A study was conducted to determine whether college tuition increases in Arizona were placing a disproportionate burden on individuals at lower income levels. Statistical data from the 10-year census reports were analyzed to calculate tuition as a percentage of per capita income for the following groups: total population, White non-Hispanics, Black non-Hispanics, and Hispanics. Study findings included the following: (1) Hispanics were the only group whose per capita income grew below the rate of inflation; (2) non-Hispanic White income was 17.8% above the statewide average per capita income in 1989, while Black income was 26.3% below the average and Hispanic income was even lower at 45.2% below the average; (3) in 1989-90, the lowest tuition increased 150% and the highest increased 39.1%; (4) full-time tuition impacts the most on the lowest per capita income groups; (5) 38.1% of Arizona's adult population reported income loss, no income, or income less than $10,000; and (6) an adult who was a member of a minority group was significantly more likely to have earned less than $10,000 in 1989 than a non-minority person; Although tuition costs may seem small when reviewed on a yearly basis, the long-term impact on low-income groups is significant. (MAB)
The State Board of Directors for Community Colleges of Arizona

prepared by David C. Rubl

The Impact of Rising Tuition on the Low Income & Minority Populations of Arizona

May 16, 1993
The Impact of Rising Tuition on the Low Income and Minority Populations of Arizona
by David C. Rubí

Introduction

The impact of tuition on our clients, the residents of Arizona, is particularly difficult to assess because this state is socio-economically stratified (segregated). One's ethnicity, race, income level, and place of residence make a difference in establishing one's situation in life. However, education, particularly of the higher variety, has long been considered one of the factors that determine whether or not people have upward mobility and can make a better life for themselves. So, when educational access is limited, by whatever means, it can mean less opportunity for those at the lower socio-economic levels of our society. For this reason, we must agree with the SHEEO Committee on College Costs that stated:

State higher education agencies should recognize that increases in the net price students and their families must pay for higher education is a legitimate concern. This is not just a public relations problem, but a problem that frightens many citizens as they perceive themselves and their children being denied access to the promise of better lives through higher education.

Since costs to students and students' families is an important consideration, this report intends to study the impact of tuition on certain segments of our state's population, the low income and minority, so that we may gain an insight into how increasing tuition costs act like regressive taxes in that they place a disproportionate burden on individuals at lower income levels. It only follows that as tuition and related costs go

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higher, the end result will be less access and opportunity to our community colleges for the low income and minority population.

It is necessary to make one point before we enter into a discussion about tuition. This report is in no way to be construed as a judgment on whether or not tuitions per se are necessary or unnecessary, excessive or fair, right or wrong. Tuition is obviously part of the way our colleges pay their costs, but those costs depend on many factors, perhaps the most significant being the revenue received from other sources, particularly from the state. In a 1978 article (during a period of time when hourly tuition was a rarity in Arizona) the following was observed:

... tuition prices and price increases tend clearly to be higher where state effort is insufficient to the financial obligations of the institutions. Indeed, of the manipulable variables studied, adjusting state appropriations seems to be the major way to affect tuition levels. State policy makers should be aware of this fact not only for the value to achieving desired outcomes, but also for the knowledge that appropriations shortfalls will raise tuition prices just as surely as if the prices had been raised by the legislators themselves.

Our only interest here is to understand the implications of constantly rising tuition, and how it impacts on certain groups vulnerable to financial pressures: the low income and the minorities.

Overview of the literature

Surprisingly, the literature on the effects of rising tuition costs on low income and minority populations is not extensive. However, there have been some studies that are pertinent to the issue in this report. These studies have looked at the specific

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effects on particular communities. What is obvious from an overview of this literature is that the higher that tuition (and other college costs) goes, the more of a burden it is on the lower income student.

At this point it is appropriate to address the issue of how rising tuition impacts on minority groups, as they seem to be especially adversely effected by rising tuition and related costs. It is important to note that minorities, just because they are minorities, are probably no more or less likely to seek higher education than the non-minority population. The situation that prevents most minorities from taking full advantage of higher educational opportunities at the same rates as the non-minority population is that minorities, overall, tend to be significantly more poor or low income than the non-minorities. This fact is as a result of social, historical, and economic factors that are not in the scope of this paper. However, it is important to note that being a minority does not give one a pathological predisposition towards avoiding higher education nor does it warp one's desire to better oneself.

Just as with any desired commodity (and we can see education in terms of a commodity), people can only acquire it if it is within their financial means. In a 1983 study done for the San Diego Community College District, which was done to study the potential effects of imposing registration fees for the first time, it was found that minorities were no more likely to stop coming to college than the non-minorities if registration fees were to be imposed.

However, it was the low income students in this study who felt that a large (relatively speaking) tuition charge of one hundred dollars would prevent them from

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attending classes in the San Diego Community College District. The report stated:

The issue of economics is a predominant one, as the effects on students in lower income levels will be greater than the total group. In the event of a $100 fee, as many as 55% of the low income students planning to return next semester stated that they definitely will not attend and an additional 20% stated they probably will not attend.

For the low income students to be able to return, more than 70% stated that they would need financial aid if a one hundred dollar fee was charged. This highlights a problem when dealing with higher tuitions: it creates a greater need for financial aid. This problem has been foreseen for a long time, as can be shown in an article from 1976:

The continued and expanded commitment to greater equality of educational opportunity for low-income students necessarily dictates that any increase in tuition be systematically absorbed through larger grants or loans for those low-income students already enrolled. Regarding prospective low-income students, whom expanded grant and loan programs are expected to attract, tuition increases would be calculated into whatever formula was used to award either the grant or loan. Increasing tuitions for this income group thus becomes synonymous with increases in subsidies, and vice versa.

While one can debate whether or not there has been real increases in financial aid to low income students since 1976 to the present, the fact remains that a demand for more financial aid is created, whether or not it is provided, because of any increase in tuition and other college-going costs. These increases in cost will negatively impact on the low income population.

In January 1987, the Virginia Community College System (VCCS) issued a
report that studied the impact of a rather rare occurrence on more than 10,000 students'. This rare occurrence was a tuition decrease. Some of the major findings of the report are as follows:

- About 15% of the respondents said that the tuition reduction did affect their decision to attend the community college.
- Over 8% reported that the higher tuition, which would have resulted if the special appropriation had not been made, would have kept them from attending college at all. This rate is very close to the actual increase in enrollment.

The results are particularly interesting because the tuition reduction was a very small one (seventy-five cents: $17.75 per quarter credit hour in 1985-86 down to $17.00 in 1986-87), and overall enrollment increased substantially more in the Virginia Community College System than nationally or locally. What is also significant is that the enrollment increase principally came from new students, and results were positive when considering race. The results of the report are best summarized in the following comments:

After examining the circumstances pertaining to Virginia's community colleges and those pertaining to community colleges across the country, and the circumstances pertaining to the other higher education institutions in Virginia, the only circumstances that are specific to the VCCS are the reduced tuition and the System's recent emphasis on marketing and retention. The emphasis on marketing and retention is far from unique, for community colleges across the country have become

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8 Ibid. Summary.

9 Ibid. Summary.

10 Ibid. Summary.

11 Ibid. Summary.

12 Ibid. Summary.

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increasingly sophisticated in the techniques of these programs. Thus one must conclude that the tuition reduction made an important contribution to the enrollment increase.

Of course, as the report notes, the converse must also be true: tuition increases probably have an adverse effect on the ability to enroll in community colleges for certain segments of our society.

In reality, tuition and related costs charged by a public institution are a very specific form of taxation, as is explained in the following citation:

In the course of providing these higher education services to its members, society (the government) incurs certain costs. Revenue to pay the costs of providing these services is usually collected through taxation. Since part of these costs is met with tuition revenue, the tuition charged by public institutions may be legitimately viewed as a form of taxation in which taxes are defined in their traditional manner as compulsory payments imposed on individuals by government to distribute the costs of governmental activities among the various members of society.

Because public tuition represents a form of taxation, it is subject to the same equity criteria as any other tax that supports any other governmental service. As such, the proposed tax increase in tuition represents an increase in societal or user tax and can be evaluated in terms of its equitableness. While recognizing that determinations of equity or equitable taxes are largely a value judgment and that there are wide differences in opinion, there is general agreement that equity in most cases requires:

1. **Equal treatment of equals.** Persons regarded as being in the same relevant circumstances (i.e., benefits received, economic circumstance) should be taxed the same amount.
2. **Distribution of the overall tax burden on the basis of the ability to pay, as measured by income, wealth, or by consumption.**
3. **Exclusion from tax of persons in the lowest income group, on the basis that they have no taxpayng capacity.**
4. **A progressive overall distribution of tax relative to income on the**

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13 Ibid. Summary.

14 Ibid. Summary.

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The end result of tuition and related costs is that they are a regressive tax, which place a disproportionate burden on certain segments of society under certain circumstances:

The proposed tuition increase in most proposals is a uniform increase that disregards the notions of ability to pay and benefits received. As such, the proposed increase is essentially regressive with respect to its treatment of individuals and families of individuals. That is, tuition as a user tax does not result in equal treatment of equals with regard to either ability to pay or benefits received, which are two primary standards of equity. 16

Even though research is not abundant on the issue we are discussing in this report, what is available is consistent in suggesting that low income students, current or potential, are adversely impacted by higher tuition and other costs. The next questions for us to answer are: is it possible that rising tuition in Arizona may have a negative impact on the low income and minority populations? What are our specific circumstances? What is the potential level of such an impact? Since detailed data and research specific to Arizona are not available to deal with these questions, we cannot develop any analyses that will provide a direct answer. However, we can analyze data that will give us an inferential understanding of how tuition and related costs impact on Arizonans at specific income levels. The rest of this report will focus on two such inferential studies.

First Analysis: Tuition as a Percentage of Per Capita Income

One basic measure that can help us understand the impact of tuition on lower
income and minority persons is to look at tuition as a percentage of per capita income. Per capita income is measured by a variety of means, but the only measure of such income that lets us do comparisons that takes into consideration the different ethnic/race groups is provided by the ten-year census. Unfortunately, at this time, the only per capita income data available from the census is not complete: it currently provides only data on Arizona's total population, White non-Hispanics, Black non-Hispanics, Hispanics, and an "other" category in which the Native Americans, Asian Americans and Other non-Hispanics are lumped together. This is rather unfortunate because it does not allow us to see the impact that tuition can have particularly on the Native American population, which is by far the poorest in the state, along with being the second largest minority group in Arizona. The education and income levels of the Native Americans and Asian Americans is markedly different, so categorizing them together does not give us a clear picture of their economic status. The term "other" normally is reserved for persons who do not categorize themselves by race (Asian, Black, Native American, White) and who do not identify their ethnicity as being Hispanic. The number of Other non-Hispanics has traditionally been statistically insignificant, as only one-tenth of one percent (0.1%) of the state's population identified itself in this category. So, at this point, this study will only focus on the total population, non-Hispanic Blacks, Hispanics, and non-Hispanic Whites.

The 1980 census reports the 1979 per capita income and the 1990 census reports on such income for 1989. In table 1 below, the per capita income in 1979 for the populations groups mentioned above is shown in column B. The 1989 per capita income is shown in column C. Column D shows the percent change in each group's per capita income from 1979 to 1989. On line 9, column D, we can see that the inflation
rate in the Metro Phoenix area measured 87.4%.

### Table 1

<table>
<thead>
<tr>
<th>Column A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Per Capita Income for</td>
<td>Percent</td>
<td>Grp Inc as % of Ttl Pop Inc</td>
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<td></td>
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<tr>
<td>White</td>
<td>$8,050</td>
<td>$15,853</td>
<td>96.9%</td>
<td>114.3%</td>
<td>117.8%</td>
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<td>Afr. Am.</td>
<td>$4,868</td>
<td>$9,921</td>
<td>103.8%</td>
<td>69.1%</td>
<td>73.7%</td>
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<tr>
<td>Hispanic</td>
<td>$4,271</td>
<td>$7,374</td>
<td>72.7%</td>
<td>60.7%</td>
<td>54.8%</td>
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<tr>
<td>Total Pop.</td>
<td>$7,041</td>
<td>$13,461</td>
<td>91.2%</td>
<td>100.0%</td>
<td>100.0%</td>
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</table>

Inflation Rate 1st Qtr 1979 to 4th Qtr 1989: 87.4%

The only group whose per capita income grew at below this rate of inflation was the Hispanic's (of course, we must remember that we do not yet know the rates for the Asian Americans or Native Americans). Table 1, column E shows us that the non-Hispanic Whites per capita income was 14.3 per cent above the statewide average rate of population growth in 1979, while the non-Hispanic Blacks’ per capita income was 30.9% below the average. The Hispanics' per capita income was even less at 39.3% below the average.

By 1989, non-Hispanic Blacks and Whites made varying income gains. This is apparent when one considers that the White per capita income in 1989 was 17.8% higher than the statewide average per capita income (compared to 14.3% higher in 1979) and that Blacks’ per capita income moved closer to the statewide average in that their per capita income was now 26.3% below the average (compared to 30.9% below in 1979). However, Hispanic per capita income, as can be inferred from the fact that

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17 This reflects the change in the Phoenix Metro Consumer Price Index as provided by the Center for Business Research at Arizona State University. This index is generally used for all of Arizona. All inflation data in this report is from the Center for Business Research.
their per capita income grew at a rate less than the inflation rate, moved slightly further away from the statewide average and had become 45.2% below than the statewide average (compared to 39.3% below in 1979).

The data above is important because it does corroborate the fact of socio-economic stratification of minorities in this state, and that for the largest minority group, the Hispanics, this stratification became increasingly intense in the 1980s. Being of a certain ethnic group matters as far as the probability of being low income goes.

Table 2, below, puts this in perspective as regards the impact of tuition on different income levels and on minorities. Table 2, column B shows the 1989 per capita income income for each group. Column C shows the lowest tuition charged in the state for thirty hours of credit in 1989-90, while column D shows this tuition as a percentage of per capita income for each population group. Column E shows the highest tuition charged in Arizona in 1989-90 for thirty hours of credit, with column F showing this tuition as a percentage of each group's per capita income.

<table>
<thead>
<tr>
<th>Column A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
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<tbody>
<tr>
<td>Population</td>
<td>1989 Per</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>Capita Inc.</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>White</td>
<td>$15,853</td>
<td>$240</td>
<td>1.5%</td>
<td>$690</td>
<td>4.4%</td>
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<tr>
<td>African American</td>
<td>$9,921</td>
<td>$240</td>
<td>2.4%</td>
<td>$690</td>
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<tr>
<td>Hispanic</td>
<td>$7,374</td>
<td>$240</td>
<td>3.3%</td>
<td>$690</td>
<td>9.4%</td>
</tr>
<tr>
<td>Total Population</td>
<td>$13,461</td>
<td>$240</td>
<td>1.8%</td>
<td>$690</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

Table 2

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When one considers that the White per capita income is $15,853 compared to the lowest on this table, the Hispanics at $7,374, one can see that the degree of impact of tuition on each income is substantially greater for Hispanics than for Whites. Though the impact on Blacks is not as great as on Hispanics, there still is a significant amount of impact when compared to the impact on Whites. As to be expected, full-time tuition impacts the most on the lowest per capita income group, especially when it is high cost. As the income goes up, the tuition impact goes down. Because of the socio-economic stratification that effects minorities in this state, we can see that tuition charges, such as they are structured now, definitely have an impact on a person's ability to pay, depending on the income level he or she is at.

Because Hispanics and Blacks have, on an average, lower income than do Whites, it follows that they will have more trouble affording tuition, especially at the rate it has gone up over the years. This is probably one reason why minorities are somewhat underrepresented in the state community college system in spite of the fact that they are a rapidly-growing, young segment of our society. Tuition seems to be a barrier that gets higher and higher every year. The information herein also shows the nature of tuition: it is very much a regressive tax and hurts those who could probably most benefit from the service that is provided by our community colleges.

One last thing to consider at this point is that we are looking at 1989 data for this analysis. It has been four years since that time. As is shown in table 3 below, at the present time the lowest tuition for thirty hours has grown from two hundred forty dollars in 1989-90 to six hundred in 1993-94, which is a 150% increase. The highest tuition in 1989-90 grew from six hundred ninety dollars to nine hundred sixty dollars in 1993-94, which is a 39.1% increase. Although projections for current 1993 per
capita income are not available from the census, it is improbable that per capita income has grown at either of the tuition rates, as shown in table three, during the same period. As a matter of fact, according to the Center for Business research at Arizona State University, inflation from first quarter 1989 to first quarter 1993 has been 17.2%.

<table>
<thead>
<tr>
<th></th>
<th>1989-90 Tuition Compared to 1993-94 Tuition</th>
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</thead>
<tbody>
<tr>
<td>2</td>
<td>Column A</td>
</tr>
<tr>
<td>3</td>
<td>Range</td>
</tr>
</tbody>
</table>

There is one problem when using per capita income to measure the impact of tuition on low income groups and minorities: in reality, per capita income is a statistical construct, it is a statistical mean that does not illustrate the depth and breadth of the population impacted. It is important to know how many people we are talking about when we speak of the low income: and whether or not they are a significant portion of our state population. For this reason, we have prepared a second analysis, as follows.

**Second Analysis: Impact on Number of Persons by Income Level**

Table 4, below, is designed to give us an idea of the breadth and depth of our community that may be impacted by increasing tuition and other costs. Data is available from the census which shows the distribution of the adult (twenty-five years of age or older) population by income level.

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*Source: 1990 Census PUMS file for Arizona.*

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Even though this leaves out persons less than twenty-five years of age, which is a significant portion of our clientele, the data can still give us an idea of how much of the state's population will feel rising tuition as an increasing burden.

It is significant to note that 38.1% of our state's adult population (twenty-five years of age or older) reported income loss, no income or income less than $10,000. This is quite a bit more than one-third of our adult population! There were 874,575
adult Arizonans at this income level. Of these 611,902 were non-Hispanic Whites, 165,392 Hispanics, 58,475 Native Americans, 24,729 African Americans, 13,515 Asian Americans. Of course, the largest number of people in this group by far are the non-Hispanic Whites. Yet, this number is 34.2% of the non-Hispanic White population measured herein.

Another way to read this table is to look at tuition as a percentage of the income range. For example, for persons earning $9,999 or less in 1989, tuition would have taken a theoretical 100% of income to a maximum of 6.9% of income. This may seem like a minor portion of one's income, but we must remember that these numbers are gross: we have not subtracted from that amount the cost of living (taxes, food, clothing, housing, transportation, etc.), or other college-going costs (books, supplies, special user fees, transportation, etc.) to obtain the net income. As an aside, although the focus of this report is on the low income population of this state, we must also take into consideration that the middle income population has a higher capacity for carrying debt than the low income. So, though one may be middle income, one also may have higher debt, which will need to be paid, before considering paying for college. Net income is relative and has an impact on college affordability.

We must also remember that this data is four-years old. As we will recall by looking at table 3, tuition is now far higher in 1993-94 than in 1989-90, and since personal income probably has not gone up as fast as tuition, the tuition situation is probably now more difficult for persons at the lower income levels.

Table 5, below, puts the above data and comments into context: 65% of Native Americans are at this income level, 49.8% of Hispanics, 44.6% of African Americans, and 44.1% of Asian Americans.
Simply put, an adult minority was significantly more likely to have earned less than $10,000 in 1989 than a non-minority person. At this point, we can begin to have an understanding how, in relative terms, constantly increasing tuition gradually puts more pressure on the minority population overall than it does on the non-minority population, which is not to discount the significant pressure it also puts on the latter.

What is most apparent from the study is that large numbers of Arizonans are at 

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lower income levels and that any tuition increase without some form of tuition relief automatically puts a strain on their already strained resources. Furthermore, we can also see how minorities, as a group or groups, are adversely impacted by rising tuition: it is not because they are minorities per se, but because the minority groups are more likely to be low income when compared to the non-Hispanic White, a likelihood that is out of proportion to their overall representation in the state population. Yet, this latter group is by far the largest numerically, as far as the low income population is concerned.

Conclusion

The State of Arizona has large numbers of low income people who probably could benefit a great deal, financially, professionally and personally, from the higher education experience. Rising tuition costs, though they may seem small when reviewed on a year-to-year basis. But, in the long run, the rise is significant and probably has a long-term impact on low income people and a potential impact on the middle income population. As tuition gradually increases and makes it more difficult for low income people, and considering the disproportionate number of minorities at low income levels, then our colleges will potentially become more non-minority and more middle to upper income. Lower income people will find themselves eventually priced out of access to community colleges. This fact will be become even more apparent considering the fact that minorities are by far the fastest growing population group in the state, and are relatively young compared to non-minorities.

This issue goes right to the heart of our mission and what we are supposed to be about, and what we have said we are about. It endangers our role as democracy's colleges or the people's college, as community colleges are known across the United

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States. This issue has serious implications for our community colleges, because if rising tuition goes unchecked and without relief, this alone can eventually take the "community" out of our colleges.

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May 16, 1993