A Case Study of the Dimensions of Affordability of Undergraduate Education in Virginia

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ABSTRACT

The main purpose of this research was to examine the dimensions of affordability of public undergraduate education, focusing on a single state during a particular period of time. The main research question was: What are the dimensions of affordability of public undergraduate education in Virginia? The study examined three dimensions between the years 1981 and 2000: 1) per capita disposable income (adjusted for inflation) in Virginia, 2) financial aid at the state and federal levels, and 3) the burden of a loan for college students. In addition, the study explored several possible influences on these dimensions, including partisan control of the U.S. presidency and Congress and partisan control of the Virginia governor and state legislature. Although this study focuses on the outcomes in a single state (undergraduate, public institution enrollments in Virginia), the national data were explored because states often determine how much they are able to contribute after the national contributions are taken into consideration.

The key dependent variable was undergraduate enrollments at Virginia public higher education institutions. Do enrollments tend to increase, decrease, or remain constant when any of the dimensions of affordability increase, decrease,

or remain constant? Two-year and four-year public undergraduate institutions in Virginia made up the sample of institutions examined. This research focused on the time frame of 1981 through 2000. The rationales for this specific time period were that 1) appropriate data are available for these years, and 2) it allows a big picture with contrary views of education policy at both the national and state levels. During this time period, Ronald Reagan (1981-1988), George H.W. Bush (1989-1992), and Bill Clinton (1993-2000) each served as president.

Three consecutive years of decreases in Virginia's public undergraduate enrollments occurred in 1988-1990. 1990 was the highest year-to-year decrease at negative 4.79% overall. 1990 was the largest decrease in 4-year public institution enrollments in VA while 1988 was the largest decrease in enrollments for 2-year public institution enrollments in Virginia. The following things happened during these years of enrollment decreases, as they related to the dimensions of affordability and the named influences. First 1989 and 1991, were both years that the Virginia public higher education state appropriations were less than 1percent. Even though 1990 itself looked more positive with a 13.43 percent increase, the years preceding and following 1990 were not so positive. Second, when people can afford more, it appears to have an inverse relationship with public institution enrollments. When people can afford more, they most likely enroll at private institutions and when they can afford less, they enroll at public institutions. The highest enrollment year for 2-year public institutions was in

1985, which followed the second largest decrease to disposable income. The inverse relationship is less strong with four-year public institutions and is more evident in the two-year institutions. Thirdly, the 1993-1994 academic year marked the year when the number of loans for higher education appears that they will forever outnumber the amount of grants. This being said, the issue of affordability is really now a matter for after college years when the payback period for these loans begins versus during college attendance. Tuition costs rose by over 80% in four-year public institutions and by over 85% in two-year institutions while disposable income only increased by 36.% over the same time period. The issue of affordability should therefore be more closely examined during the payback period and could perhaps sway someone from enrolling knowing that this payback period is inevitable for most.

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Introduction

1.1 The Background and Importance of this Study

Higher education in the United States has existed since the mid-seventeenth century and began with the institutions we refer to today as ivy-league or colonial colleges. Yale, Harvard, William and Mary, and Princeton are just a few of the universities that have been around even before the American Revolution. Although higher education was present before the United States came into existence, education advocates and policy makers are constantly discussing ways to improve the higher education system in our country. A few broad areas of discussion for improvement often mentioned are: more challenging curricula to make the U.S. more globally competitive, greater accessibility, and improved affordability. In 2005, U.S. Secretary of Education Margaret Spellings created the Commission on the Future of Higher Education to address four key issues to improve higher education access, affordability, the standards of quality in instruction, and the accountability of institutions of higher learning to the American people.

Although all four of these areas of focus are important, the higher education problem that is often discussed by elected officials in this country is associated with affordability. The issue of the affordability of higher education comes up often during campaigns, as do other items that affect the bottom lines of voters. The amount of publicly funded higher education affects not only the students and their families but also anyone that

may pay taxes because the taxes they pay will be distributed to certain areas including higher education. In order to find ways to address this issue, an important question first needs to be answered. How can we begin to define what affordability is in higher education?

The following study strives to answer this question. I will define several dimensions of affordability in an effort to determine whether or not there is any link to any of these specific dimensions (defined in Section 1.2) and an increase or decrease in higher education as tapped by undergraduate enrollments in public institutions. By describing what has been done in the past and analyzing its impact on enrollments, we can make a determination on what has or has not been successful and build upon these findings for future policy decisions.

This study is important because it gets to the heart of many public funding matters where some people want more funding for certain things and others want less. Is an individualist view fairer or is a community view fairer? What programs should receive public funding and what should not? What percentage of the funds available should each program get? In this specific study, why should we move some of the responsibility of higher education costs from the individual and move toward more public funding? This study goes through the data, past studies and scholarly literature and will hopefully shed some light on what is fair. My view on what is fair is that no one should feel that they cannot achieve higher education because of affordability.

Higher education not only benefits the individuals but also society and our economy as well. This is why I ask the question above and lean toward more public funding for higher education. Higher education affordability goes way beyond the college years. If we do not make higher education more affordable to all classes of people, we run the risk of creating a sub-culture where only the higher classes achieve higher education, leaving the lower classes without.

1.2 The Purpose of the Study

The main purpose of this research is to examine the dimensions of affordability of public undergraduate education, focusing on a single state during a particular period of time. The main research question is: What are the dimensions of affordability of public undergraduate education in Virginia? The dimensions that will be examined between the years 1981 and 2000 are 1) per capita disposable income (adjusted for inflation) in Virginia, 2) financial aid at the state and federal levels, and 3) the burden of a loan for college students. In addition, possible influences on these higher education policies and the finances of these policies will also be examined. The influences to be examined include but are not limited to: 1) partisan control of the U.S. presidency and Congress and 2) partisan control of the Virginia governor and state legislature. The changes in both partisan control and the policies that were passed at both the national and Virginia state levels are analyzed. Although this study focuses on the outcomes, undergraduate, public institution enrollments in Virginia, the national data are explored because states often determine how much they are able to contribute after the national contributions

are taken into consideration. The key dependent variable is undergraduate enrollments at Virginia public higher education institutions. Do enrollments tend to increase, decrease, or remain constant when any of the dimensions of affordability increase, decrease, or remain constant? Two-year and four-year public undergraduate institutions in Virginia will be the sample of institutions examined.

This research will focus on the time frame of 1981 through 2000. The rationales for this specific time period are that 1) appropriate data are available for these years, and 2) it allows a big picture with contrary views of education policy at both the national and state levels. During this time period, Ronald Reagan (1981-1988), George H.W. Bush (1989-1992), and Bill Clinton (1993-2000) each served as president. Each year will be analyzed separately as well as used in comparison with each other. This permits me to examine the partisan ideology evidently behind the higher education policies passed or supported by the President and Congress during the period. The contrary views at the national level began when Reagan unsuccessfully tried to eliminate the Department of Education, but succeeded in the beginning of decentralization of education by lessening the education burden on the federal government and pushing the responsibility back to state and local governments, in addition to the individual. George H. W. Bush acted more closely to stereotypical Democratic views on higher education, i.e. more government involvement, and laid the groundwork for Clinton's support for higher education funding. Clinton advocated more federal involvement and the strengthening of federal subsidies through financial aid while keeping states accountable as well.

These time periods will play an important role in understanding whether one or the other perspective or partisan control at the national and state levels had a more positive effect on the affordability of Virginia's public undergraduate higher education.

My education policy perspective begins at the national level because financial aid and education policies are established at both the national and state levels. Although my research question points to Virginia public undergraduate institutions as the population being examined, the national policies cannot be ignored. The funding and policies from the national levels are important variables in the equation that the states consider when determining their financial contributions as well as their own policies. In addition to the national perspective, my research will delve deeply into which party the governor was a member of, which party controlled the two chambers of the Virginia state legislature, and the policies that were passed during the period 1981-2000 in Virginia that affected the affordability of higher education. Do the higher education policies seem to be more positively or more negatively affected when the governor or control of the Virginia State Legislature belong to a particular political party? Does the presence of a mixed party control, i.e., divided government, make a difference? Is it a specific policy that made the greatest impact on the affordability of higher education? The State Council of Higher Education for Virginia (SCHEV) also will be examined closely to see what activities or policies it supported during this timeframe. Were there certain initiatives that played a large role in affordability that SCHEV actively supported or opposed? What were the reasons behind its position?

This thesis is organized as follows. Chapter Two reviews important scholarly literature that forms the reasoning behind the purpose of this thesis. These topics include: 1) the importance of making higher education more affordable for individuals and society, 2) the decision to go to college as it relates to affordability, and 3) the issue of affordability and why students or their families make the decision for a community college versus a four-year institution. Chapter Three discusses the higher education financial aid policies at the federal and state levels. The federal policy section begins by describing the roles that the Department of Education plays followed by a more detailed account of how the Reagan (1981-1988), Bush (1989-1992), and Clinton (1993-2000) policies specifically affected higher education in this country. The state policy section describes the role of the Virginia Department of Education and then reviews the role that each of the six governors and their policies on higher education funding played during this time period. Chapter Four focuses on the methodology used in this thesis. The methodology is first introduced by framing the measures used to examine the affordability, enrollment and party control variables. It also justifies why the years 1989-2000 and Virginia public undergraduate enrollments were used for this study. Chapter Five uses both data and literature to first analyze and evaluate the dependent variable, undergraduate, public higher education enrollments in Virginia. The national enrollment levels are also included as a larger population to provide a broader view of the Virginia enrollment data. Then the three affordability dimensions and possible influences on these dimensions are discussed using both national and Virginia data that are tied back to the dependent variable. Chapter Six reveals the conclusion that more

public funding for higher education results in a greater number of enrollments, which I argue ultimately leads to the economic benefits achieved through a more highly educated society.

Chapter II
Review of Literature

2.1 The Importance of Making Higher Education More Affordable for Individuals and Society

I will now explore the following topics as they are related to affordability in higher education: 1) the importance of making higher education more affordable for individuals and society, 2) the decision to go to college as it relates to affordability, and 3) the issue of affordability and why students or their families make the decision for a community college versus a four-year institution.

The National Center for Public Policy and Higher Education (NCPPHE) is a non-profit organization committed to providing an analysis of our nation's education system. It is not affiliated with any political party, allowing for an independent perspective of our national education policies and trends. Its November 2005 report "Income of U.S. Workforce Projected to Decline If Education Doesn't Improve" addresses the first question: *Why is the affordability of higher education as important to individuals as it is to the economy*? This report consistently discusses the need to improve the affordability of higher education, especially because the "racial and ethnic groups that are the least educated are the fastest growing" and usually the largest groups that cannot afford education. [20] The combinations of higher education costs, more burdens for students to contribute more to the increased cost, and the historically poorer groups growing at a faster rate are alarming reasons for the state or national governments to contribute more

to higher education costs. According to the NCPPHE, the proportion of these "poorer" groups is growing while the "less poor" groups who are of school age are shrinking. The baby boomer generation is approaching retirement age, while the increase in the immigrant population is contributing more to the college age population.

Some might think this to be just another social program that will cause more dependency, but this report gives important reasons for more government benefits for higher education. "A drop in the average level of education of U.S. workers would depress personal income levels for Americans, in turn creating a corresponding decrease in the nation's tax base."[20] In the knowledge-based global economy that we are currently in, it is important for our governments to contribute enough so the individuals and the communities do not end up suffering. "The prospects for states and communities whose citizens and workers lack college level skills are equally poor".[21] The NCPPHE suggests that if tuition increases are necessary, financial aid should be equally increased to prevent the ripple effect of a non-educated population.

Getting students to attend college is half the battle. The other half is to get students to finish college. According to the NCPPHE, there are four key transition points that can determine the success from high school through college graduation: high school graduation, entry into higher education, persistence in higher education, and, finally, completing higher education. The first point refers to the number of high school students that graduate in four years inferring that they did not drop out of school, but

instead went straight through. The second point refers to "the number of high school graduates who enter college depends on student preparation levels and the capacity of the college and the university system."[22] Not only is it important for our high schools to prepare students for college but for colleges to be able to maintain a high standard of learning for an increased capacity of students. The third point refers to the number of freshman dropouts and those who re-enroll as second time freshman. This information is important to analyze why freshman drop out the first time and what causes them to return again. The fourth point discusses that completing a higher education degree increases personal income but "less than 50 percent of first-time, full-time college students complete an associate's degree within three years or a bachelor's degree within six years at their original institution."[20] So, the pay-off for both individual and the economy takes longer than originally planned if it occurs at all.

Lawrence Gladieux and Laura Perna put another spin on this important topic in their report *Borrowers Who Drop Out: A Neglected Aspect of the College Student Loan Trend*. Affordability of higher education is important to get students into college, but it also plays an important role in enabling the student to actually earning the degree. For example, "working too many hours and part-time attendance" are a few of the results of a student trying to attend school who cannot afford it, even with some financial aid.[23] If more financial aid is the answer, how much is too much when a student is considering taking on a loan? At which point does the cost outweigh the benefit of a college degree? Gladieux and Perna discuss what actually happens to students when

they cannot finish their college degree even when they owe money toward their education. "Half of entering freshman borrow and one-fifth of borrowers drop out," which means that there is a significant amount of risk that borrowers will not be able to pay back their loans.[23] "For students who began at four-year institutions and expected to attain a bachelor's degree, borrowers who dropped out were twice as likely to be unemployed as borrowers who received a degree, and more than ten times as likely to default on their loan."[23]

Given that the percentage of local and national subsidies for education tuition is decreasing, the fact that more of the burden is being placed on the students, and that tuition is increasing at a faster rate than disposable income, the dollar amount that students need to borrow for higher education is growing. These factors in turn lead to the risk of having more loan defaults. Gladieux and Perna also point out that there is no difference in median salary for those who drop-out and borrow versus those who don't borrow but still drop out. The main difference is that those who do drop-out and have borrowed money now have a huge debt to pay off and most likely do not have a higher paying job to assist with paying off this debt. Gladieux and Perna also describe the double-bind situation:

> Borrowing can cause long-term negative financial consequences for those who fail to complete their programs. Yet avoidance of borrowing may push students to delay enrolling after high school, to enroll part-time in college or to work full-time while in college, each of which is a known risk factor for dropping out of college. [23]

As more and more of the increasing tuition cost burden is turning into an individual's responsibility to pay, the amount of loans needed to accept these increased costs are growing. This is resulting in an increased debt for those willing to take on this burden and undergraduate degree recipients having large debts to pay by the time they complete their degree. Is financial aid through the form of loans enabling students to attend college or impeding them from focusing on anything other than repaying their college loans?

The United States often is termed an individualistic society, meaning we are driven on issues that can benefit or harm each of us individually versus the impact issues have on society as a whole or even on our own families. So, how can we define the benefits of higher education in a way that can convince the public that more public funding for higher education can not only benefit the individual attending college, but also society as a whole? George Psacharopoulos examined the economic returns to higher education in 25 countries on an individual basis as well as for society as a whole. A few of the benefits to society that he found were: 1) over time, the long-term benefits for society for a higher educated individual outweighed the initial short-term cost of obtaining the education, 2) the taxes earned from the individual's higher tax bracket from achieving the higher education out-weighed the amount it cost tax payers to support a person unable to support themselves. [69]

In addition to any economic impacts, Nevzer Stacey also examines the need for more social data to be studied. Among the social implications that Stacey calls to be more closely examined are: "health, family structure, fertility, child care, the environment and crime."[70] Stacey urges the need for more data in these areas to be collected because of the certainty of their relevance to more funding needed for public higher education.

2.2 The Decision to Attend College as it Relates to Affordability

The next question explored in this literature review is why students decide to go to college. It is important to understand the variables that draw students to higher education in order to use those variables to attract more students to the ideas of higher education. According to David W. Chapman, the categories of these variables that make the greatest impact on this decision are: 1) student characteristics and 2) relatively fixed college characteristics. Student characteristics refer to each individual student's unique circumstances or characteristics. College characteristics refer to the location, cost, and curriculum unique to a college, yet fixed and not easily changed. These characteristics are described in more detail in the following paragraphs.

One student characteristic is the socio-economic status (SES) of the student and their families. Chapman claims that "students from homes with higher SES are more likely to go to four-year colleges and universities than students from homes with average or below average SES."[25] This SES can affect what a student believes are within their options and whether they even decide to pursue higher education. The level of income

that a family has can contribute to both the types of institutions that may be within their reach as well as the expected family contribution (EFC) that the Department of Education uses to determine the amount of financial aid for which a student is eligible. The amount of financial aid and whether it is disbursed through grants or through loans can make a huge impact on whether or not a student decides to go to college and which college to attend if the monetary burden is manageable. An individual's aptitude can also influence their choice to attend college. If a student is consistently made to feel like they will be no more successful than they were in previous grades, they might not even attempt to pursue higher education. When a child excels at school, their chances of having more of the costs associated with colleges absorbed through scholarships is greater. This may also increase the decision to go to college. Chapman also explains that "educational expectations and aspirations are also moderately correlated with high school performance as measured by GPA."[25] This may also increase a student's aspirations to pursue a career that requires a college degree, which may increase a student's desire to attend college.

Locations, costs, and availability of desired programs are a few of the fixed college characteristics that Chapman describes as additional factors affecting the choice to go to college. Location is large factor in college choice because a commuter student will spend far less than a boarding student on overall college costs. As discussed earlier in Chapter 4, room and board can account for 50% or more of the total cost of attending college. So, it is not surprising that "Over 50% of entering freshman attend colleges within fifty

miles of their home."[25] The increase in the number of satellite college campuses and the number of online college courses is surely an effect of the choice or inability to pay the added cost of room and board.

A student's choice to attend college cannot be without some influence from their friends or their family. Chapman also suggests that parental input influences 43% of student choices to attend or not to attend college. So, parents have an even greater influence than a student's peers do on deciding to go to college and also which college they should attend. How does this statistic impact those students who will be first-generation college students? As the number of minority or immigrant populations increase and as the college degree is being looked at as more of a necessity rather than a nice-to-have in our increasingly competitive workforce, the statistic of first-generation college students is getting to be more and more important. "In 1995-96, 34% of students entering the nation's four-year institutions and 53% of students starting at two-year colleges were first-generation students."[26] If parental input has the greatest influence on a student's choice to attend college, than perhaps it is a combination of both the students and the parents to want the potential student to achieve more than the generation before them did and see a college degree as a way to obtain this "better" life. The parental influence on a student goes much deeper than just the decision to go to school, but also how successful and how far they actually go in obtaining higher education degrees. "First-generation students made significantly smaller increases in the highest degree they planned to obtain than did the high parental education

group…Students with higher-educated parents may simply be more aware of the importance that advanced degrees play in one's occupational life and labor-market opportunities than their first-generation counterparts."[26] The article by Pasacarella, et al concludes that a child is driven to achieve more than their parents were and that parents want their children to have more and achieve more than they did themselves. So, as we take these steps toward making higher education affordable and available to all income classes, it has a lasting effect on our country's education levels and economic status.

2.3 Why Students or Their Families Make the Decision for a Community College Versus a Four-Year Institution

The next question that I will approach in this literature review is why students decide to start at a community college versus a four-year institution. Community colleges are, in many cases, the stepping stone into a four-year institution or they enable a student to obtain the two-year degree or a certification necessary for specific careers at a lower cost than four-year institutions. "The two-year public sector is the primary point of entry into higher-education for low-income students, African Americans, Latinos, immigrants and working adults."[27] According to most of the literature that I have read on this topic, lower tuition costs and more flexibility for working adults are the two major reasons for students to choose the community college. A community college is not just a cheap way to higher education, but also a stepping stone to how the student will contribute to society. The four primary components of a community college system that lead to that

next step are: "academic preparation for transfer to four-year institutions, vocational education, general education, and noncredit community outreach."[27]

Table 2.1 below shows the enrollments at both four-year and two-year public institutions for the years 1992-2000. (For the period of this research, I was not able to find Virginia data for the years 1981-1991.) As indicated in the chart below, the four-year public institution enrollments in Virginia outnumbered the enrollments at two-year public institutions. The exact opposite is seen in the national figures, where the two year public institution enrollments out-number the four-year institution enrollments. If cost is one of the major driving forces behind choosing a two-year institution over a four-year institution, perhaps this is due to disposable income (which will be discussed in Chapter Five). It should be noted that Virginia's per capita disposable income surpassed U.S. per capita disposable income levels in all but one year between 1981 and 2000. As tuition costs increase and the burden of the tuition costs fall on the individuals, we may see a sufficient increase in the rate of enrollment for community colleges.

Public Institution Enrollment				
Year	**VA Four-Year**	**VA Two-Year**	**US Four-Year**	**US Two-Year**
1992	21602	13296	697393	993074
1993	21071	13277	702273	973545
1994	21486	13096	709042	952468
1995	22678	12484	731836	954595
1996	23994	12219	741164	989536
1997	24176	12387	755362	923954
1998	24309	13584	792772	858417
1999	25005	13453	818957	952319
2000	25831	13719	842228	952175
2001	26666	14880	866619	988726

Table 2.1 VA and U.S. Public Undergraduate Enrollment[9] (enrollment in 1000s)

The other main reason, according to the literature review, for students attending community college is open admissions: only minimum qualifications need to be met, unlike the SAT scores, GPA, and class-rank required by most four-year institutions. If we take a look at the admissions qualifications for the Northern Virginia Community College System (NVCCS), for example, its admission requirements can be summarized as:

1. Must have a high school diploma or equivalent
2. Must be at least 18 years of age
3. Able to benefit from enrollment [28]

There are a few specific course requirements for certain curriculums but any "holes" in required courses can be filled at the community college and will not delay admissions. In contrast, Old Dominion University, a public four-year institution in Virginia, requires the following of its freshman undergraduate applicants:

1. Admission application
2. $40 non-refundable application fee
3. Official high school transcript or GED scores
4. SAT or ACT scores
5. Resume
6. Essay
7. Up to three letters of recommendations
8. Any additional information required by specific departments applying to. [29]

Supporters of community colleges view the open admissions policy of the community college system as a benefit to those who not only need a more inexpensive way to go to college, but also an alternative for someone that may not meet all of the admissions requirements at institutions such as Old Dominion University.

Are low cost and open admissions good reasons to choose a school? There are many critics of community college education who believe the low cost and open admissions policies actually create a poorer educational platform. Elizabeth Monk-Turner's article, "The Occupational Achievements of Community and Four-Year College Entrants," actually goes as far as to defend her opinion that having a community college on one's curriculum vitae (CV) can actually hurt occupational advancement in the future.

First, community college entrants are investing in an education that is inferior in quality. Even if the community college entrant transfers into a four-year school, this

> effect should hold. Second, community college entrance is not a positive signal to employers regarding an individual's social and educational background. Given gender and race discrimination in the labor market, the deleterious effect of community college entrance on adult occupational status may be stronger for women and blacks. Finally community college entrants may be more likely to select lower status occupations than four-year college entrants.[30]

While this viewpoint does seem a bit extreme, Monk-Turner does back up her argument with data showing that when someone starts out at a community college the risk of them not finishing their bachelor's degree and having poorer academic results is higher. I do think her data are a bit flawed because a person starting out at a community college is likely working outside of the classroom more than a student attending a four-year college full-time. The fact that a community college student transfers to a four-year institution does not mean that they can stop working; chances are they are still working part-time or full-time to offset the increased cost. Monk-Turner is making a blanket stereotypical statement inferring that the caliber of community college students is less than those that start at four-year institutions, but often these students are in fact working harder than their peers, as they work to balance employment with schoolwork. Monk-Turner also suggests that her findings have more negative effects for the minorities of women and African Americans that attend community colleges.

In contrast, Andrew M. Gill and Duane E Leigh contend that the affordability and flexible schedule of community colleges contribute to the narrowing of the gender wage gap. Not only are the numbers of women attending higher education institutions growing, but the percentage of community college enrollees is growing as well. Gill and Leigh state that "…in 1970 nearly 60% of all post-secondary college students were male, and nearly three-quarters of all students attended four-year institutions. By 1993, the percentage of men had dipped to 45%, and the percentage of all college students enrolled in two-year institutions had risen from 27% to 39%."[31] Gill and Leigh conclude that there is a direct relationship between the increase of women and their success in the workforce and the growing numbers of women in community college. Community colleges tend to attract not only those who need a cost effective way to attend college but also students who need flexibility. With the increased population of students that are older, working, and often parents, the real-world knowledge of the student-base at the community colleges may be greater than that of the four-year institutions. "Community colleges typically supply 1) vocation training programs that terminate in certificates as well as A.A. degrees, 2) remedial educational services, and 3) 'customized' or 'contract' courses designed to meet the particular needs of local employers."[31] Gill and Leigh conclude that the economic contributions through the remedial and customized courses and the individual contributions through flexibility, cost and vocation training offered through community colleges are not only narrowing the gender wage gap but increasing the possibilities for other groups needing one of these attributes to make higher education possible. The ability to attend full time also

increases the likelihood that the degree will be completed. The percentage of women attending full-time also has been less than the percentage of men attending full-time, increasing the likelihood that a higher proportion of men than women will complete degrees.

Chapter III
Federal and State Higher Education Policies and Financing

Before discussing the methodology of this research and the analysis of the data collected, it is important to understand the policies behind higher education funding. Among the possible ways of financing college education in the U.S. are, in addition to student/family funds, financial assistance from the national and the state governments. This chapter first examines the national policies relevant to higher ed funding and the current procedures surrounding federal financial aid. These national policies are examined as they relate to each of the three presidents during the time period 1981 – 2000: Ronald Reagan, George Bush and Bill Clinton. Then, the state level policies and procedures for surrounding financial aid are examined as they related to the six Virginia governors and their partisan membership during the same time period. Each of these factors -- partisan affiliation, policies and appropriations for undergraduate, public higher education – then will be discussed as influences on the dimensions of affordability.

3.1 Financial Aid at the National Level

Financial aid is a means for students to attend college but at a less direct or immediate cost to them. Financial aid in the United States is managed by Federal Student Aid (FSA), an office under the Department of Education. FSA is not simply an agency that issues and manages student loans; it also creates and enforces the rules and regulations

to which all lending institutions and loan recipients must adhere. A few of the responsibilities highlighted on the FSA Web site are:

- Processing 14 million student financial aid applications each year
- Disbursing more than $80 billion annually in financial aid to students through schools
- Enforcing financial aid rules and regulations
- Partnering with schools, financial institutions and guaranty agencies to prevent fraud, waste and abuse
- Educating students and families on the process of obtaining aid and other college funding
- Servicing millions of student loan accounts;
- Securing repayment from borrowers who have defaulted on their loans
- Operating information technology systems and tools that help manage our $400 billion loan portfolio [1]

In order to perform these highlighted responsibilities, FSA first issues a five-year strategic plan that identifies its mission and strategic direction. The current five year plan is for the period 2006–2010. This plan begins by reiterating that its primary mission is to "ensure that all eligible individuals can benefit from federally funded or federally guaranteed financial assistance for education beyond high school."[1] FSA has organized itself into the functional roles that it plays in U.S. national financial aid initiatives. This method of organization allows each department to focus on specific key objectives and be measured by those functional areas that it is assigned. The FSA organization chart in Figure 3.1 gives a picture of how the organization is divided and its functional roles.

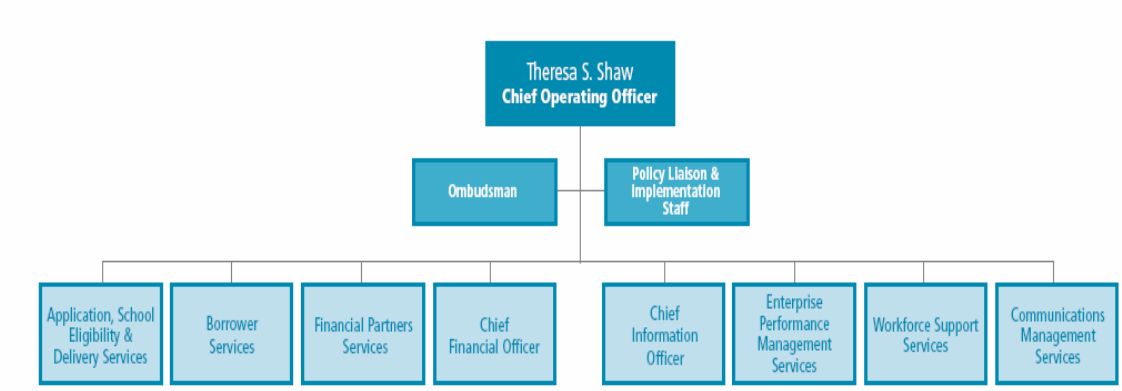


Figure 3.1 Federal Student Aid Organizational Structure[1]

The Federal Student Aid Organization and the functions that it administers make up the highest percentage of higher education assistance in the nation. The first major program administered by the FSA is the Federal Pell Grant, which is known as the most needs-based distribution done by the FSA. It is primarily awarded only to those that have not received their first baccalaureate degree and on rare occasions to those seeking a post-baccalaureate degree. "Federal Pell Grants are direct grants awarded through participating institutions to students with financial need who have not received their first bachelor's degree or who are enrolled in certain post baccalaureate programs that lead to teacher certification or licensure."[2] The maximum amount awarded during the 2004-2005 school year was roughly $4,050. This does not appear to be a large dollar amount, but a combination of assistance through the various programs from the FSA can add up to significant assistance. Table 3.1 below shows the Federal Pell Grant Awards from the 1976-1977 school years to the 2006-2007 school years.

	Expenditures (in Millions)		Actual Maximum Awards		Actual Minimum Awards		Maximum Percent of Costs	Number of Recipients (in Thousands)	Percent of Recipients Independent
	Current	*Constant*	*Current*	*Constant*	*Current*	*Constant*			
1976-77	$1,475	$5,132	$1,400	$4,870	$200	$696	50%	1,944	38.3%
1981-82	$2,300	$4,989	$1,670	$3,623	$120	$260	50%	2,709	41.9%
1986-87	$3,460	$6,349	$2,100	$3,854	$100	$184	60%	2,660	53.9%
1991-92	$5,793	$8,557	$2,400	$3,545	$200	$295	60%	3,786	61.5%
1996-97	$5,780	$7,426	$2,470	$3,173	$400	$514	—	3,666	57.6%
2001-02	$9,975	$11,428	$3,750	$4,296	$400	$458	—	4,341	57.1%
2006-07	$12,881	$12,881	$4,050	$4,050	$400	$400	—	5,165	58.9%

Table 3.1 Federal Pell Grant Awards[71]

The second major program the FSA administers is the Direct Loan Program. This program is strictly a loan originating from the U.S. Treasury to the FSA, then back to the students at a significant savings compared to securing a loan through other means. One may secure two kinds of loans through FSA, subsidized and unsubsidized. Both have the same interest rate. The subsidized version of the loan means that the "student is not liable for interest when in school and during periods of grace and deferment."[2] An unsubsidized loan means that the "student is liable for interest in school and during periods of grace and deferment."[2] The unsubsidized loan allows the borrower to make the payments on interest while in school so the amount owed is actually less (no interest remaining) when the grace period (finished with that semester of school) is over. It is not always feasible for one to be paying on a loan while in school and in this case the subsidized loan would be preferable. In this case, the government is actually paying the interest for the student during the grace periods. Both loans provide for a fixed interest rate for the life of the loan and allow the student the option to pay-off early without penalty.

The actual need of an applicant is determined based on her or his EFC (Expected Family Contribution), which is calculated using factors such as income, assets, and liabilities. Each of these factors is considered differently depending on which of the three categories the applicant falls under: a dependent student, an independent student with just a spouse, or an independent student with a spouse and additional dependents. The details of each formula can be seen in the Appendix under Worksheets A, B, and C. Worksheet A represents the formula for a dependent student, Worksheet B represents the formula for an independent student with a spouse, and Worksheet C represents the formula for an independent student with a spouse and additional dependents. FSA defines a student to be independent if they meet one or more of the following criteria:

- Was born before January 1, 1983
- At the beginning of the 2006-2007 school year, the student will be enrolled in a master's or doctoral degree program (such as MA, MBA, MD, JD, PhD, EdD, or graduate certificate, etc.)
- Is married (Answer "Yes" if the student is separated but not divorced)
- Has children who receive more than half of their support from the student
- Has dependents (other than children or spouse) who live with the student and who receive more than half of their support from the student, now and through June 30, 2007
- Both parents are deceased OR student is (or was until the age of 18) a ward/dependent of the court
- A veteran of the U.S. Armed Forces[3]

If these criteria are not met, then the student will fall under the dependent category and Worksheet A should be completed to determine the EFC.

The next major programs administered by the FSA are the Federal Supplemental Educational Opportunity Grant (FSEOG), the Federal Work-Study (FWS), and the

Federal Perkins Loan Programs. FWS is a way for the student to actually earn money from the institution they will be attending as a way to offset some of the education costs. FSEOG is different than the Pell Grant in that the actual institution where the applicant wishes to attend must contribute 25% of the grant amount. These options all share that the institution is partnering with FSA to share the cost of the benefits for the neediest applicants.

Earlier, it was mentioned that the FSA not only administers loans but also regulates other agencies that administer loans. The final major program administered by the FSA is the Federal Family Education Loan program (FFEL). These loans are regulated to abide by the guidelines set forth by the FSA and are also insured by the federal government to lower the risk of these loans, which in turn allow agencies to offer a lower interest rate than if the loans were not insured by the federal government. This allows for a win-win for both the agency loaning the funds and the applicant receiving the loan.

Although I have included how to calculate the level of assistance one qualifies for as well as the different programs administered by the FSA, the Free Application for Federal Student Aid (FAFSA) does this for each of its applicants. The FAFSA Web site (http://www.fafsa.ed.gov/) is very user friendly and organizes the page in a way that eliminates the applicant from wondering where to start. Figure 3.2 below is a screenshot of the FAFSA homepage as well as a summary of the step-by-step directions that

FAFSA has laid. This streamlined approach allows students to take advantage of Federal Student Aid instead of creating a cumbersome process that deters them from the advantages they qualify for.

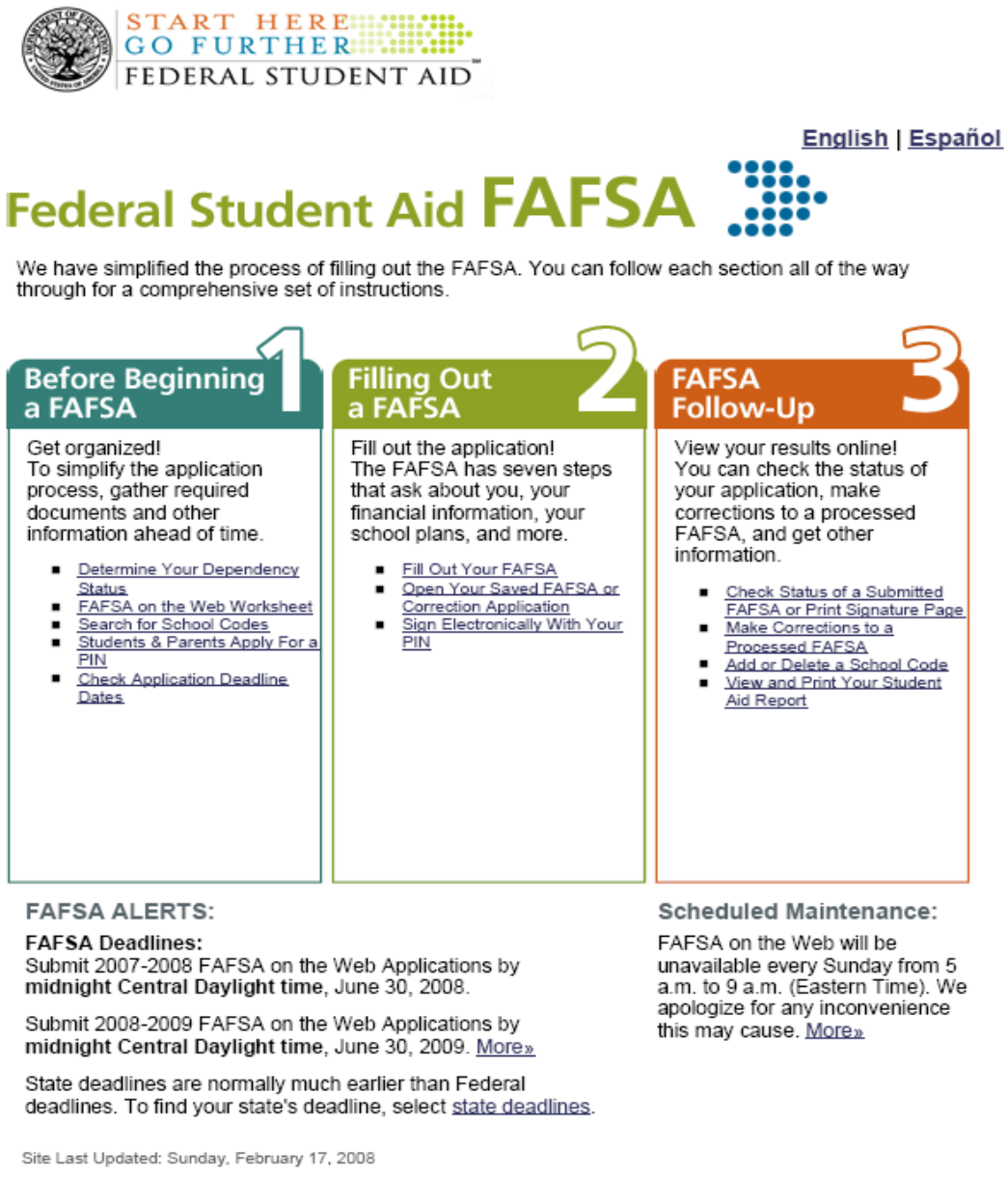


Figure 3.2 FAFSA Homepage

Each of the steps shown above is a hyperlink that takes the applicant through what they need to do before actually filling out the FAFSA application in step 2. One determines dependency status by answering a series of questions, then deferring to the FAFSA Web site's decision. By going through the FAFSA Web worksheet, the applicant is able to prepare for the questions they will be asked during the actual application process. A PIN is a personal identification number that allows the applicant to have a secure way to sign the application online. Online submission of the application can speed up the application process and allow for a tracking mechanism that is not always reliable when sending hard paper copies through the mail. The application deadline dates are important because "how one will pay for education" usually comes after the question "which college am I going to attend" is answered. Both the FAFSA application and the admissions applications are equally important for potential higher education students to complete. Although much of the process is conducted online (the FAFSA application process is done online, status can be checked online, and a section on frequently asked questions is online), FSA also offers live chat and telephone support.

3.2 Education Policies at the National Level

Although higher education assistance is both a state and federal government responsibility, the federal government does play a large role in regulating the financial aid that both institutions and individuals qualify for through grants and loans. The original purpose of the Department of Education, "to make recommendations surrounding methods of teaching that work or do not work," still exists, but the DOE's

role has grown in many areas, including college financial aid.[2] In 1998 the Higher Education Act of 1965 was amended to make improvements in the way that the Department of Education served the public. Specifically relevant here, Section 101 Part C discusses the changes made to allow for more affordable ways to obtain higher education. These changes focused on ways to collect the data necessary to know where improvements were needed. Some of the initiatives in this amendment were to improve the data collection methods that should and were to be used to make policy decisions and observations. "The Secretary shall direct the Commissioner of Education Statistics to convene a series of forums to develop nationally consistent methodologies for reporting costs incurred by postsecondary institutions in providing postsecondary education."[6] These methodologies include redesigning data collection systems and mandating pushing the information out to the higher education institutions. Mandates also required the higher education institutions to provide the Department of Education with the information the Department needed to disseminate the data, make recommendations, spear-head policy initiatives, etc. The information the DOE requests is similar to what a public company must provide in its annual I-9 for investors:

> A) the change in tuition and fees compared with the consumer price index and other appropriate measures of inflation;
>
> (B) faculty salaries and benefits;
>
> (C) administrative salaries, benefits and expenses;
>
> (D) academic support services;

(E) research;

(F) operations and maintenance; and

(G) institutional expenditures for construction and technology and the potential cost of replacing instructional buildings and equipment [6]

These measures forced higher education institutions to provide information or else face fines. The measures may seem harsh, but how else could the Department of Education make real and actual claims surrounding the cost of higher education without these data? Also mentioned in the 1998 amendment to the Higher Education Act of 1965 is a requirement that the Department of Education "submit a report regarding the findings of the study required … to the appropriate committees of Congress not later than September 30, 2002."[6] Not only were there new requirements for college institutions but also for the Department of Education. It was recognized that a joint effort was needed in order for any recommendations for improving the affordability of higher education, in addition to other improvements, to be accomplished.

In 2002, the Education Sciences Reform Act of 2002 was signed into law, which led to the creation of the Institute of Educational Sciences (IES), another sub-agency within the Department of Education. The IES consists of four functional operating bodies: The National Center for Education Research (NCER), The National Center for Education Statistics (NCES), The National Center for Education Evaluation and Regional Assistance (NCEE), and The National Center for Special Education Research (NCSER). Each of these entities plays a distinctive role in data collection and analysis in its respective areas of expertise and allows the Department of Education to use this

information in deciding the burden of higher education costs on the institutions, the individuals, and the other contributors. An example of how the information the NCES collects is important to higher education costs is its *Projects to Education Statistics to 2016* report.

> This edition of *Projections of Education Statistics* provides projections for key education statistics, including enrollment, graduates, teachers, and expenditures in elementary and secondary schools. Included are national data on enrollment and graduates for the past 15 years and projections to the year 2016, as well as state-level data on enrollment in public elementary and secondary schools and public high school graduates to the year 2016.[7]

The historical cost information is then used with the projections to determine the level of assistance that will be needed from a federal perspective and determine what responsibility will fall back on the state governments, the institutions, and the individuals themselves.

3.3 Education Policies during the Reagan Years (1981-1988)

Before reviewing the education policies passed during the Reagan, H.W. Bush, and Clinton years (1981-2000), it is important to recall the shifting party control of Congress and the presidency (see Table 3.2).

Year	President Party	Senate Majority	House of Representatives Majority
1981	R	R	D
1982	R	R	D
1983	R	R	D
1984	R	R	D
1985	R	R	D
1986	R	R	D
1987	R	D	D
1988	R	D	D
1989	R	D	D
1990	R	D	D
1991	R	D	D
1992	R	D	D
1993	D	D	D
1994	D	D	D
1995	D	R	R
1996	D	R	R
1997	D	R	R
1998	D	R	R
1999	D	R	R
2000	D	R	R

Table 3.2 Party Control [67, 68]

Policies at both the national and state levels are affected by who is president and by their agenda for each fiscal year. For the purposes of this research, I will first recap the higher education policies on Ronald Reagan's agenda during his presidency and discuss how that affected both the national and state government education initiatives. Following that, attention shifts to similar examination of the H.W. Bush and Clinton administrations. This overview will allow us to later examine the possible links between presidential initiatives (more federal involvement in education or less) and enrollment levels in higher education. Historically, Republicans have wanted more state

control of higher education, while Democrats have wanted more federal control of higher education.

Reagan's reign as President of the United States is often referred to as a period of New Federalism, although not the first, because he viewed many of the past responsibilities of the federal government as responsibilities that the states should actually undertake. Ronald Reagan had several items that he wanted put back in the hands of the state governments, and higher education was one of them. The Reagan administration affected education policy by 1) reducing federal funding, 2) reducing the size and power of the Department of Education, and 3) empowering the states to make education policy decisions, manage funds, and develop more competitive schools and teachers. Reagan's education policies have been met with mixed reactions. David Clark and Terry Astuto wrote an interesting article that implies the budget cuts were actually beneficial because they "created a mind-set that has persisted, that is, the expectation is for less."[13] Deborah Verstergen's account takes a more negative spin by implying that Reagan continued his pursuit to reduce federal involvement in education despite the negative effects it was having:

> the Reagan administration marked decreases in federal aid to education that have affected nearly a generation of federal aid recipients. Reductions in aid for education during the Reagan administration diminished the size, cost, and direction of the federal role in American education and, therefore, marked a critical turning point in national educational policy and finance.[14]

3.4 Education Policies during the Bush Years (1989-1992)

After Reagan left office, George H. W. Bush worked to revamp the Higher Education Act in 1991. During the one term held by George H. W. Bush, Congress passed the Higher Education Amendments of 1992, which reformed the act passed in 1965. This was undoubtedly the largest impact to higher education affordability made by the first Bush administration. This amendment raised the income eligibility for both grants and loans. As will be shown in greater detail in a later section, this time period marks when the amount of loans and the dollar amounts of these loans increased at an unexpected rate. Student loan volume soared following the 1992 amendments, which extended borrowing eligibility to middle- and upper-income groups. "Federal student loans currently cover approximately 60% of all student aid, compared to 40% in 1980, and 30% in 1970."[38] This amendment could be viewed as both a positive or negative move toward a more affordable college education. This amendment allowed more people to consider higher education through lower interest and deferred loans, but as loan numbers increased so did the amount of debt for students and their families.

Between the school years 1992-93 and 1995-96, the average indebtedness for students attending public four-year institutions increased by over 50%, and this trend has continued. The Higher Education Amendments of 1992 created much controversy

despite the good intentions of those who passed it. The increased loan amounts that are now offered to students do not take all factors into consideration like other types of loans do. All that is really considered is how much is needed to attend school and not how the loan will be paid back or how long the repayment period will be. Qualification is based on need or amount requested within the ceiling amounts, and no consideration is made for how much one can afford to pay back.

3.5 Education Policies during the Clinton Years (1993-2000)

Unfortunately, good intentions led to higher deficits and an even bigger financial aid situation by the time Clinton was sworn in. Bush's plan to reduce the number of student loans and increase the number of grants for the neediest of students had effects opposite of those that were intended.

> Expansion of the loan program, combined with failure to win entitlement status for Pell Grants actually worsened the grant-loan imbalance. The cost of correcting this problem is substantial–just restoring the grant-loan ration that existed in 1992 would require $5 billion a year in additional federal funds.[15]

When Clinton was sworn in, assistance for higher education from both the federal and state levels was on his agenda. Many of his initiatives involved giving money back through tax breaks to the neediest students. Some of these tax break initiatives included a "$10,000 tax deduction to help middle-class families--with adjusted gross incomes below $100,000--pay college tuition" [15] and the Hope Scholarship, which gave $1,500 in tax credits back to families over a two-year period.

Clinton's views on education policies were that both the national and state governments should share the responsibility for successful education in America. Through a series of programs, a joint effort between the federal governments and state and local governments began to make strides and put the confidence back into our nation's future of higher education affordability.

3.6 Financial Aid at the State Level

Financial aid for higher education is not just a national responsibility, but a state responsibility as well. Each state has its own department of education that oversees the condition of education at the state and local levels. For the purposes of this research, Virginia is the focal state.

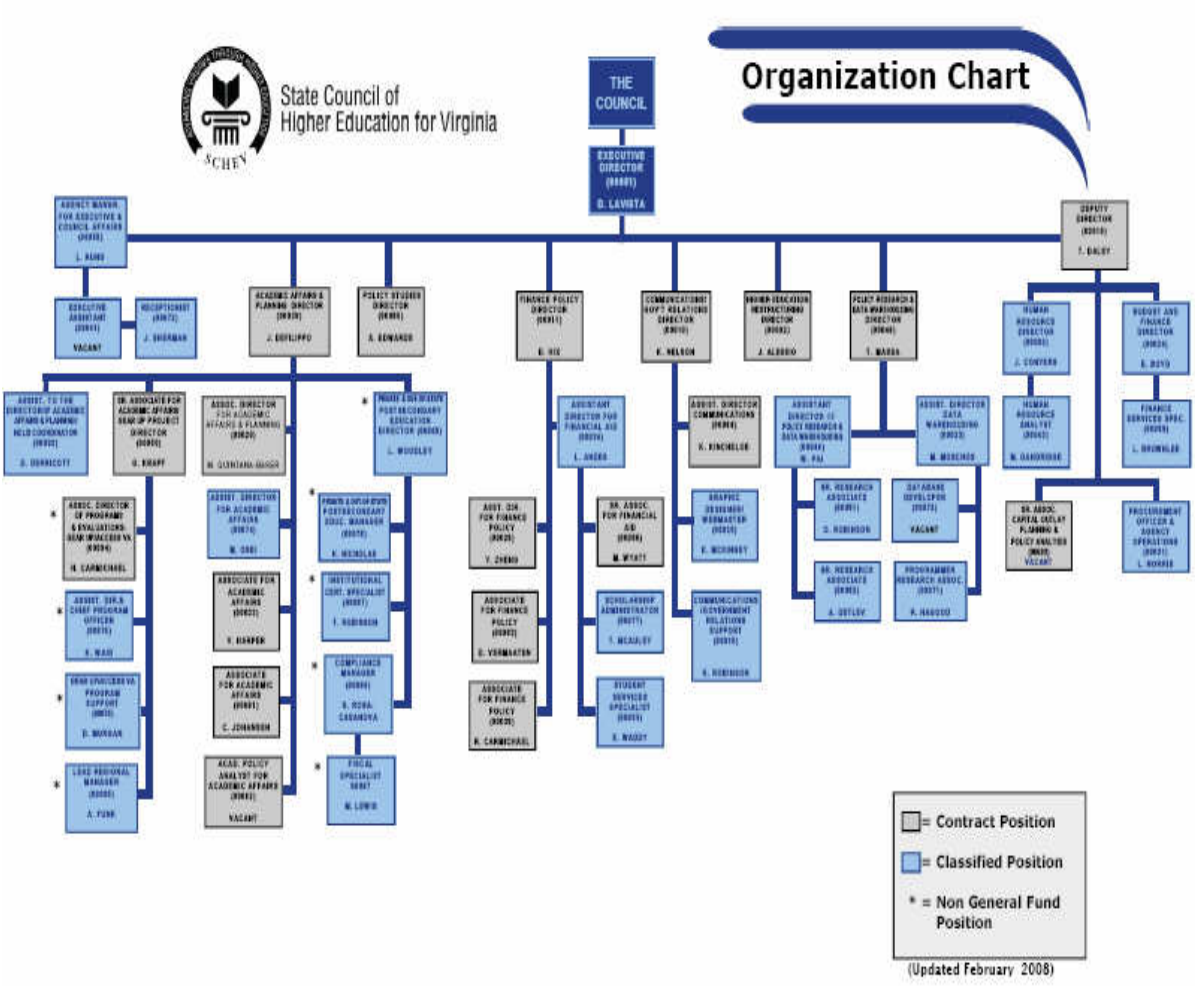


Figure 3.3 SCHEV Organization Chart[5]

The State Council of Higher Education for Virginia (SCHEV) "makes higher education public policy recommendations to the Governor and General Assembly in such areas as capital and operating budget planning, enrollment projections, institutional technology needs, and student financial aid."[5] SCHEV's functional divisions, as shown above in

Figure 3.3, include Academic Affairs, Finance Policy, Policy Research and Data Warehousing, and Communications and Government Relations. Like the U.S. Department of Education Federal Student Aid Agency, SCHEV assists with the policies surrounding how to make other lending agencies accountable and maintaining the moral standards needed when dealing with the money of citizens and the education necessary to promote Virginia into the future. Although SCHEV does not actually lend money to students, it has compiled the federal, state, private, and institutional means that students can pursue to secure the necessary aid to make higher education within reach. "The purpose of SCHEV's website is to provide to students and parents an overview of the different sources of available financial aid."[5]

The financial aid offered through state mechanisms are the Commonwealth Award, the Virginia Guaranteed Assistance Program, the Tuition Assistance Grant Program, and the College Scholarship Assistance Program. "The purpose of the Virginia Commonwealth Award is to assist undergraduate students with financial need and graduate students to pay part of their college costs."[5] As with federal financial aid, the state instructs that those with the highest need should be given aid first. The Virginia Guaranteed Assistance Program targets high school students that demonstrate a financial need that would otherwise prohibit them from being able to consider education after high school. The Tuition Assistance Grant Program (VTAG) "is designed to assist Virginia residents who attend accredited private, non-profit colleges and universities in Virginia for other than religious training or theological education."[5]

The College Scholarship Assistance involves a combination of funds from state appropriations and the Federal Leveraging Educational Assistance Partnership (LEAP). "Each state's LEAP allotment is based on its relative share of the total national population of 'students eligible to participate' in the LEAP Program."[2] In order to accomplish its mission, SCHEV conducts a series of studies and maintains an impressive data warehouse of statistics. These statistics are then compared and analyzed in order to make recommendations to the current governor and legislative members for policy and financial aid.

3.7 Education Policies at the State Level

As stated earlier, most consider public higher education to be a state government responsibility. Although the U.S. Department of Education oversees the overall picture, each state has its own Department of Education specifically to oversee the details for its specific state. This research focuses on Virginia's Department of Education, which oversees Virginia's higher education policies and works to "develop the rules and regulations for the administration of state programs."[8]

The part of the Department that is most relevant here is the Division of Finance. The VDOE is regulated by the Code of Virginia, which sets the formulas deciding what amount of funding (in any fashion) Virginia can grant to an institution, thus determining the burden that falls on the institution and on individuals.

Previous sections introduced the Reagan, Bush, and Clinton education policies and agenda items during the years 1981 through 2001. It is important to understand state actions and context during this time as well. Among the items to be considered are the parties of the governors and the state legislature during this period, key state higher education topics, and higher education appropriations during each of the years being discussed.

Year	Governor	Governor Party	House of Delegates	Senate
1981	John N. Dalton	Republican	Democratic	Democratic
1982	Charles S. Robb	Democratic	Democratic	Democratic
1983	Charles S. Robb	Democratic	Democratic	Democratic
1984	Charles S. Robb	Democratic	Democratic	Democratic
1985	Charles S. Robb	Democratic	Democratic	Democratic
1986	Gerald L. Baliles	Democratic	Democratic	Democratic
1987	Gerald L. Baliles	Democratic	Democratic	Democratic
1988	Gerald L. Baliles	Democratic	Democratic	Democratic
1989	Gerald L. Baliles	Democratic	Democratic	Democratic
1990	L. Douglas Wilder	Democratic	Democratic	Democratic
1991	L. Douglas Wilder	Democratic	Democratic	Democratic
1992	L. Douglas Wilder	Democratic	Democratic	Democratic
1993	L. Douglas Wilder	Democratic	Democratic	Democratic
1994	George Allen	Republican	Democratic	Democratic
1995	George Allen	Republican	Democratic	Democratic
1996	George Allen	Republican	Democratic	Republican
1997	George Allen	Republican	Democratic	Republican
1998	James S. Gilmore, III	Republican	Democratic	Republican
1999	James S. Gilmore, III	Republican	Democratic	Republican
2000	James S. Gilmore, III	Republican	Democratic	Republican

Table 3.3 Virginia Governor and Virginia State Legislature Party Control (1981-2000)[17]

Table 3.3 shows the party control of the legislative and gubernatorial branches of state government between 1981 and 2000. Those years that had opposing parties in governor position and in the legislative control are highlighted yellow. All years between 1981 and 2000 will be examined in this study, but the years with divided government will be taken into account when analyzing the data. It is assumed that when a governor faces a divided legislature that it will be more difficult for a consensus to be formed and bills to be passed. This assumption was put to the test and proved in a study by Cynthia J. Bowling and Margaret R. Ferguson. "Using data from the 50 states, we found that when a governor faced a legislature controlled by the opposition party, divided government did make passage of conflictual policy more difficult, When the control of the legislature itself was split, divided government had a positive (or insignificant) effect in less conflictual policy areas."[72]

Charles Robb was the Virginia governor between 1982 and 1985; he was a member of the Democratic Party. During his term, he stood for the view of education as a public responsibility where the federal and state governments should do as much as possible to improve affordability and accessibility. "Robb froze the budgets of most state agencies so he could direct more money to education, despite a recession and falling student enrollment during his governorship from 1982 to 1986."[38] He took extreme measures because he believed in strengthening higher education despite the poor

economy. Robb also realized the shifting trend of less federal and more state responsibility when it came to certain areas, education included.

> The shifts in responsibilities from Washington to the states will continue regardless of which party is in power…It is not farfetched to project that by the end of the century, if not before, the federal government will be responsible for national defense, the national debt, Social Security, and income maintenance programs and little else.[45.]

Despite Robb's efforts, Virginia still fell short compared to other states when it came to public education assistance. When Robb took office, Virginia ranked 45th among states in the percentage of public education spending that came from the state budget, according to figures compiled by the Virginia Education Association, which backed Robb. These figures include higher education but are not limited to higher education. After one billion dollars of new education spending, Virginia's ranking had nudged up to 44th the year he left office"[39]. Robb's commitment to education did not stop after he was governor. He volunteered at George Mason University as a part-time professor in the law and public policy department. Although the pay was only $2,500 per semester, he refused the pay because of his concern for Virginia's higher education budget that he worked so hard for during his term as governor.[40]

Democrat Gerald L. Baliles succeeded Robb as governor. He too added significant sums to the public higher education funding. During his term from 1986–1989, we see the largest year-to-year increase to public higher education funding, 23.94%. L. Douglas Wilder was the next governor whose term was 1990–1993, but he did not fit the typical mold of a Democratic governor. He received much attention for being Virginia's first African-American elected governor as well as his actions to decrease funding for public higher education. Wilder's justification for the decreases or, in some cases, smaller increases, was to respond to the budget crisis in Virginia in the midst of the national recession of the late 1980s and early 1990s. Wilder was forced to make some tough decisions that were not popular. The 1991 higher education budget year saw the largest year-to-year decrease between the years 1981 and 2000.

George Allen, a Republican, was governor between 1994 and 1997. During the first two years of his term, Allen began to get a reputation for not putting money toward education, but in his last two years, he made every effort to not only support more money for public higher education but also to freeze tuition increases to narrow the affordability gap that had been consistently growing. "In keeping with his administration's emphasis on rewarding merit, Allen proposed an additional $50 million for colleges and universities that do well in areas such as graduation and retention rates and student performance. He also wants to extend the state's college tuition freeze for two more years at a cost of $37.3 million and pump an additional $84.6

million into the budget to raise college faculty pay to the 60th percentile nationally."[42] This plan was popular among students, faculty, policy makers, and taxpayers.

Allen was succeeded by James Gilmore, another Republican. He set out to streamline and cut "unnecessary" spending and as a result threatened significant budget cuts to public higher education. He demonstrated awareness to keep college tuition costs down during a time when the state appropriations for higher education would either be remaining constant or even possibly decreasing by reducing the burden of personal property taxes.

> Gilmore, a graduate of the University of Virginia and its law school, wants to cut tuition by 20% for in-state students, a plan that would cost Virginia $75 million a year. It would save an in-state student at a four-year college $578 a year; an in-state student at a two-year college would save an average of $286.[44]

The foundation for both the national and local politics occurring during the timeframe for this research has just been discussed. Now, the methods used to analyze this historical information will be discussed.

Chapter IV
Methodology

4.1 Introduction

The main evidence and conclusions of this research are drawn from a case study of the impact of higher education affordability on public college and university enrollments in a single state between 1981 through 2000. Three dimensions of the affordability of undergraduate higher education in public Virginia institutions have been examined through an exploration of literature, previous research, and data collection and analysis. These three dimensions of affordability are: 1) per capita disposable income (adjusted for inflation) in Virginia, 2) financial aid at the state and federal levels, and 3) the loan burdens for college students. Possible influences on affordability that are also examined are: 1) the partisan control of the U.S. presidency and Congress and 2) the partisan control of the Virginia governor and the Virginia state legislature.

This case study will then look at the relationships between these variables and undergraduate public institution enrollments in Virginia. Because the affordability of education is broadly defined, I have chosen enrollment as the dependent variable, hypothesizing that more people will enroll in colleges and universities as they become more affordable. This in turn should give a clearer view of which dimensions our

political leaders should pay more attention to when evaluating issues of higher education affordability for undergraduate, public institution attendees in the future.

4.2 Type of Research

The three affordability dimensions can be used in an examination of the possible effects of variation in affordability on higher education enrollments. A case study was chosen as the type of research to be conducted because of the complexity of defining the affordability of higher education in public institutions. I hope this analysis will provide a benchmark either for further study on this topic and state or for further-reaching studies encompassing other states, a longer time period, or both. Virginia was chosen because I have lived in Virginia all of my life and plan to continue living in Virginia. I am personally vested in the success or failure of Virginia's higher education institutions being affordable or not due to the societal implications of a more highly educated society as noted in Chapter Two. The time period of 1981 – 2000 was selected for two main reasons: 1) multiple data are more readily available for later time periods, and my research requires the gathering, analysis and comparisons of multiple kinds of data, and 2) this time period allows for diverse partisan control to be examined at both the national and state government levels, permitting partisan control to be considered as a possible influence on affordability.

4.3 Research Conducted

I researched specific details for each of the affordability dimensions and the stated influences to ensure my inferences would be as accurate as possible. Those details are outlined below.

#1 Per capita disposable income (adjusted for inflation) in Virginia

The Bureau of Economic Analysis, an agency in the U.S. Department of Commerce, defines disposable income as "personal income minus personal tax and non-tax payments."[12] More disposable income is a positive thing for the economy because it is what individuals have left to spend (or save) on goods and services -- including higher education. A firm understanding of this concept would suggest that if disposable income increases, then more money will be spent on "non-essentials" such as higher education.

In order to determine if there is a relationship between the levels of disposable income per capita and enrollment in higher education, one must first determine the disposable income levels adjusted for inflation. The Bureau of Labor Statistics publishes the disposable income per capita but not adjusted for inflation. In order to obtain this information, I used the following formula throughout the thesis to come up with the disposable income per capita adjusted for inflation. Figure 4.1 shows the yearly inflation rates used to produce the answer to the "Disposable Income Per Capita Adjusted for Inflation" formula:

Current Disposable Dollar Amount x (Previous Year Inflation Rate/Current Year Inflation Rate) = Disposable Income Per Capita Adjusted for Inflation.

Per Capita Disposable Income Adjusted for Inflation in Virginia was chosen as one of the three dimensions of the affordability of undergraduate public education in Virginia. All figures in this thesis that present disposable income data were adjusted for inflation so I would be comparing comparable figures and not skewing the results. I then calculated the percentages of disposable income (adjusted for inflation) that students were spending on undergraduate, public institution enrollment in Virginia. National data also were collected for comparison. Is Virginia on target with the national average or are students in Virginia public institutions paying a higher percentage of disposable income than most? Data for each of the above were collected from multiple sources including the U.S. Census Bureau, the U.S. Department of Education and their sub-agencies, SCHEV, the College Board, and the Bureau of Economic Analysis.

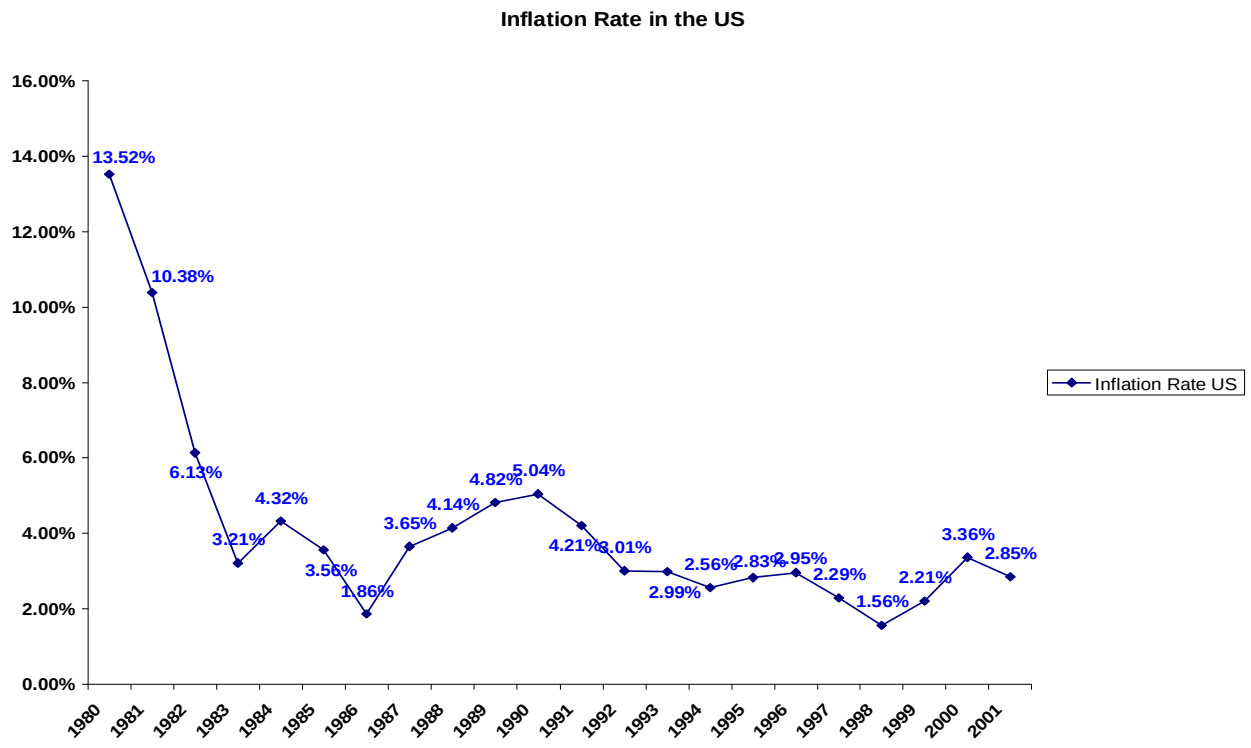


Figure **4.1 Percentage Change in U.S. Inflation**

#2Financial aid at the state and federal levels

This dimension was chosen because the burden of tuition is lessened by the amount of both federal and state aid available. I examined the amounts of loans, grants, and appropriations given directly to the institutions to offset costs. The proportions of loans as a comparable data source to grants is an important topic to include because loans need to be repaid and grants do not, which can affect the long-term benefits and costs of a college education for the individual as well as for society. Data for each of the above were collected from multiple sources including the U.S. Census Bureau, the U.S. Department of Education and their sub-agencies, SCHEV, the College Board, the Bureau of Economic Analysis and the Acts of the General Assembly.

#3The burden of a loan for college students

This dimension was chosen because the level of debt a college student can carry during their undergraduate years and later can impact both the individual and society as a whole because money that is spent repaying these college loans is money that otherwise could be put back into society through the way of purchasing consumer goods. I will explore the new loan crisis in our country and how it is affecting prospective students and the decision to enroll, graduates, drop-outs and current students. Affordability of higher education should be considered throughout the entire repayment period, not just while the student is attending school. We need to consider the entire burden and the entire cost of public higher education. Data for each of the above were collected from multiple sources including the U.S. Census Bureau, the U.S. Department of Education and their sub-agencies, SCHEV, the College Board, the Bureau of Economic Analysis and the Acts of the General Assembly.

The next two items are possible influences on the three dimensions of affordability that were just discussed. The data would not be presented with sufficient content if these influences are not taken into consideration.

#1 The partisan control of the U.S. presidency and Congress

Although my primary focus is the state of Virginia, the federal policies cannot be ignored. I will look at the levels of enrollment to see if they appear to have any

significant differences when a particular party is in control of the presidency or Congress. Specific policies surrounding education will also be discussed. Reagan, Bush, and Clinton were chosen for the following reasons. First, Reagan represents the stereotypical Republican view while Clinton represents the stereotypical Democratic view. Bush is included since he was president in between the two and the policies that began under him impacted the Clinton higher education policies. Second, data on public higher education enrollment as well as disposable income levels are available for the years during which all three were president.

#2 *The partisan control of the Virginia governor and the Virginia state legislature*

This dimension is important because I will look at the levels of enrollment to see if they appear to have any significant differences when a particular party is governor or in control of the Virginia Legislature. Specific policies surrounding education also will be discussed. I did not research specific information about John Dalton because his participation during the timeframe of this study is minimal, only serving one year.

4.4 Limitations

To my surprise much of the data prior to 1998 were not available in multiple physical locations or in a central database. The Virginia higher education appropriations are only available at the Library of Virginia located in Richmond Also, most information about previous Virginia governors must be found in sources such as newspaper articles and other periodicals that require my interpretation. Much of the data prior to 1998 are

difficult to find in disaggregated form ("in the raw") and are only available as in summary form in published reports; this, of course, can create difficulties if data are grouped into periods greater than the individual years that I needed for this study. The scope of this research was narrowed to eliminate consideration of gender or racial variations, factors that deserve future study.

Chapter V
Analysis and Evaluation

This chapter examines the study's dependent variable, undergraduate, public institution enrollments in Virginia, but also looks at the national figures as well. Looking at the national figures with our dependent variable gives a broader view of the Virginia data. Then the three affordability dimensions are examined for Virginia, but again national data figures are explored to provide a broader picture. Relationships between the dependent variable and the three dimensions are then discussed.

5.1 Enrollment Data

This section begins by examining the dependent variable, undergraduate public higher education enrollments in Virginia. In all of the years during this study, four-year public institution enrollments as a percentage of the population surpassed the two-year public institutions. Table 5.1 shows the actual figures, in thousands, for these enrollment figures.

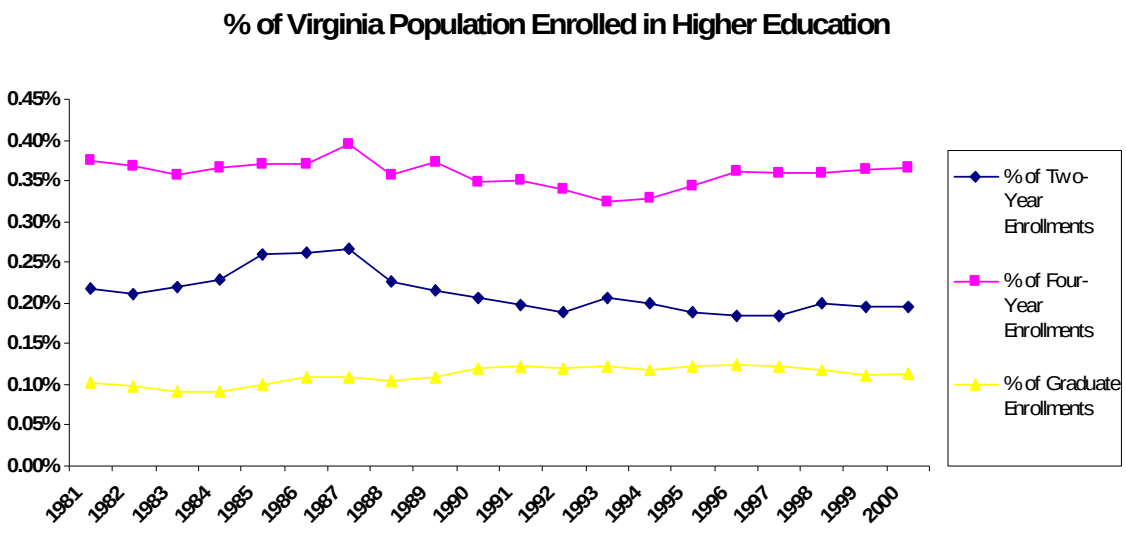


Figure 5.1 Percentage of VA Population Enrolled in Higher Education[9]

Year	2-Year Public Institution Enrollments	4-Year Public Institution Enrollments	Total VA Public Institution Enrollments
1981	11,791	20,367	**32,158**
1982	11,609	20208	**31,817**
1983	12,167	19884	**32,051**
1984	12,910	20581	**33,491**
1985	14,872	21142	**36,014**
1986	15,152	20157	**35,309**
1987	15,784	22919	**38,703**
1988	13,651	23447	**37,098**
1989	13,225	22,753	**35,978**
1990	12,704	21,549	**34,253**
1991	12,444	21,965	**34,409**
1992	11,964	21,591	**33,555**
1993	13,271	20,940	**34,211**
1994	13,108	21,438	**34,546**
1995	12,504	22,708	**35,212**
1996	12,218	24,041	**36,259**
1997	12,399	24,211	**36,610**
1998	13,588	24,334	**37,922**
1999	13,462	25,050	**38,512**
2000	13,736	25,907	**39,643**

Table 5.1 Virginia's Public Two-Year and Four-Year Institution Higher Education Enrollments (in thousands)[9]

I hypothesized that enrollments would vary with affordability measured by the extent of disposable available for higher education. Table 5.2 compares one of the affordability dimensions against a portion of the dependent variable. The percentage change for Virginia population enrolled in four-year public higher education institutions is compared to the percentage change for Virginia's per capita disposable income. The years 1984, 1987, 1993, 1995, 1999 and 2000 all saw decreases in per capita disposable

income adjusted for inflation in Virginia, while 1982, 1983, 1986, 1989, 1990, 1989, 1990, 1992, and 1993 saw decreases in enrollments at four-year undergraduate public institutions. This information leads to an inference that when times are "good," perhaps the desire to spend additional disposable income on public four-year institutions decreases. This study does not include private institutions but it would be interesting to see if when there is more disposable income available, we see the four-year institution enrollment numbers decreasing because more students can afford private institutions.

Year	Disposable Income Per Capita % Change	4-Year Public Institution Enrollments % Change
1981		
1982	41.07%	-0.78%
1983	22.32%	-1.60%
1984	-56.77%	3.51%
1985	73.38%	2.73%
1986	67.71%	-4.66%
1987	-71.97%	13.70%
1988	85.92%	2.30%
1989	3.41%	-2.96%
1990	15.79%	-5.29%
1991	28.77%	1.93%
1992	22.02%	-1.70%
1993	-26.05%	-3.02%
1994	19.92%	2.38%
1995	-20.20%	5.92%
1996	9.86%	5.87%
1997	40.36%	0.71%
1998	18.54%	0.51%
1999	-49.88%	2.94%
2000	-0.98%	3.42%

Table 5.2 VA Percentage Change in Disposable Income and 4-Year Public Enrollments[5]

If one looks at the same information for two-year public undergraduate institutions (see Table 5.3), 1982, 1988-1992, 1994-1996 were the years where the decreases in two-year

institution enrollments occurred. These drops occur most frequently in disposable income percentages are up. During the highest year of disposable income increases in 1988, this also marked the highest decrease in 2-year public institution enrollments. When people can afford less, they do not enroll in a four-year college, but instead enroll in a 2-year college, and vice versa. As seen in Figure 5.1, the percentage of Virginia's population enrolled at four-year public institutions always surpasses the number of Virginia's population enrolled at two-year public institutions. This is why the total Virginia enrollments in public institutions increase and decrease in the same years as the four-year institution figures.

Year	Disposable Income Per Capita % Change	2-Year Public Institution Enrollments % Change
1981		
1982	41.07%	-1.54%
1983	22.32%	4.81%
1984	-56.77%	6.11%
1985	73.38%	15.20%
1986	67.71%	1.88%
1987	-71.97%	4.17%
1988	85.92%	-13.51%
1989	3.41%	-3.12%
1990	15.79%	-3.94%
1991	28.77%	-2.05%
1992	22.02%	-3.86%
1993	-26.05%	10.92%
1994	19.92%	-1.23%
1995	-20.20%	-4.61%
1996	9.86%	-2.29%
1997	40.36%	1.48%
1998	18.54%	9.59%
1999	-49.88%	-0.93%
2000	-0.98%	2.04%

Table 5.3VA Percentage Change in Disposable Income and 2-Year Public Enrollments[5]

Overall in Virginia, public institution enrollments decreased in the years 1982, 1986, 1988-1990, and in 1992. This is portrayed in Table 5.4 below. These years of decreases to Virginia's public institution enrollments are all years when the per capita disposable income in Virginia was increasing.

Year	2-Year Public Institution Enrollments	4-Year Public Institution Enrollments	Total VA Public Institution Enrollments	Total VA Public Institution Enrollment % Change
1981	11,791	20,367	**32,158**	
1982	11,609	20208	**31,817**	**-1.06%**
1983	12,167	19884	**32,051**	**0.74%**
1984	12,910	20581	**33,491**	**4.49%**
1985	14,872	21142	**36,014**	**7.53%**
1986	15,152	20157	**35,309**	**-1.96%**
1987	15,784	22919	**38,703**	**9.61%**
1988	13,651	23447	**37,098**	**-4.15%**
1989	13,225	22,753	**35,978**	**-3.02%**
1990	12,704	21,549	**34,253**	**-4.79%**
1991	12,444	21,965	**34,409**	**0.46%**
1992	11,964	21,591	**33,555**	**-2.48%**
1993	13,271	20,940	**34,211**	**1.95%**
1994	13,108	21,438	**34,546**	**0.98%**
1995	12,504	22,708	**35,212**	**1.93%**
1996	12,218	24,041	**36,259**	**2.97%**
1997	12,399	24,211	**36,610**	**0.97%**
1998	13,588	24,334	**37,922**	**3.58%**
1999	13,462	25,050	**38,512**	**1.56%**
2000	13,736	25,907	**39,643**	**2.94%**

Table 5.4 Percentage Change for All VA Public Institution Enrollments

In order to really understand what these data describe, Figure 5.2 shows the data in total by taking the percentage change of Virginia institution enrollments and compares that to the percentage change in per capita disposable income adjusted for inflation. The percentage change in disposable income fluctuates at a much higher rate than the percentage change in enrollees. The largest decrease of enrollments in Virginia was in 1990-1991 school year. This was while Wilder was governor and made cuts in the 1991

education appropriations for the 1991 school year.

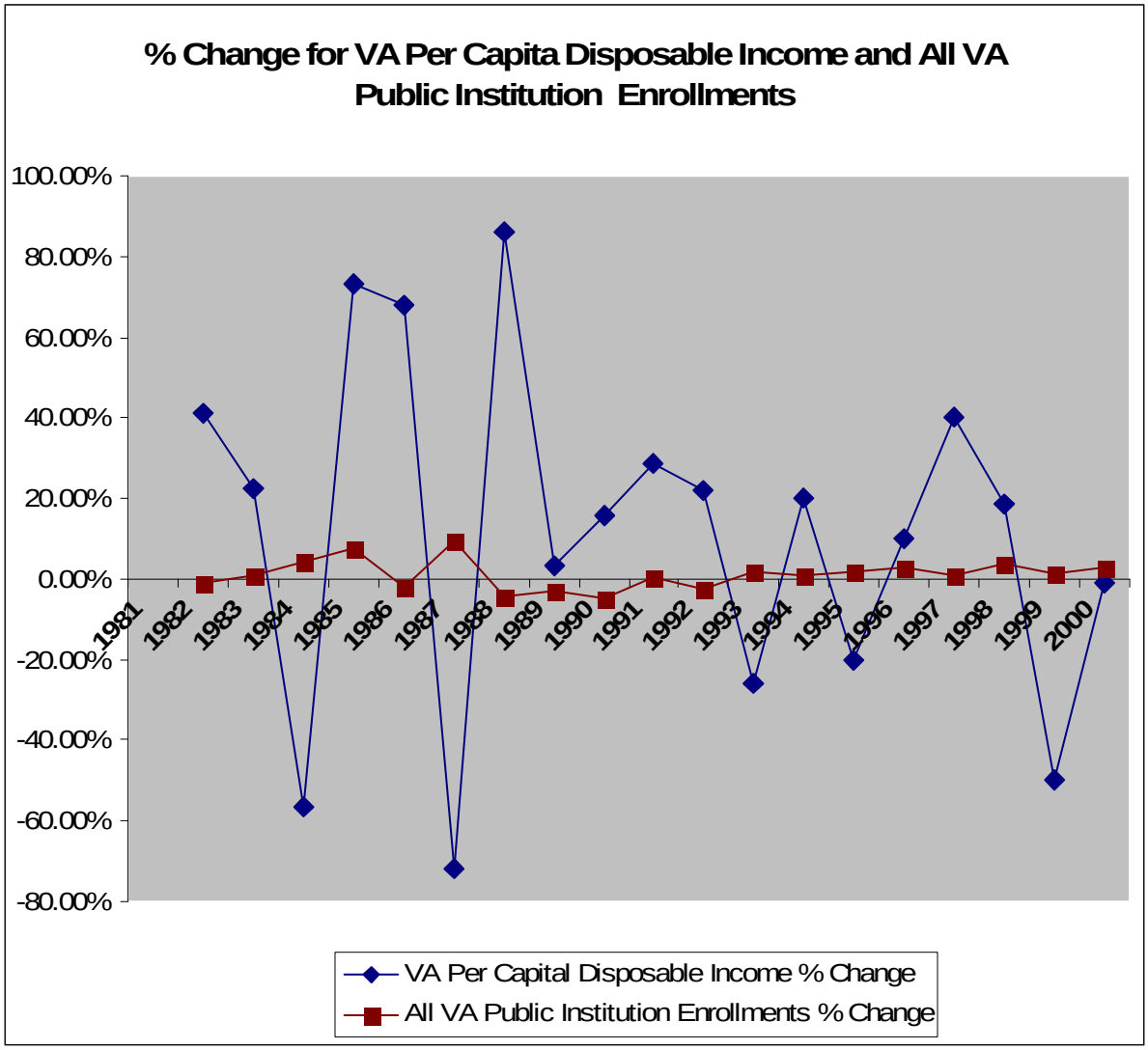


Figure 5.2 Percentage Change for VA Enrollments for All Public Institutions Compared to VA Disposable Income Percentage Change[9]

In order to gain a broader view, national enrollment levels also were analyzed. Although only the Virginia enrollments levels are our dependent variable, the national data are included to compare with the Virginia enrollment data. It is hard to know whether Virginia is way off the mark because there is no control group that could be

established. The national enrollment data come from the National Center for Education Statistics (NCES) and the U.S. Census Bureau. They can be used to better understand the Virginia enrollment data; the following national figures are employed as comparable measures: 1) the percentage of the U.S. population attending college, 2) tuition costs as a percentage of disposable income, 3) tuition trends, and 4) federal appropriations (loans, grants, and aid) for higher education. Comparing these national data with the Virginia undergraduate data may help place the state figures in a broader perspective.

The NCES provides data on enrollment trends for undergraduate students from a national perspective. According to the NCES 2006 edition of the *Digest of Education Statistics*, enrollment increased by 17% between 1984 and 1994 and again increased by 21% between 1994 and 2004. Undergraduate degree enrollees increased and decreased through the 1970's and 1980's until finally increasing steadily at 20% between 1996 and 2004.

How do the overall enrollee numbers by year compare when examined as a percentage of the overall American population? In order to take a look at these data from a slightly different angle, we turn to U.S. Census Bureau for population statistics for the years that the NCES reports on its enrollment numbers. It is worth looking at these data as a percentage of the total U.S. population or as a percentage change of the total U.S. population so that interpretation of these figures is not muffled by the continual growth in U.S. total population. Of course the total number of enrollees will increase each year,

but what do these figures look like as a percentage? Figure 5.3 represents the percentage increase or decrease by year for higher education enrollments during the period 1981-2001. The highest percentage increase that we saw was in 1990 when the percentage of the U.S. population enrolled in higher education increased by 4.63% and the lowest percentage decrease was 3.96% in 1999. The data in Figures 5.4 below show the fluctuations in higher education enrollments as a percentage of the U.S. population. The percentage changes from year to year are minimal and translate into subtle changes in total U.S. population enrolled in higher education. Figure 5.4 also shows that higher education enrollments, as a percentage of the U.S. population, are growing faster than the total U.S. population. During the period of 1981-2001, the U.S. population grew by 20.73% while the percentage of higher education enrollments grew by 29.64%.

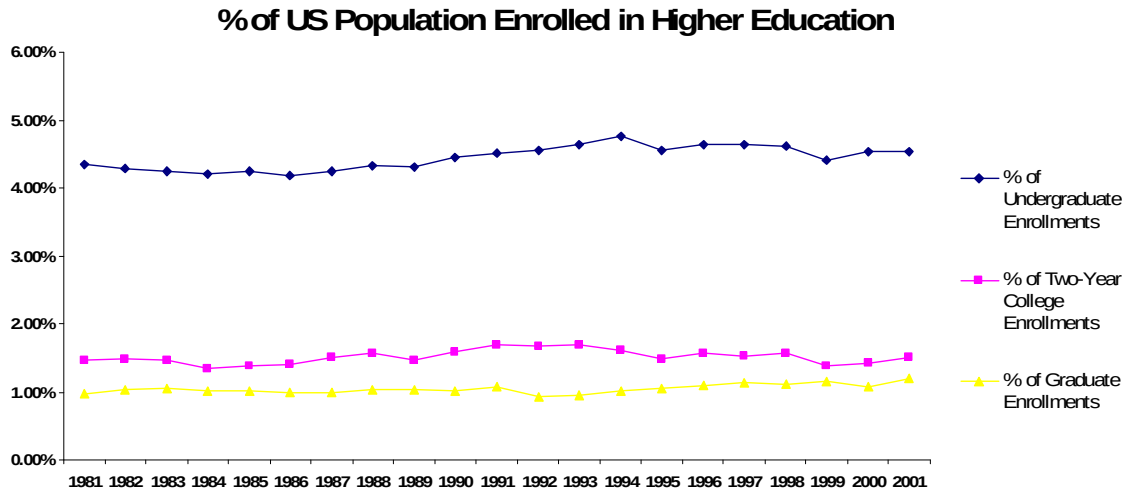


Figure 5.3 Higher Education Enrollments as a Percentage of the U.S. Population[7]

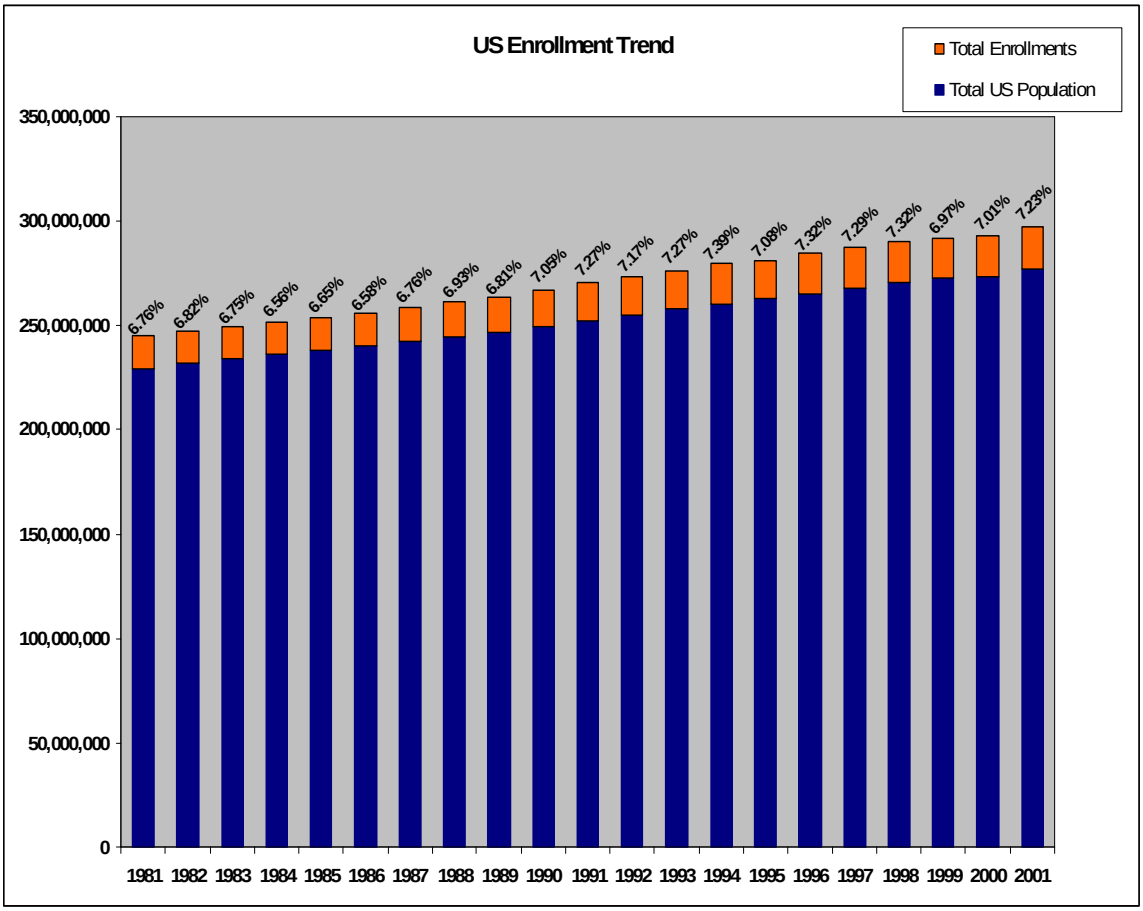


Figure 5.4 VA and U.S. Public Undergraduate Enrollment[7]

5.2 Affordability Dimension Number 1: Per Capita Disposable Income

The amount of disposable income available can be used as one measure of how affordable higher education is. Disposable income here was measured by "personal income minus personal tax and non-tax payments."[1] The amount of disposable income available (controlling for inflation) can be used as one measure of how affordable higher education is. Higher education is not seen as a necessity, so any costs associated with higher education would then have to come out of an individual's disposable income. Figure 5.1 reflects the percentage of Virginia's population enrolled in higher education.

The Bureau of Economic Analysis (BEA) captures disposable income amounts as actual dollars and not constant dollars (adjusted for inflation). Figure 5.5 compares per capita disposable income in Virginia and the U.S. as a whole for the years 1981-2001. Virginia's per capital disposable income surpasses the national level every year starting in 1982.

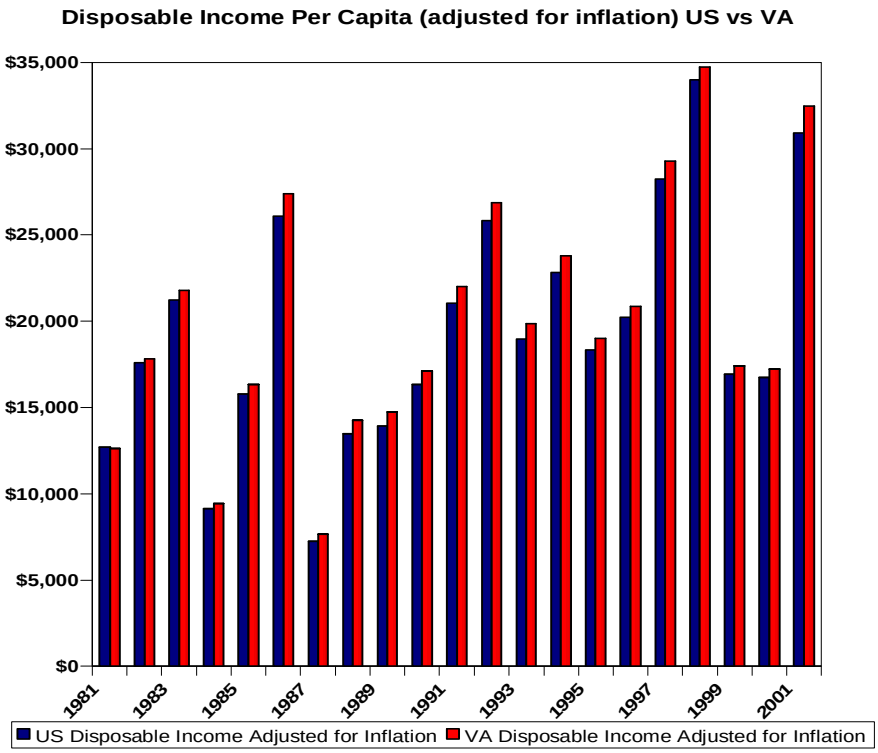


Figure 5.5 Disposable Income Per Capita: U.S. vs. VA[12]

The percentage increase in per capita disposable income for the United States only surpassed the percentage increase for Virginia in six out of the 21 years (see Figure 5.6).

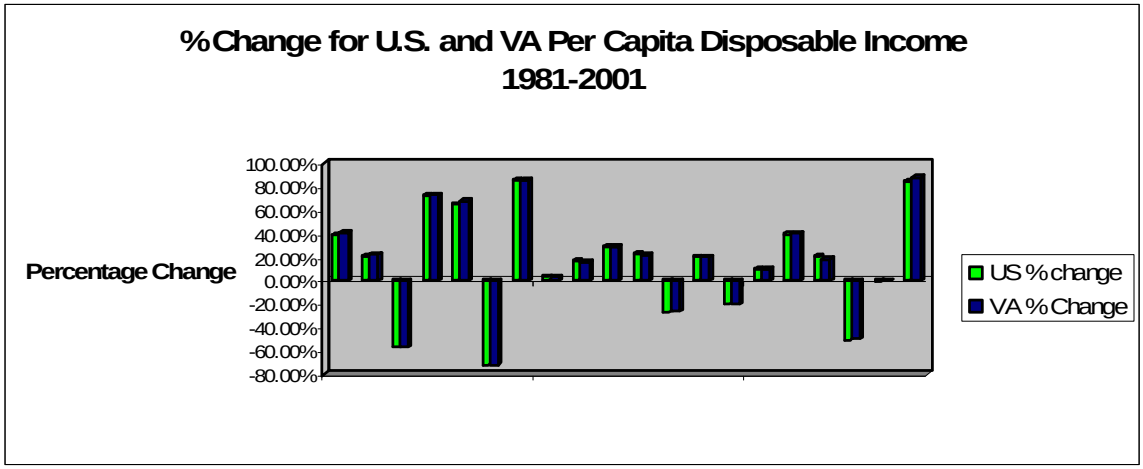
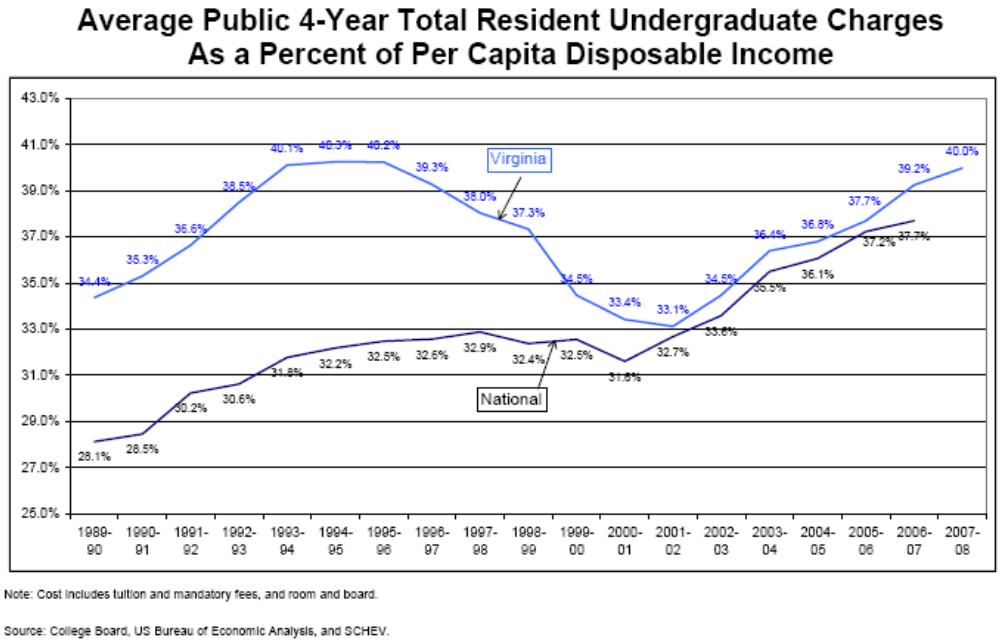


Figure 5.6 Percentage Change in U.S. and Virginia Per Capita Disposable Income[12]

Figure 5.7 shows SCHEV's findings on in-state undergraduate charges at four-year institutions as a percent of per capita disposable income. Declines in the proportion coincides with the time period of 1994–2004 when the Virginia governor and General Assembly intermittently froze or capped the amount a college or university could increase tuition costs. Tuition costs as a percentage of disposable income began to rise again after these tuition freezes/caps no longer were in place. Virginia's four-year institution undergraduate tuition costs as a percentage of per capita disposable income are consistently higher than national levels. In order to examine the implications of this finding, future studies comparing tuition costs as a percentage of per capita disposable income for each of the states and the national levels should be conducted.



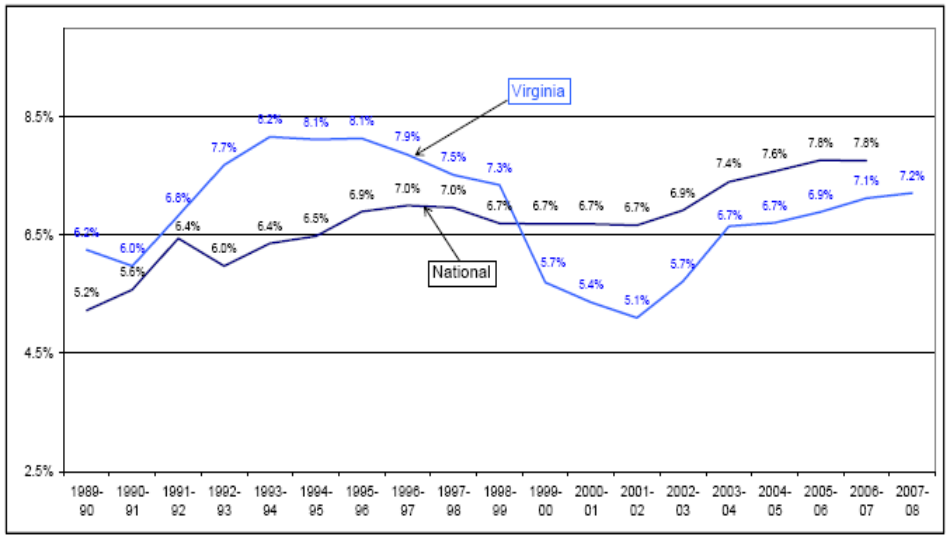
Note: Cost includes tuition and mandatory fees, and room and board.

Source: College Board, US Bureau of Economic Analysis, and SCHEV.

Figure 5.7 Undergraduate Tuition as a Percentage of Per Capita Disposable Income for VA and U.S.[5]

When these same measures are analyzed for Virginia's two-year institutions, a different picture emerges. In the late 1990s, the tuition costs for Virginia's two-year institutions as a percentage of per capita disposable income dropped below the national average. When analyzing these data, it is important to note that "costs at two-year institutions as a percentage of per capita disposable personal income are much lower than that at four-year institutions because two-year institutions do not provide room and board for students…room and board costs usually account for 50% or more of the total price of attending college."[18]

Chart 9B
Average Public 2-Year Total Resident Undergraduate Charges
As a Percent of Per Capita Disposable Income



Notes:
(1) Cost includes tuition and mandatory fees.
(2) Virginia public 2-year institutions include the Richard Bland College and Virginia Community College System.

Source: College Board, US Bureau of Economic Analysis, and SCHEV.

Table 5.8 Two-Year Undergraduate Tuition as a Percentage of Per Capita Disposable Income for VA and U.S.[5]

The *SCHEV 2007-2008 Tuition and Fee Report* compares the percentage of disposable income per capita to the national average with the percentage of undergraduate tuition costs as a percentage of that disposable income amount for both four-year and two-year institutions in Virginia. SCHEV's findings include: "In 1990, Virginia's per capita disposable income was about 6% higher than the national average…the average total undergraduate charge for in-state undergraduate students was nearly 30% higher than the national norm…nationally total charges represented 28.1% of per capita disposable income, while the rate in Virginia was 34.4%."[18] This SCHEV report concludes that

Virginia has been taking the steps necessary to push Virginia's higher education institutions to be more affordable through the following three initiatives: 1) The Higher Education Restructuring Act, 2) The Higher Education Tuition Incentive Fund, and 3) raising state support overall by shifting more cost sharing to the state instead of the individual.

Now that we are familiar with the comparison between the U.S. population and its percentage of higher education enrollees, how do these figures compare with the amount of disposable income, the first affordability dimension, at the national level? Figure 5.9 contains data on national disposable income levels from the Bureau of Economic Analysis, tracking annual percentage increases or decreases. Then, these changes are compared to changes in yearly higher education enrollments in Table 5.5. The percentage changes in disposable income are definitely sharper than the percentage changes in higher education enrollments. The five best years of percentage increases in both disposable income and enrollments are highlighted in yellow. The two worst years are highlighted in red. The disposable income levels appear to make more of an impact in the later years in this study than in the earlier years. This could be related to the shift in more individual responsibility for tuition costs and the loan burdens for college students increasing. Disposable income levels may be more of a factor now than they have been over the last three decades.

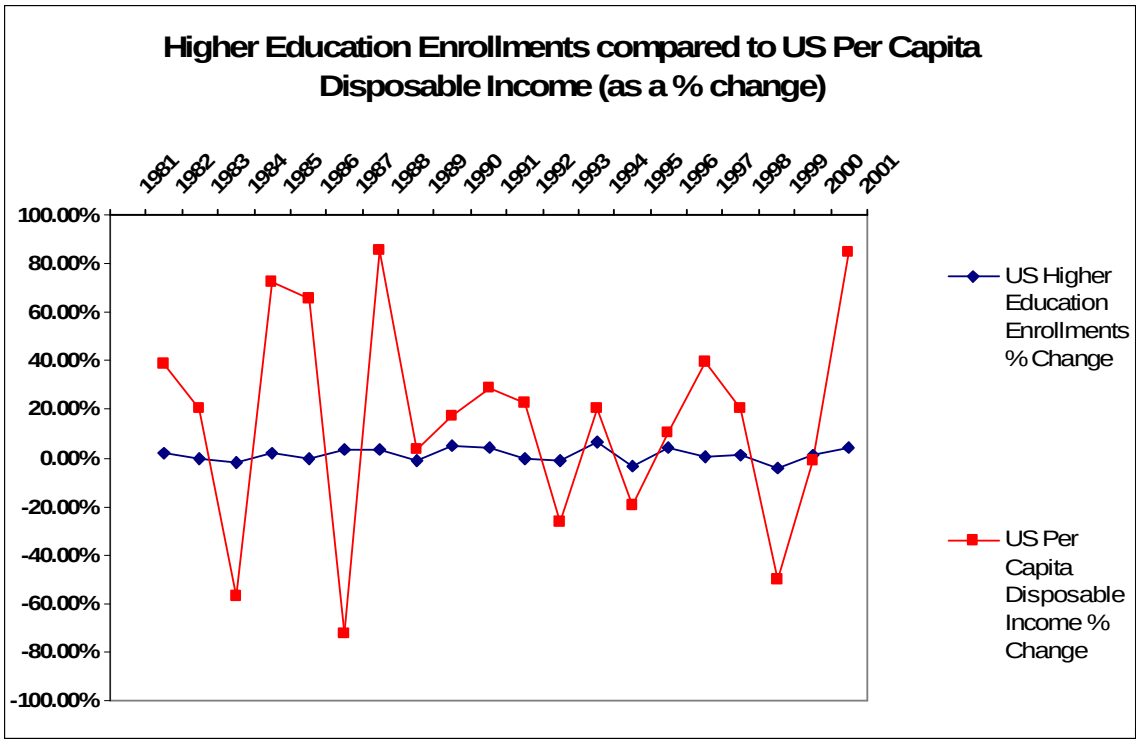


Figure 5.9 Percentage Changes in Real Disposable Income & Higher Education Enrollments

Year	US Higher Education Enrollments % Change	US Per Capita Disposable Income % Change
1981		
1982	1.76%	38.86%
1983	-0.06%	20.40%
1984	-1.93%	-56.96%
1985	2.16%	72.79%
1986	-0.15%	65.22%
1987	3.65%	-72.20%
1988	3.57%	85.72%
1989	-0.86%	3.55%
1990	4.63%	17.36%
1991	4.26%	28.62%
1992	-0.32%	22.82%
1993	-1.00%	-26.53%
1994	6.28%	20.25%
1995	-3.29%	-19.63%
1996	4.32%	10.25%
1997	0.58%	39.71%
1998	1.36%	20.30%
1999	-3.95%	-50.23%
2000	1.03%	-1.01%
2001	4.37%	84.65%

Table 5.5 Best 5 years and Worst 2 Years for Enrollments and Disposable Income Percentage Change[9-12]

5.3 Affordability Dimension Number 2: Financial Aid

In addition to reviewing articles about each of the governors and higher education, I looked at which governors and Virginia legislatures supported more financial assistance for higher education by reviewing how much of a budget increase was approved for public higher education in Virginia. Table 5.6 below displays data from the Acts of the General Assembly of the Commonwealth of Virginia for the years 1981-2001. The only two years where the budget (in current, not constant dollars) decreased

from the year before were 1983 and 1991. Of course, these decreases are not very significant, but they are important to note. In 1983 Virginia had a Democratic governor and a Democratic-controlled legislature. In 1991, there also was a unified government, with Democratic control of both the governor and the state legislature. It is important to note that both 1983 and 1991 were times of state budget shortfalls where many programs were cut to balance the budget. 1995 was a year with mixed partisan control, a Republican governor and Democratic state legislature, but it also produced one of the highest annual higher education appropriation increases during the time period analyzed.

Public Higher Education Appropriations from the State of Virginia		
Year	**First Year Appropriations**	**Percent Increase or Decrease**
1981	$2,211,410,540	
1982	$2,698,677,995	22.03%
1983	$2,664,992,720	-1.25%
1984	$3,197,843,382	19.99%
1985	$3,214,339,905	0.52%
1986	$3,983,865,080	23.94%
1987	$4,012,777,386	0.73%
1988	$4,687,626,102	16.82%
1989	$4,720,655,955	0.70%
1990	$5,354,692,146	13.43%
1991	$5,270,711,477	-1.57%
1992	$5,686,562,124	7.89%
1993	$5,720,924,644	0.60%
1994	$5,721,084,644	0.00%
1995	$6,497,184,950	13.57%
1996	$6,719,604,664	3.42%
1997	$6,746,768,725	0.40%
1998	$7,042,230,965	4.38%
1999	$7,907,794,941	12.29%
2000	$8,324,515,916	5.27%
2001	$8,779,585,055	5.47%

Table 5.6 Public Higher Education Appropriations for VA (in current dollars)[50-66]

SCHEV is the entity that makes recommendations about higher education policy to the Governor and General Assembly in Virginia. Its recommendations are based on current and projected education trends in areas such as enrollment, affordability, and academic standards.

In July 2007 SCHEV published the report, *2007-2008 Tuition and Fees at Virginia's State-Supported Colleges and Universities.* One interesting item to note is that "between 1994 and 2004, tuition and mandatory educational and general (E&G) fees for in-state undergraduates were, at various times, capped, frozen, and reduced."[18] The governor and the General Assembly chose to do this to allow the rest of the state economy to catch up to the rate that tuition costs had increased. In 2004, when the governor and General Assembly gave the colleges the right again to set tuition costs, the increased ranged between 8-10%. In an effort to permanently maintain tuition increases under more uniform control, the Higher Education Tuition Incentive Fund was created for the 2007-2008 academic years. This fund was created with the following provisions:

- $7.2 million granted to public institutions to limit the in-state tuition increases to no more than 6%
- The 6% increase could be exceeded if "the additional revenue is used solely to increase student financial aid for in-state undergraduates"[18]

This fund will allow for an increase in tuition and E&G fees of roughly 6.3% versus the 9% projected before the fund was enacted.

In addition to the Higher Education Tuition Incentive Fund, Virginia's General Assembly also passed and Governor Tim Kaine signed the 2005 Higher Education Restructuring Act, which holds higher education institutions accountable for 11 specific areas annually evaluated by SCHEV for compliance. In turn, those institutions will receive a certain level of funding depending on how they are evaluated using the new act as the scorecard.

> Under the bill, three levels of autonomy will be available to all public institutions of higher education with the level of autonomy depending on each institution's financial strength and ability to manage day-to-day operations. The bill also requires such institutions to develop six-year academic, financial, and enrollment plans that outline tuition and fee estimates as well as enrollment projections, to develop detailed plans for meeting statewide objectives, and to accept a number of accountability measures, including meeting benchmarks related to accessibility and affordability.[19]

When SCHEV is evaluating the cost of higher education in Virginia, it uses the following formula: "The total cost to students and parents--absent student financial aid --includes the sum of tuition, all mandatory fees, and room and board."[18] Historic trends indicate the total cost of higher education is steadily increasing at both national levels as well as at the state and local levels, including Virginia. When states cannot contribute an increased amount to offset the higher education costs, these increased costs are then passed onto the students.

I begin this analysis by first looking at the percentage increase in tuition and mandatory E&G fees between 1981 and 2002 in Table 5.7 below, which shows the percentage increase for total tuition costs between both two-year and four-year institutions in Virginia. The significant increase is summarized for the years 1981-2001.

Four-Year Institutions		
Year	**Actual Dollars**	**% Increase**
1982	1155	
2002	3883	236.19%

Two-Year Institutions		
Year	**Actual Dollars**	**% Increase**
1982	522	
2002	1406	169.35%

Table 5.7 Tuition Cost Change[5]

The positive news can be seen in the Figure 5.10. The rate at which tuition costs are increasing seems to be dropping significantly. Although the rates are still rising, they are not at the over 80% rate that occurred between the 1982 and the 1986 school years. Although the percentage increase is not as significant, higher education costs are going to continue to increase.

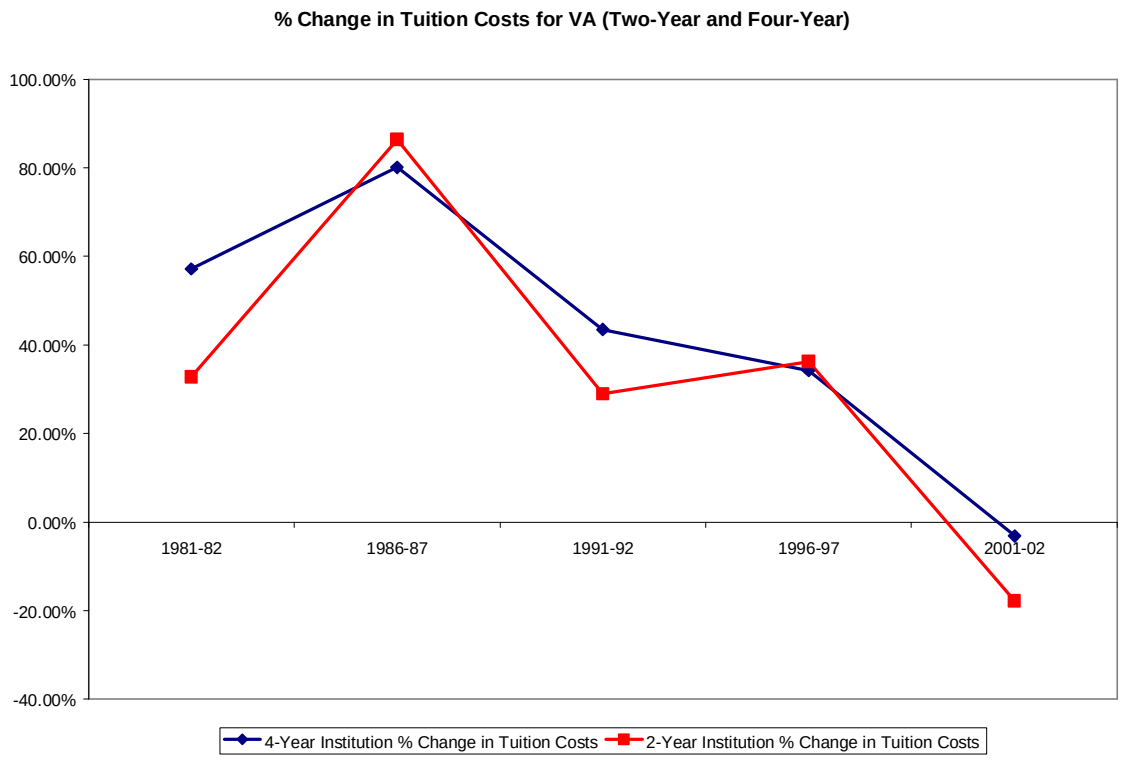


Figure 5.10 Percentage Change in Tuition Costs for VA[5]

How is the ratio for tuition cost sharing determined at the state level? In 1976, Virginia introduced the 70/30 policy at four-year institutions and 80/20 at two-year institutions, where the state always took on the higher burden percentage. "The 30% component for students at four-year institutions was comprised of two parts: 1) tuition and fee revenue from in-state students; and 2) tuition and fee revenue from out-of-state students."[18] This formula worked when out-of-state students contributed 75% of their own higher tuition costs. This 70/30 ratio only held up until the early 1990s when the recession hit. This forced the in-state student to accept a 40% burden while out-of state students had a 100% tuition cost burden. So, tuition costs were increasing, the burden of these increased costs rose for students, all at a time when money was tight because of the

recession. This cost share trend follows the cyclical pattern of our economic state where in conditions of recession the student takes on a higher burden..

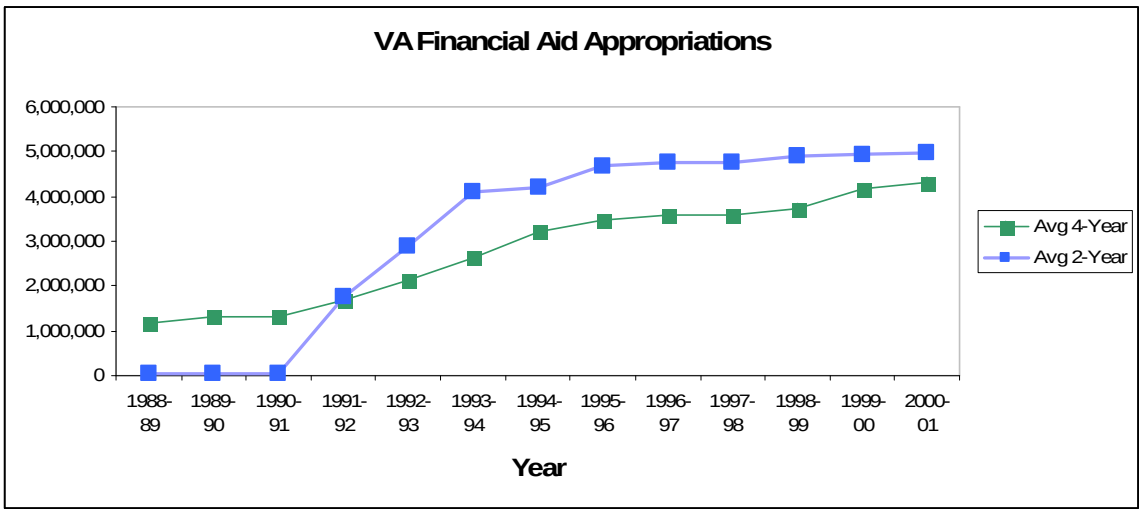


Figure 5.11 VA Financial Aid Appropriations[17]

State appropriations make up a significant portion of aid to both the institutions and the individual students and their families. One might assume that state appropriations for individual financial aid would be higher for four-year institutions because the cost for four-year institutions is higher, but as Figure 5.11 indicates, in the 1991-1992 school year, this changed. The amount of state appropriations for two-year institutions has increased, allowing for the two-year institution to remain a cost-effective way for someone to begin their college career. In 2002, the General Assembly published a report showing the source for education appropriations by source, either through state appropriations (General Funds) or by the operating revenues generated by the revenue from the school. The General Funds accounted for more than half of the tuition and

mandatory educational and general (E&G) fees from 1981-2001. Higher Education Operating revenues grew by 94% between this timeframe and the General Fund contributions grew by 19%.

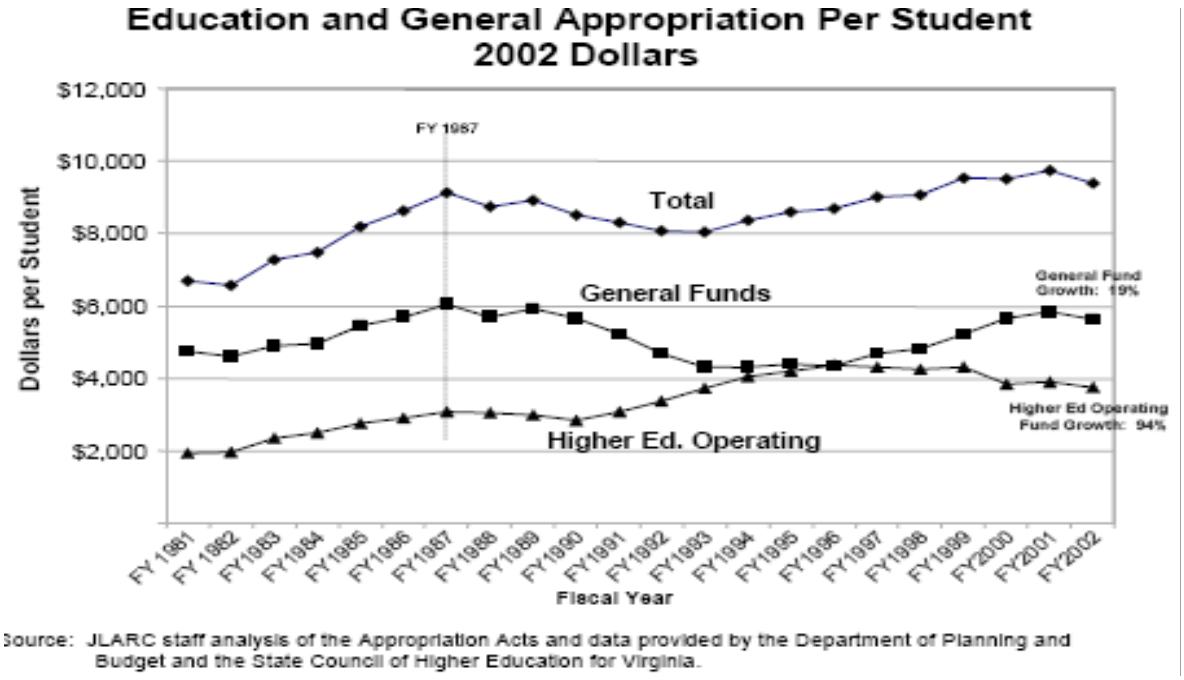


Figure 5.12 VA Appropriations Per Student[17]

The remaining tuition fees then would be the responsibility of the students to pay through grants, loans, financial aid, or their own pocket. Between the years 1981 and 2001, the total general fund and higher education operating revenue contributions to E&G fees went up roughly 48% overall. This 48% increase in state appropriations does not even come close to the tuition rate increases of 236% felt at the four-year institution levels and the 169% felt at the two-year institution levels. The remaining increase on tuition is becoming the burden and the responsibility of the students to pay either through grants, loans, financial aid, or out-of-pocket which directly relates to the third affordability dimension: the loan burden of the college student.

Another important trend to examine is that in tuition at the national level. These percentage changes in tuition rates will be compared to the percentage changes in federal appropriations for public higher education through grants, loans, and aid. This relationship will help determine if the amount of federal aid is keeping up with the percentage changes for tuition costs. Between 1981 and 2001, tuition costs at two-year institutions increased by 144.81%, and rose by 269.27% at four-year institutions in the United States in current dollars. Two-year institutions exhibit a more sporadic trend, with decreases even in the negatives between the 1986-87 and 1987-88 school years. Although tuition is still increasing, the rate of increase is not as rapid as previous years.

Four-Year Institutions		
Year	Actual Dollars	% Increase
1981	3499	
2001	12992	269.27%

Two-Year Institutions		
Year	Actual Dollars	% Increase
1981	2230	
2001	5460	144.27%

Table 5.8 Percentage Increase for Tuition

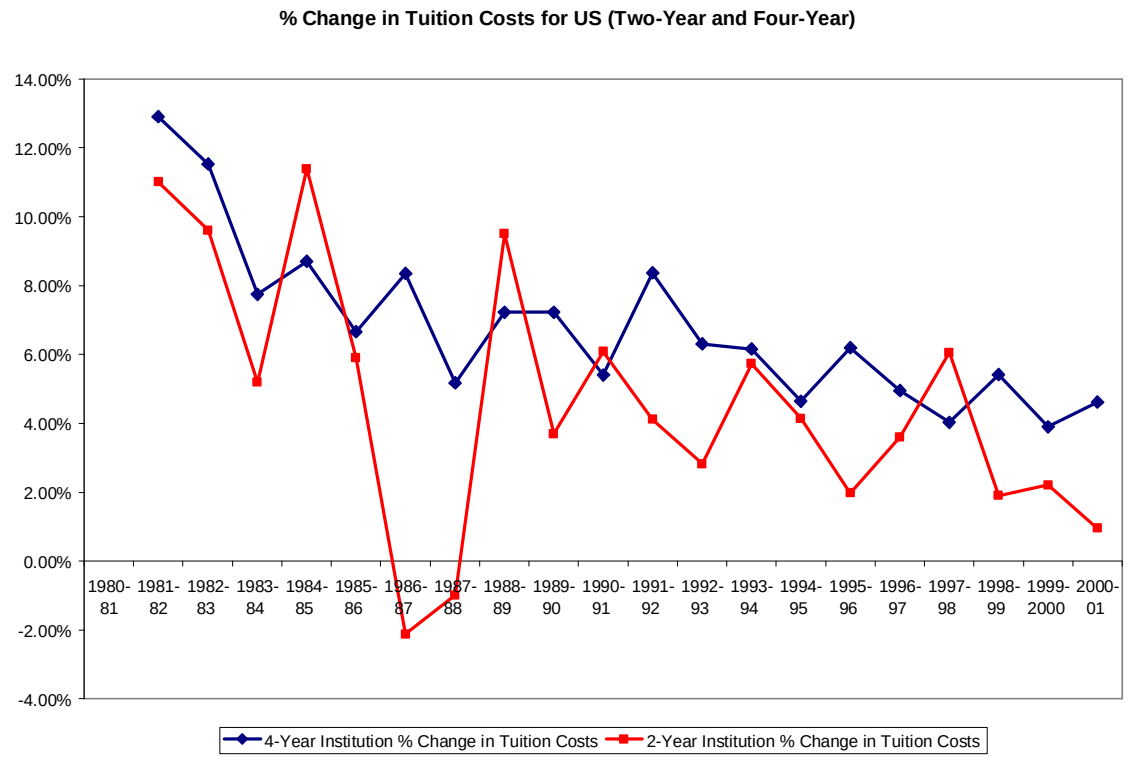


Figure 5.13 Percentage Change in Tuition Costs for U.S.

5.4 Affordability Dimension Number 3: Loan Burden

Whether we have read about it, heard it on the radio, or seen it happening around us, we have all been affected in some way by the mortgage loan crisis in the United States. If we do not take what we have learned from these unfortunate events, college loans

and their long-term and sometimes unreachable obligations may be our next loan crisis in this country. According to the National Center for Education Statistics, several variables have led to the next loan crisis in the United States. The turning point, when each of these variables really took off, was the 1990s. "First, the price of going to college increased faster than inflation. Second, the 1992 Reauthorization of the Higher Education Act increased loan limits for the Stafford loan program, expanded eligibility for need-based aid, and introduced unsubsidized Stafford loans for undergraduates regardless of their financial need."[46]

How did all of this start? During Ronald Reagan's term, he pushed to decrease federal funding for higher education and to put more of the burden on the states. As state budgets were tightened, state appropriations for higher education also decreased, forcing colleges and universities to increase tuition rates at a much faster rate than the rate of disposable income. The next obvious step was for the states and universities to put the majority of the burden on the student to pay for college. This created more borrowing and has led to the increased debt that we are seeing today. According to the NCES report, loans grew by 137 percent between the 1992-1993 and 2002-2003 school years.[46]

The NCES defines debt burden as "the monthly loan payment as a percentage of monthly income" and recommend this debt burden "not exceed eight percent of pre-tax income." [46] This is, of course, a recommendation, and it does not limit the amount that

one's debt burden or total loan amount will actually be. This is an important indicator because, of course, those with high loan amounts but low monthly incomes would have a higher debt burden. This higher debt burden can then make the gap between what individuals can afford even higher. According to the NCES, "those with a debt burden of less than 5 percent were more likely than those with a debt burden of 17 percent or more to have mortgage, rent, or auto loan payments, and when they did, the amounts they paid were generally larger." [46]

The NCES recommends the debt burden for higher education to not exceed 8% of pretax income. Table 5.9 shows that the lowest salaried persons had a 15.4% debt burden in 2001, which is almost twice the recommend amount of 8%. The next lowest salaried persons just exceeded this debt burden at 8.6%, while the two upper classes of salaried persons were below the recommended debt burden for higher education. This leads to a longer pay-off period and less time for the bottom two quartiles to contribute financially and otherwise to society.

	All graduates had borrowed		Borrowers amount borrowed		Borrowers in repayment					
					Average salary		Average loan payment		Median debt burden	
Characteristic	1992–93	1999–2000	1992–93	1999–2000	1994	2001	1994	2001	1994	2001
Total	49.3	65.4	$12,100	$19,300	$2,400	$2,800	$160	$210	6.7	6.9
Sex										
Male	49.7	64.7	12,400	19,100	2,700	3,100	170	220	6.3	6.4
Female	48.9	65.9	11,800	19,500	2,100	2,600	160	210	7.0	7.3
Race/ethnicity[1]										
Asian/Pacific Islander	42.7	60.5	13,500	17,900	2,200	3,200	170	230	7.4	6.0
Black	64.1	79.8	11,400	19,800	2,100	2,800	170	190	6.9	6.1
White	47.8	63.7	12,300	19,700	2,400	2,800	170	210	6.7	7.2
Hispanic	60.7	70.6	9,500	17,000	2,200	3,200	150	190	5.7	6.0
Family income										
Dependent total	42.7	62.0	12,600	19,700	2,100	2,700	170	210	7.4	7.3
Lowest quarter	66.7	72.1	12,700	17,800	2,200	2,700	160	190	7.6	6.4
Lower middle quarter	45.1	68.1	10,800	19,100	2,100	2,600	160	220	6.9	8.0
Upper middle quarter	34.3	61.9	12,700	20,100	2,100	2,600	170	220	6.9	7.7
Highest quarter	24.3	45.6	15,300	23,300	2,200	2,900	230	220	7.9	6.6
Independent total	59.8	69.8	11,500	18,900	2,600	3,000	160	210	6.3	6.5
Baccalaureate degree major										
Business and management	46.1	60.2	12,200	17,200	2,500	3,300	160	200	5.9	5.6
Education	54.0	71.2	11,800	18,100	2,100	2,300	150	210	7.7	7.7
Engineering, mathematics, or science	53.5	62.9	11,800	19,500	2,500	3,500	170	220	5.8	5.8
Humanities or social sciences	44.9	66.5	11,700	20,500	2,000	2,500	170	200	7.7	7.6
Other	51.3	68.0	12,600	20,000	2,600	2,700	170	210	7.0	7.4
Amount borrowed (in 1999 dollars)										
Less than $10,000	100.0	100.0	5,200	4,900	2,200	2,700	110	100	4.5	3.2
$10,000–14,999	100.0	100.0	12,400	11,400	2,600	2,700	170	160	7.8	5.7
$15,000–19,999	100.0	100.0	17,300	16,400	2,200	2,800	220	210	9.4	7.5
$20,000–24,999	100.0	100.0	22,600	21,000	2,300	2,900	260	230	11.5	8.0
$25,000 or more	100.0	100.0	40,600	38,400	2,900	3,000	330	310	12.0	9.9
Monthly salary in 1994/2001										
Lowest quarter	46.5	62.7	12,000	20,500	700	1,000	140	180	17.8	15.4
Lower middle quarter	53.1	68.6	11,500	18,700	1,400	2,000	150	190	8.7	8.6
Upper middle quarter	51.7	69.8	12,000	18,800	2,100	2,700	160	210	6.1	7.0
Highest quarter	48.8	64.3	13,000	20,200	3,900	4,300	190	230	4.3	5.0
Employment status in 1994/2001										
Employed full time	49.7	66.7	12,000	19,000	2,500	2,900	160	210	6.4	6.8
Employed part time	52.0	63.0	12,200	19,700	1,300	1,600	170	180	12.2	11.3

[1]Black includes African American, Pacific Islander includes Native Hawaiian, and Hispanic includes Latino. Racial categories exclude Hispanic origin.

SOURCE: U.S. Department of Education, NCES, 1993/94 and 2000/01 Baccalaureate and Beyond Longitudinal Studies (B&B:93/94 and B&B:2000/01).

Table 5.9 Loan Burden by Salary, Amount Borrowed, Level of Education, Ethnicity, Race and Income (A Comparison between 1993/94 and 2000/01)

Like many other aspects of the world's economy, loans for college educations are being affected by the mortgage loan crisis. Stricter rules are starting to be set or private companies are getting out of the college loan business all together. According to a March 2008 *Washington Post* article, Sallie Mae, the largest student loan provider in the country, said it was "tightening credit requirements for borrowers and pulling out of offering loans to students attending some for-profit career schools and community colleges."[47] Community college students are seen as riskier borrowers because their wages tend to be less than four-year college graduates, thus creating higher debt burdens and greater risk of default on loans.

If loans are necessary, federal loans are the best option for a student because the rates are fixed, the rates are lower than privately issued loans and the repayment period does not start until six months after graduation. If a student is attending an expensive school and the tuition amount is more than what is offered through federal programs, their next option is to subsidize the difference through more expensive privately issued loans. Currently, undergraduate students may borrow up to $23,000 and graduate students may borrow up to $65,000 from the federal government. These amounts are for enrollment through graduation and are made up of a combination of subsidized (need-based) and unsubsidized loans.

The federal government has started to realize the need for more federal involvement--and the inability for states and individuals to carry the majority of the burden and the

growing student loan crisis by issuing the College Cost Reduction and Access Act of 2007. It expanded the Pell Grant Program by "increasing funding for Pell Grants by $11.4 billion over the next five years and allowing the maximum Pell award to increase from $4,310 in 2007 to $5,400 by 2012."[48] Some other benefits of this act are: gradual decreases of student loan interest rates determined by a disbursement dates schedule, a cap on monthly loan repayment amounts (not to exceed 15% of the borrowers monthly income), and many other improvements that make access and affordability of a postsecondary degree more attainable.

Federal appropriations have been shifting gears in past years despite efforts to make education more affordable. Figures 5.14 and 5.15 show the widening gap in the overall percentage of loans versus grants. Although this makes college possible, it is at the cost of an increasingly indebted society. Figure 5.14 is the percentage of loans and grants for the overall amount of aid granted by the federal government between the years 1981 and 2002. Figure 5.15 shows these same measures but the amount of aid awarded by Full-Time Equivalent student (FTE) on average through either grants or loans. The FTE amount represents the figures if every full-time student either had a loan or a grant, but taking the total award amounts and dividing it by the number of full-time students. Both figures represent a higher presence of loans and fewer grants, meaning more money for students to pay back and less benefit to cost ratio for the student to consider.

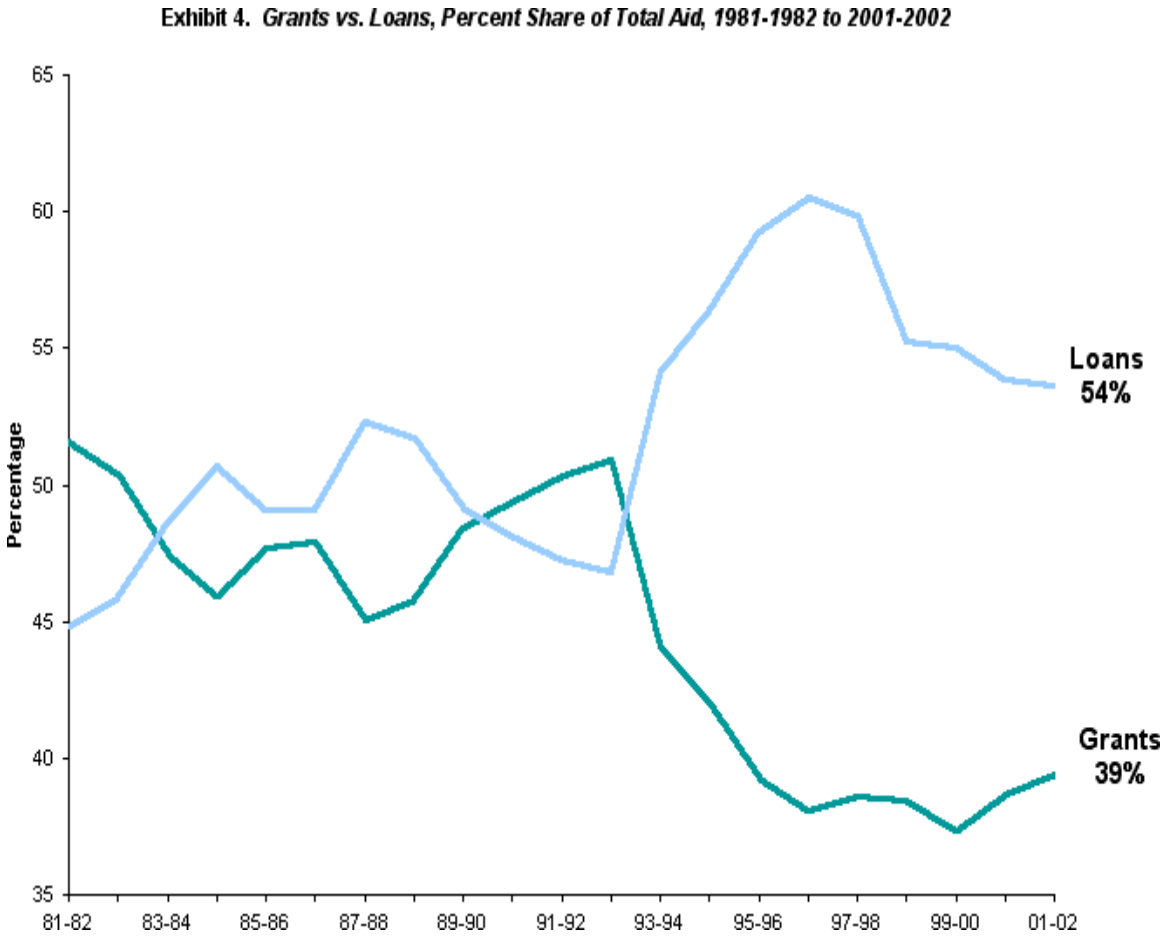


Figure 5.14 Grants vs. Loans, as a Percentage of National Funding[9]

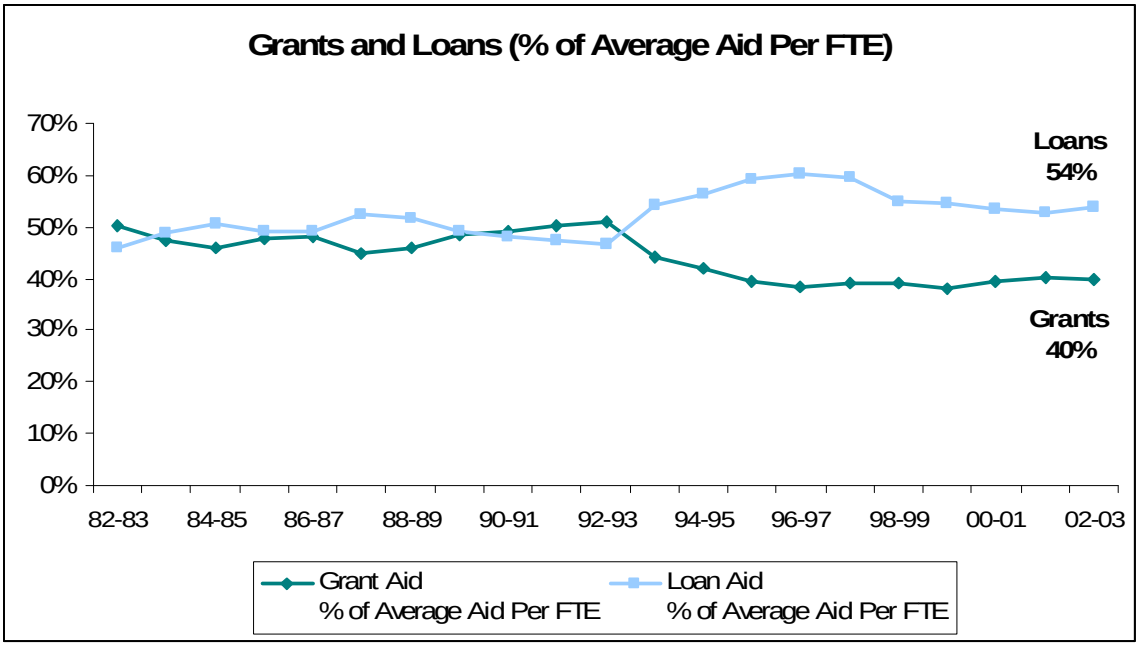


Figure 5.15 Grants vs. Loans (% of Average Aid Per FTE) [9]

Total aid increased by 246.10%, which may appear to stand up to the tuition increases on the national level in Table 5.8, but loans increased by 306.9%, while grants rose only by 173.14%.

Disposable income per capita in Virginia, loan amounts and state appropriation levels for higher education have been examined for the years 1981 – 2000 with respect to undergraduate enrollment levels at public institutions in Virginia. The national data were also explored to gain a broader view. The dependent variable has been analyzed along with the data for the three affordability dimensions. It is now time to discuss the conclusions drawn from this case study.

Chapter VI
Conclusion

The purpose of this research was to explore the dimensions of affordability of public undergraduate education in Virginia between 1981 and 2000 and to look for possible effects on enrollments in public institutions of higher education. The dimensions of affordability that I explored from 1981 through 2000were: 1) per capita disposable income (adjusted for inflation) in Virginia, 2) financial aid at the state and federal levels, and 3) the loan burdens of college students. This case study does suggest a link between affordability (as defined by the three affordability dimensions) and higher education enrollments in public institutions in Virginia.

I identified what appears to be an inverse relationship in public institution enrollments and disposable income levels. Higher education enrollment in Virginia also leveled off more in the four-year institutions than the two-year institutions after the 1994 tuition freeze went into effect.

In Virginia, undergraduate enrollment in public institutions decreased in three consecutive years, 1988 – 1990. The largest annual increase (4.79%) took place in 1990. The largest decrease in 4-year public institution enrollment occurred in 1990, while 1988 saw the largest decrease in enrollment at Virginia 2-year public institutions. Several possible influences appeared to be operating. First, 1989 and 1991 were both years in

which state appropriations for higher education rose by less than one percent. Even though 1990 itself looked more positive with a 13.43 percent increase, the years preceding and following it were not so positive. Second, when people can afford more, it appears to have an inverse relationship with public institution enrollments. When people can afford more, they may be more likely to enroll at private institutions and when they can afford less, they enroll in public institutions, especially two-year colleges. The highest enrollment year for 2-year public institutions was in 1985, which followed the second largest decrease to disposable income. The inverse relationship is less strong in four-year public institutions than in two-year ones. Thirdly, the 1993-1994 academic year marked the point at which the number of loans for higher education appears to begin to outnumber the amount of grants. Even so, the issue of affordability really is now a matter for the after-college years when the payback period for these loans begins. Tuition costs rose by over 80% in four-year public institutions and by over 85% in two-year institutions, while disposable income only increased by 36.% over the same time period. The issue of affordability therefore should be more closely examined during the payback period, thoughts of which could perhaps sway someone from enrolling knowing that such a time is inevitable for most.

The enrollment data and disposable income data in Chapter Five show that as the federal government and other private loan companies increase the amount of money they lend for college expenses, borrowers accept those loans despite increased debt burdens. The idea of making higher education more affordable should not be taken off

the public agenda simply because many accept the higher debt burdens. Instead, national and state governments should be looking into other ways to 1) close the widening gap between loans and grants and 2) decrease the debt burden of college students and graduates. In my view, taxpayers should see higher education as they do preventative care in the medical field. Studies have shown (e.g., Stacey 1998, Nezver 1998 and Psacharopoulos 1972) that society and the economy benefit from having a more highly educated public.

I reached these conclusions based on the data and literature reviewed—and the understanding that a fear of college loan debt may be dissuading a certain percentage of the population from attending college. Also the money that is spent on paying off these college loans could be contributed to society in other ways by spending it on mortgage, rent or other consumer goods. These concerns with debt are not the only thing preventing potential students from enrolling, but also point to a public obligation. Graduates are shown to make more contributions to society instead of being more dependent on society. The concern with college loans in this country, therefore, can make a potential student feel that it is unattainable or that the benefit to cost ratio is not high enough to take on a college loan. As Chapter II mentioned, the long-term societal and economic gains from governments investing in higher education far outweighs the short-term investment they would have to make to decrease the growing gap between loans and grants. Four of the studies quoted in Chapter II elaborate on this assertion. First, the National Center for Public Policy and Higher Education reports that minority

groups or poorer groups are growing faster than other economic groups, which increases the importance of making higher education more affordable because these groups will need even more help than exists today, in turn ultimately increasing the loans/debt burdens and the burdens to society. Secondly, the study done by Gladieux and Perna (2005) for the National Center for Public Policy and Higher Education shows that the more affordable higher education is the more likely enrollment and college completion becomes. The two main obstacles to enrollment and college completion are working too many hours and part-time attendance. Thirdly, the Psacharopoulos study (1972) shows the cost-benefit analysis in favor of more public assistance for higher education costs versus making it an individual responsibility. Finally, Pascarella (2004) describes the cyclical benefits of more affordable higher education because the likelihood is greater for a child of college graduates to attend college versus a child of parents that did not attend college.

My findings in no way recommend that we should abandon other public education programs such as elementary education. Yet, for the purposes of this thesis, I have focused on the need to increase the affordability of public higher education, which likely will involve increases in post-secondary public funding. A more educated society can lead to closer, more cooperative communities that grow stronger as they increase their own abilities. Or we can continue to allow to fall behind other countries in higher education by not taking on this responsibility for making higher education more

affordable, without individuals taking on an enormous monetary debts to pay for the rest of their working lives.

My findings suggest that more federal assistance accompanied by increased state support can close the widening gap between grants and loans, making higher education more affordable and preventing affordability from being a roadblock to enrollment in and completion of college. Higher education can strengthen the U.S. economy by allowing more disposable income to be spent in the consumer economy rather than in paying off this growing debt. As the nation moves toward strengthening its domestic resources, higher education as a resource must not be forgotten. Addressing the affordability issues of higher education in this country is the foundation for the rest of the improvements our nation still needs to make.

Additional research should be done on many areas surrounding this topic. In-state versus out-of state enrollment at public colleges and universities should be separated and analyzed to determine if affordability is more of any issue in one state versus another, "forcing" a student to attend an out-of-state institution. Private institutions also need to be examined and the affordability dimensions and influences applied. My hypothesis about the inverse relationship between disposable income and public institutions can than be tested to see if it holds when comparing public and private institutions.

Other questions should be examined as well. For example, during the years that public higher education funding decreased, what if any other programs saw funding increases? What was the rationale behind cutting higher education funding but providing more support for these other programs? What are the opportunity costs of attending college both while enrolled and during the loan payback period? An analysis should be done of the average payback period and the consumer goods that are normally purchased during those years, but are postponed due to college loans. This research is the foundation for many other hypotheses that still need to be tested and the findings analyzed in order to fully address the issue of the affordability of higher education.

Appendix: Expected Family Contribution Worksheets[1]

2006-2007 EFC FORMULA A: DEPENDENT STUDENT

REGULAR WORKSHEET Page 1 — A

PARENTS' INCOME IN 2005	
1. Parents' Adjusted Gross Income (FAFSA/SAR #73) If negative, enter zero.	
2. a. Father's/stepfather's income earned from work (FAFSA/SAR #76)	
2. b. Mother's/stepmother's income earned from work (FAFSA/SAR #77) +	
Total parents' income earned from work =	
3. Parents' Taxable Income (If tax filers, enter the amount from line 1 above. If non-tax filers, enter the amount from line 2.)*	
4. Untaxed income and benefits: • Total from FAFSA Worksheet A (FAFSA/SAR#78)	
• Total from FAFSA Worksheet B (FAFSA/SAR#79) +	
Total untaxed income and benefits =	
5. Taxable and untaxed income (sum of line 3 and line 4)	
6. Total from FAFSA Worksheet C (FAFSA/SAR #80) –	
7. TOTAL INCOME (line 5 minus line 6) May be a negative number. =	

ALLOWANCES AGAINST PARENTS' INCOME	
8. 2005 U.S. income tax paid (FAFSA/SAR #74) (tax filers only) If negative, enter zero.	
9. State and other tax allowance (Table A1) If negative, enter zero. +	
10. Father's/stepfather's Social Security tax allowance (Table A2) +	
11. Mother's/stepmother's Social Security tax allowance (Table A2) +	
12. Income protection allowance (Table A3) +	
13. Employment expense allowance: • Two working parents: 35% of the lesser of the earned incomes, or $3,100, whichever is less	
• One-parent families: 35% of earned income, or $3,100, whichever is less	
• Two-parent families, one working parent: enter zero +	
14. TOTAL ALLOWANCES =	

*STOP HERE if **both** of the following are true: line 3 is $16,000 or less, plus the student **and** parents are eligible to file a 2005 IRS Form 1040A or 1040EZ (they are not required to file a 2005 Form 1040), or they are not required to file any income tax return. If both circumstances are true, the Expected Family Contribution is automatically zero.

AVAILABLE INCOME	
Total income (from line 7)	
Total allowances (from line 14) –	
15. AVAILABLE INCOME (AI) May be a negative number. =	

PARENTS' CONTRIBUTION FROM ASSETS	
16. Cash, savings & checking (FAFSA/SAR #81)	
17. Net worth of investments** (FAFSA/SAR#82) If negative, enter zero.	
18. Net worth of business and/or investment farm (FAFSA/SAR#83) If negative, enter zero.	
19. Adjusted net worth of business/farm (Calculate using Table A4.) +	
20. **Net worth** (sum of lines 16, 17, and 19) =	
21. Education savings and asset protection allowance (Table A5) –	
22. Discretionary net worth (line 20 minus line 21) =	
23. Asset conversion rate ×	.12
24. CONTRIBUTION FROM ASSETS If negative, enter zero. =	

PARENTS' CONTRIBUTION	
AVAILABLE INCOME (AI) (from line 15)	
CONTRIBUTION FROM ASSETS (from line 24) +	
25. **Adjusted Available Income (AAI)** May be a negative number. =	
26. **Total parents' contribution from AAI** (Calculate using Table A6.) If negative, enter zero.	
27. **Number in college in 2006-2007** (Exclude parents) (FAFSA/SAR #66) ÷	
28. **PARENTS' CONTRIBUTION** (standard contribution for nine month enrollment)*** If negative, enter zero. =	

**Do *not* include the family's home.

***To calculate the parents' contribution for other than nine month enrollment, see page 11.

continued on the next page

Appendix: (continued)

REGULAR WORKSHEET Page 2 **A**

STUDENT'S INCOME IN 2005	
29. Adjusted Gross Income (FAFSA/SAR #35) If negative, enter zero.	
30. Income earned from work (FAFSA/SAR #38)	
31. Taxable Income (If tax filer, enter the amount from line 29. If non-tax filer, enter the amount from line 30.)	
32. Untaxed income and benefits: Total from FAFSA Worksheet A (FAFSA/SAR #40) —————— Total from FAFSA Worksheet B (FAFSA/SAR #41) +—————— Total untaxed income and benefits =	
33. Taxable and untaxed income (sum of line 31 and line 32)	
34. Total from FAFSA Worksheet C (FAFSA/SAR #42) −	
35. TOTAL INCOME (line 33 minus line 34) May be a negative number. =	

ALLOWANCES AGAINST STUDENT INCOME	
36. 2005 U.S. income tax paid (FAFSA/SAR #36) (tax filers only) If negative, enter zero.	
37. State and other tax allowance (Table A7) If negative, enter zero. +	
38. Social Security tax allowance (Table A2) +	
39. Income protection allowance +	2,550
40. Allowance for parents' negative Adjusted Available Income (If line 25 is negative, enter line 25 as a positive number in line 40. If line 25 is zero or positive, enter zero in line 40.) +	
41. TOTAL ALLOWANCES =	

STUDENT'S CONTRIBUTION FROM INCOME	
Total income (from line 35)	
Total allowances (from line 41) −	
42. Available income (AI) =	
43. Assessment of AI ×	.50
44. STUDENT'S CONTRIBUTION FROM AI = If negative, enter zero.	

STUDENT'S CONTRIBUTION FROM ASSETS	
45. Cash, savings & checking (FAFSA/SAR #43)	
46. Net worth of investments* (FAFSA/SAR #44) If negative, enter zero.	
47. Net worth of business and/or investment farm (FAFSA/SAR #45) If negative, enter zero. +	
48. Net worth (sum of lines 45 through 47) =	
49. Assessment rate ×	.35
50. STUDENT'S CONTRIBUTION FROM ASSETS =	

EXPECTED FAMILY CONTRIBUTION	
PARENTS' CONTRIBUTION (from line 28)	
STUDENT'S CONTRIBUTION FROM AI (from line 44) +	
STUDENT'S CONTRIBUTION FROM ASSETS (from line 50) +	
51. EXPECTED FAMILY CONTRIBUTION (standard contribution for nine month enrollment)** If negative, enter zero. =	

*Do *not* include the student's home.

**To calculate the EFC for other than nine month enrollment, see the next page.

Appendix: (continued)

Note: *Use this additional page to prorate the EFC only if the student will be enrolled for other than nine months and only to determine the student's need for campus-based aid, a subsidized Federal Stafford Loan, or a subsidized Federal Direct Stafford/Ford Loan. Do not use this page to prorate the EFC for a Federal Pell Grant. The EFC for the Federal Pell Grant Program is the nine month EFC used in conjunction with the cost of attendance to determine a Federal Pell Grant award from the Payment or Disbursement Schedule.*

REGULAR WORKSHEET Page 3 **A**

Calculation of Parents' Contribution for a Student Enrolled LESS than Nine Months		
A1. Parents' contribution (standard contribution for nine month enrollment, from line 28)		
A2. Divide by 9	÷	9
A3. Parents' contribution per month	=	
A4. Multiply by number of months of enrollment	×	
A5. Parents' contribution for LESS than nine month enrollment	=	

Calculation of Parents' Contribution for a Student Enrolled MORE than Nine Months		
B1. Parents' Adjusted Available Income (AAI) (from line 25—may be a negative number)		
B2. Difference between the income protection allowance for a family of four and a family of five, with one in college	+	3,990
B3. Alternate parents' AAI for more than nine month enrollment (line B1 + line B2)	=	
B4. Total parents' contribution from alternate AAI (calculate using Table A6)		
B5. Number in college (FAFSA/SAR #66)	÷	
B6. Alternate parents' contribution for student (line B4 divided by line B5)	=	
B7. Standard parents' contribution for the student for nine month enrollment (from line 28)	−	
B8. Difference (line B6 minus line B7)	=	
B9. Divide line B8 by 12 months	÷	12
B10. Parents' contribution per month	=	
B11. Number of months student will be enrolled that exceed 9	×	
B12. Adjustment to parents' contribution for months that exceed nine (multiply line B10 by line B11)	=	
B13. Standard parents' contribution for nine month enrollment (from line 28)	+	
B14. Parents' contribution for MORE than nine month enrollment	=	

Calculation of Student's Contribution from Available Income (AI) for a Student Enrolled LESS than Nine Months*		
C1. Student's contribution from AI (standard contribution for nine month enrollment, from line 44)		
C2. Divide by 9	÷	9
C3. Student's contribution from AI per month	=	
C4. Multiply by number of months of enrollment	×	
C5. Student's contribution from AI for LESS than nine month enrollment	=	

*For students enrolled more than nine months, the standard contribution from AI is used (the amount from line 44).

Use next page to calculate total EFC for enrollment periods other than nine months

Appendix: (continued)

REGULAR WORKSHEET Page 4 **A**

Calculation of Total Expected Family Contribution for Periods of Enrollment Other than Nine Months	
Parents' Contribution—use ONE appropriate amount from previous page: • Enter amount from line A5 for enrollment periods less than nine months **OR** • Enter amount from line B14 for enrollment periods greater than nine months	
Student's Contribution from Available Income—use ONE appropriate amount from previous page: • Enter amount from line C5 for enrollment periods less than nine months **OR** + • Enter amount from line 44 for enrollment periods greater than nine months	
Student's Contribution from Assets • Enter amount from line 50 +	
Expected Family Contribution for periods of enrollment other than nine months =	

Appendix: (continued)

2006-2007 EFC FORMULA B: INDEPENDENT STUDENT
Without Dependent(s) Other than a Spouse

REGULAR WORKSHEET Page 1 **B**

STUDENT/SPOUSE INCOME IN 2005		
1. Student's and spouse's Adjusted Gross Income (FAFSA/SAR #35) If negative, enter zero.		
2. a. Student's income earned from work (FAFSA/SAR #38)		
2. b. Spouse's income earned from work (FAFSA/SAR #39)	+	
Total student/spouse income earned from work	=	
3. Student/spouse Taxable Income (If tax filers, enter the amount from line 1 above. If non-tax filers, enter the amount from line 2.)		
4. Untaxed income and benefits: • Total from FAFSA Worksheet A (FAFSA/SAR #40)		
• Total from FAFSA Worksheet B (FAFSA/SAR #41)	+	
Total untaxed income and benefits	=	
5. Taxable and untaxed income (sum of line 3 and line 4)		
6. Total from FAFSA Worksheet C (FAFSA/SAR #42)	−	
7. TOTAL INCOME (line 5 minus line 6) May be a negative number.	=	

ALLOWANCES AGAINST STUDENT/SPOUSE INCOME		
8. 2005 U.S. income tax paid (FAFSA/SAR #36) (tax filers only) If negative, enter zero.		
9. State and other tax allowance (Table B1) If negative, enter zero.	+	
10. Student's Social Security tax (Table B2)	+	
11. Spouse's Social Security tax (Table B2)	+	
12. Income protection allowance: • $5,790 for unmarried or separated student; • $5,790 for married student if spouse is enrolled at least 1/2 time; • $9,260 for married student if spouse is not enrolled at least 1/2 time.	+	
13. Employment expense allowance: • If student is not married or is separated, the allowance is zero. • If student is married but only one person is working (the student or spouse), the allowance is zero. • If student is married and both student and spouse are working, the allowance is 35% of the lesser of the earned incomes, or $3,100, whichever is less.	+	
14. TOTAL ALLOWANCES	=	

CONTRIBUTION FROM AVAILABLE INCOME		
TOTAL INCOME (from line 7)		
TOTAL ALLOWANCES (from line 14)	−	
15. AVAILABLE INCOME (AI)	=	
16. Assessment rate	×	.50
17. CONTRIBUTION FROM AI May be a negative number.	=	

STUDENT'S/SPOUSE'S CONTRIBUTION FROM ASSETS		
18. Cash, savings & checking (FAFSA/SAR #43)		
19. Net worth of investments* (FAFSA/SAR #44) If negative, enter zero.		
20. Net worth of business and/or investment farm (FAFSA/SAR #45) If negative, enter zero.		
21. Adjusted net worth of business/farm (Calculate using Table B3.)	+	
22. **Net worth** (sum of lines 18, 19, and 21)	=	
23. Asset protection allowance (Table B4)	−	
24. Discretionary net worth (line 22 minus line 23)	=	
25. Asset conversion rate	×	.35
26. CONTRIBUTION FROM ASSETS If negative, enter zero.		

EXPECTED FAMILY CONTRIBUTION		
CONTRIBUTION FROM AI (from line 17) May be a negative number.		
CONTRIBUTION FROM ASSETS (from line 26)	+	
27. Contribution from AI and assets	=	
28. Number in college in 2006-2007 (FAFSA/SAR #85)	+	
29. EXPECTED FAMILY CONTRIBUTION for nine month enrollment. If negative, enter zero.**	=	

*Do *not* include the student's home.

**To calculate the EFC for less than nine month enrollment, see the next page. If the student is enrolled for more than nine months, use the nine-month EFC (line 29 above).

Appendix: (continued)

Note: *Use this additional page to prorate the EFC only if the student will be enrolled for less than nine months and only to determine the student's need for campus-based aid, a subsidized Federal Stafford Loan, or a subsidized Federal Direct Stafford/Ford Loan. Do not use this page to prorate the EFC for a Federal Pell Grant. The EFC for the Federal Pell Grant Program is the nine month EFC used in conjunction with the cost of attendance to determine a Federal Pell Grant award from the Payment or Disbursement Schedule.*

REGULAR WORKSHEET Page 2 **B**

Calculation of Expected Family Contribution for a Student Enrolled for Less than Nine Months		
Expected Family Contribution (standard contribution for nine month enrollment, from line 29)		
Divide by 9	÷	9
Expected Family Contribution per month	=	
Multiply by number of months of enrollment	×	
Expected Family Contribution for less than nine month enrollment*	=	

*Substitute the student's EFC for less than nine month enrollment in place of the EFC for the standard nine month enrollment (EFC Formula Worksheet B, line 29).

Appendix: (continued)

2006-2007 EFC FORMULA C: INDEPENDENT STUDENT With Dependent(s) Other than a Spouse

REGULAR WORKSHEET Page 1 — C

STUDENT/SPOUSE INCOME IN 2005		
1. Student's and spouse's Adjusted Gross Income (FAFSA/SAR #35) If negative, enter zero.		
2. a. Student's income earned from work (FAFSA/SAR #38)		
2. b. Spouse's income earned from work (FAFSA/SAR #39)	+	
Total student/spouse income earned from work	=	
3. Student/spouse Taxable Income (If tax filers, enter the amount from line 1 above. If non-tax filers, enter the amount from line 2.)*		
4. Untaxed income and benefits: • Total from FAFSA Worksheet A (FAFSA/SAR #40)		
• Total from FAFSA Worksheet B (FAFSA/SAR #41)	+	
Total untaxed income and benefits	=	
5. Taxable and untaxed income (sum of line 3 and line 4)		
6. Total from FAFSA Worksheet C (FAFSA/SAR #42)	−	
7. TOTAL INCOME (line 5 minus line 6) May be a negative number.	=	

ALLOWANCES AGAINST STUDENT/SPOUSE INCOME		
8. 2005 U.S. income tax paid (FAFSA/SAR #36) (tax filers only) If negative, enter zero.		
9. State and other tax allowance (Table C1) If negative, enter zero.	+	
10. Student's Social Security tax (Table C2)	+	
11. Spouse's Social Security tax (Table C2)	+	
12. Income protection allowance (Table C3)	+	
13. Employment expense allowance: • Student and spouse both working: 35% of the lesser of the earned incomes, or $3,100, whichever is less • One-parent families: 35% of earned income, or $3,100, whichever is less		
• Student or spouse working (not both): zero	+	
14. TOTAL ALLOWANCES	=	

AVAILABLE INCOME		
TOTAL INCOME (from line 7)		
TOTAL ALLOWANCES (from line 14)	−	
15. AVAILABLE INCOME (AI) May be a negative number.	=	

*STOP HERE if both of the following are true: line 3 is $16,000 or less, and the student and spouse are eligible to file a 2005 IRS Form 1040A or 1040EZ (they are not required to file a 2005 Form 1040), or they are not required to file any income tax return. Under these circumstances, the student's EFC is zero.

STUDENT'S/SPOUSE'S CONTRIBUTION FROM ASSETS		
16. Cash, savings & checking (FAFSA/SAR #43)		
17. Net worth of investments** (FAFSA/SAR #44) If negative, enter zero.		
18. Net worth of business and/or investment farm (FAFSA/SAR #45) If negative, enter zero.		
19. Adjusted net worth of business/farm (Calculate using Table C4.)	+	
20. **Net worth** (sum of lines 16, 17, and 19)	=	
21. Asset protection allowance (Table C5)	−	
22. Discretionary net worth (line 20 minus line 21)	=	
23. Asset conversion rate	×	.12
24. CONTRIBUTION FROM ASSETS If negative, enter zero.		

EXPECTED FAMILY CONTRIBUTION		
AVAILABLE INCOME (AI) (from line 15)		
CONTRIBUTION FROM ASSETS (from line 24)	+	
25. Adjusted Available Income (AAI) May be a negative number.	=	
26. Total contribution from AAI (Calculate using Table C6.) If negative, enter zero.		
27. Number in college in 2006-2007 (FAFSA/SAR #85)	+	
28. EXPECTED FAMILY CONTRIBUTION for nine month enrollment. If negative, enter zero.***		

**Do *not* include the student's home.

***To calculate the EFC for less than nine month enrollment, see the next page. If the student is enrolled for more than nine months, use the nine-month EFC (line 28 above).

Appendix: (continued)

Note: *Use this additional page to prorate the EFC only if the student will be enrolled for less than nine months and only to determine the student's need for campus-based aid, a subsidized Federal Stafford Loan, or a subsidized Federal Direct Stafford/Ford Loan. Do not use this page to prorate the EFC for a Federal Pell Grant. The EFC for the Federal Pell Grant Program is the nine month EFC used in conjunction with the cost of attendance to determine a Federal Pell Grant award from the Payment or Disbursement Schedule.*

REGULAR WORKSHEET Page 2 **C**

Calculation of Expected Family Contribution for a Student Enrolled for Less than Nine Months		
Expected Family Contribution (standard contribution for nine month enrollment, from line 28)		
Divide by 9	÷	9
Expected Family Contribution per month	=	
Multiply by number of months of enrollment	×	
Expected Family Contribution for less than nine month enrollment*	=	

*Substitute the student's EFC for less than nine month enrollment in place of the EFC for the standard nine month enrollment (EFC Formula Worksheet C, line 28).

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