid and reliable count of graduates by high school. That would allow a college-going rate to be calculated for each high school. Second, continue to add information about the receipt of student aid to the student unit record. This will help calculate persistence and graduation rates for students who receive need-based aid. It is necessary to develop a longitudinal data set that will track students from the time they begin college through their graduation and entry into the labor market.

Develop an Affordability Index. The Council should agree on an index of affordability that will allow a quick and easy way to monitor trends in affordability. We recommend using a maximum of \$4,000 over the Family Net Price for the eight income groups used in this study, corrected for inflation over time. This represents an amount that a student working part-time could earn over the course of the year. This is a simple and plausible estimate that is easy to calculate for aided students.

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