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# The Impact Of The North Carolina Promise On Student Loan Outcomes

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# THE IMPACT OF THE NORTH CAROLINA PROMISE ON STUDENT LOAN OUTCOMES

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**Dedication**

To Arby:

Who was right next to me the whole time.

Literally.

**Acknowledgments**

Many people have supported me through this journey that started in the fall semester of 2017. I would first like to thank my Committee Chair, Dr. Jim Barber, who has been a colleague, friend, mentor, advisor, and massive supporter since I arrived at William & Mary in 2013. Next, Dr. Tom Ward has been invaluable in supporting statistical learning as a colleague and while serving on the Board of Visitors. Finally, to Dr. Rob Knoeppel, I thank you for your thoughtfulness, expertise in education finance, and being a UNC fan like me. To all my committee members, thank you for your support and guidance.

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**Abstract**

The North Carolina Promise (NC Promise) is an education subsidy program that sets in-state tuition at $500 per semester and out-of-state tuition at $2500 per semester for all undergraduates at four campuses of the University of North Carolina (UNC) System campuses applies to all undergraduate students beginning with the Fall 2018 semester. A goal of the NC Promise is to reduce the number of student loans for students to complete a degree. The NC Promise represents a new way to structure a promise program with the state government taking on more responsibility for the cost of higher education. Due to the recent creation of the program, there is limited research about its efficacy and impact. This study investigates if the NC Promise delivers on its goal of reducing the amount of student loans students need to complete a degree. Data from IPEDS across a 10-year time series were collected and analyzed using a difference-in-difference method. In addition to focusing on student loan outcomes, student fees were studied to determine if the program had any impact on fees. This study found that a reduction in federal student loans across three NC Promise campuses could not be attributed to the NC Promise program. However, recommendations for policy changes and future research are presented. Overall, given the program's unique structure and other benefits, the program should continue despite the findings in this study.

THE IMPACT OF THE NORTH CAROLINA PROMISE ON STUDENT LOAN OUTCOMES

# CHAPTER 1

# INTRODUCTION

From 2000 to 2020, policymakers in the United States (U.S.) sought solutions to the increasing cost of earning a college degree and tackling the growing student loan debt. Since 2007, Federal student loan debt has tripled, and the number of borrowers has almost doubled (Federal Student Aid, 2023a). According to the U.S. Department of Education's Office of Federal Student Aid (2023a), the current federal student loan portfolio is $1.6022 trillion U.S. dollars with 43.2 million borrowers. These borrowers have an average loan debt balance of $37,087. Additionally, 78.5%, or 34.4 million borrowers, have a debt of up to $40,000, and about one-fifth of borrowers (9 million) are over 50 years of age (Federal Student Aid, 2023a). In response to the increase in student loan debt, promise programs have become a tool policymakers more widely use to address this issue. A commonly cited definition of a promise program is a financial aid program that (a) has a primary goal of increasing higher education attainment, (b) promises a financial award to eligible students, (c) has some place requirement, and (d) is designed for promising college attainment for the traditional college-age population (Perna & Leigh, 2018). In 2015, 53 promise programs existed in the U.S., according to the College Promise Campaign (2021), and as of 2021, 348 promise programs exist in 47 states (Billings et al., 2023).

Promise programs are often seen as one solution to address the rising cost of higher education being passed on to students; however, these programs have their limits. Despite promise programs being implemented, their goal is to manage the cost of higher education passed on to the student, not address the increase in the cost of higher education itself. In the case of the North Carolina Promise program (NC Promise), the state takes on more responsibility to pay for higher education through an educational subsidy. This program exemplifies an underlying theme in financing higher education: *who should* pay versus *who is* paying for higher education?

Recently, there has been substantial activity on student loan reform at the federal level. In August 2022, the Biden administration announced one-time student loan forgiveness for borrowers with federal student loans. In the loan forgiveness part of the program, borrowers eligible for the Pell Grant can receive up to $20,000 in one-time loan forgiveness, and non-Pell Grant borrowers are eligible for up to $10,000 in loan forgiveness. Borrowers can apply for this forgiveness if their income is less than $125,000 for single individuals or $250,000 for households. This relief is estimated to cover 98.5% of borrowers and forgive about $430 million in debt (*Biden v. Nebraska*, 2023; Federal Student Aid, 2022; The White House, 2022).

By October 2022, about 16 million borrowers had been approved for this forgiveness, including me. Just as loan forgiveness was about to be issued, lawsuits were filed, and the program was halted. Eventually, these cases were argued at The Supreme Court of the U.S. in February 2023. The Court struck down the forgiveness part of the relief program in a 6-3 ruling later that year in June 2023 (*Biden v. Nebraska*, 2023). However, hours after the decision was announced, President Biden announced another legal path forward for the forgiveness part of the program that will take longer (The White House, 2023a).

Since then, the Biden administration has pursued fixing the federal student loan system and announcing several forgiveness and payment plans. As recently as January 2023, the Biden administration announced $5 billion in loan forgiveness for 74,000 borrowers. This brings the total loan forgiveness to almost $140 billion for over 3.6 million borrowers. Much of what the federal government has forgiven is providing relief already owed to borrowers who never received forgiveness (The White House, 2023b, 2023c, 2023e, 2023f, 2024). The administration is working to hold its promise to fix a broken system in addition to reforms and providing relief.

One of the most significant actions the federal government has taken is introducing a new repayment plan. This plan caps monthly payments at 5% or 10% of a borrower's discretionary income and ensures that the loan principle will not grow while a borrower makes payments. This is achieved by the federal government covering any remaining interest for borrowers after a monthly payment is made (The White House, 2023d). The administration has also recently held loan servicing companies accountable for practices that harm borrowers (U.S. Department of Education, 2023).

These announcements are the most federal action that has been taken to reduce the amount of student loan debt; they do not address the continuing increase in the cost of higher education. As noted in a 2021 report from the College Board, the price of a 4-year college degree has almost tripled since 1980, even when factoring in inflation (Ma & Pender, 2021). However, there are the beginnings of a change in trend with the cost of higher education. The College Board trend report from 2022 showed a downward trend in published tuition and fees beginning in 2020-2021. That same report also noted that "since 2016-17, the average net tuition and fee price paid by first-time, full-time in-state students enrolled in public four-year institutions has been declining after adjusting for inflation" (Ma & Pender, 2022, p. 18).

The announcements from the Biden administration represent a federal plan to address student loan debt. Additionally, some states and local governments have implemented programs to try and address the problem.

**How Student Loan Debt Became So Large**

The federal student loan debt portfolio has become larger than many other debts Americans hold for several reasons. Robert Kelchen (2018) cited two reasons why student loan debt has increased. First, higher education prices have steadily increased faster than the inflation rate. Kelchen (2018) stated, “Tuition and fees at private nonprofit colleges rose by about 140% between 1985-86 and 2015-16 academic years and by 233% at four-year public colleges” (p. 3). With the real household income only increasing by 5% during that same time, the cost of higher education has far outpaced income. The second reason contributing to student loan debt is that public funding has not kept up with rising prices (Kelchen, 2018). Taylor (2022) noted that “Sticker price tuition, meaning the published price for full-time enrollment, more than tripled in constant dollars from 1988-1989 to 2018-2019” (p. 18). The long-term reduction in state funding for higher education or deinstitutionalization, as Taylor (2022) defines it, is just one part of an overall increase in the politicization of higher education.

The decrease in state funding can be calculated and presented in many ways, but the overall trend across the U.S. is a steady decline. Goldrick-Rab (2016) noted that “Beginning in 1981, state appropriations began to decline, from $10.18 per $1,000 of state personal income in that year to $9.24 in 1990 to $7.52 in 2000 to $6.32 in 2010” (p. 15). Goldrick-Rab (2016) argued the point that if states had maintained the 1981 level of funding, “the total amount states contribute to higher education today would be about $146 billion, instead of the $81 billion contributed in 2015” (p. 15). Kelchen (2018) noted that while state and local support for higher education increased by 8% between 1990 and 2015, this is far less than a 43% increase in full-time equivalent enrollment over the same period. These data show that the decrease in state and local funding, an increase in enrollment, and a decrease in family income over the last 40 years have contributed significantly to the hefty student loan debt portfolio today.

An unintended consequence of the real household income not keeping up with the rising tuition and fees cost is that borrowers cannot make monthly payments that cover the accrued interest. Beamer and Steinbaum (2023) found that the student loan repayment pause during the COVID-19 Global Pandemic helped borrowers pay down their loan principal. This was because interest was not accruing during the payment pause.

Surprisingly, “In 2020, 60.7 percent of outstanding student loans had a higher balance than when they were first issued” (Beamer & Steinbaum, 2023, para. 5). This means that borrowers had interest accruing on their loans at a rate that outpaced what the borrower could afford to pay down each month. With many repayment plans based on a borrower's income, most federal student loans will not be fully repaid, as Beamer and Steinbaum (2023) point out. This is where the interest reform with the newly enacted repayment plan from the federal government will be crucial in assisting borrowers for decades to come (The White House, 2022, 2023d).

These trends did not happen in a short amount of time. This passage from a 2022 State Higher Education Executive Officers Association report about state financing captures the historical lens of student loan issues:

> There has been a substantial shift of responsibility for financing public higher education toward net tuition revenue (from 20.9% to 42.1%) since 1980. Historically, student share has increased most rapidly during periods of economic recession, shifting more of higher education costs to students and families. The student share grew rapidly during the Great Recession, increasing from 35.8% in 2008 to an all-time high of 47.5% in 2013. During this time, students and their families turned to federal aid to cushion their growing share

> of higher education costs. From 2008 to 2012, the proportion of students attending public institutions using federal Pell Grant aid increased from 23.2% to 37.8%. Of greater concern, the percentage of students using federal loans increased from 23.7% to 30.1% during that time. (Laderman & Kunkle, 2022, p. 33)

In other words, what we see today with a large amount of student loan debt is a result of a shift of responsibility to pay for higher education more to the students and families during and after the Great Recession.

This trend continues, with the student share increasing to 42.2% (excluding federal stimulus funding), which means that, on average, 42.2% of public institution revenue came from tuition and fees (Kunkle & Laderman, 2023). In looking at North Carolina specifically, that number is lower than the national average. The State Higher Education Executive Officers Association reported that for fiscal year 2022, North Carolina had a 30.2% student share, an 11.3% increase since 2001. When student share is divided between two-year and 4-year public institutions, the student share increases to 36.9% for 4-year institutions, with a national average of 51.6% (Kunkle & Laderman, 2023). While these statistics put North Carolina below the national average, the state still mirrors the trend of shifting more funding responsibility to students.

Taylor (2022) framed this issue by noting the decrease in state funding. Specifically, "the recession of the early 2000s reduced government contributions from 74 percent of education expenditures in 2001 to 68 percent in 2005. State spending fell… after the Great Recession of 2007-2009, dropping 11.2 percent from 2008 to 2018" (p. 10). This decrease in state funding, increase in costs, and an increase in enrollment have all contributed to the ballooning amount of student loan debt. These dynamics also created space for policymakers to look for solutions.

**North Carolina's Experiment**

In 2016, state legislators in North Carolina created an experimental program to address the cost of higher education in North Carolina. Implemented in the fall of 2018, NC Promise set the cost of tuition at $500 per semester for in-state undergraduates and $2,500 per semester for out-of-state undergraduates at Elizabeth City State University (ECSU), Fayetteville State University (FSU), the University of North Carolina at Pembroke (UNCP), and Western Carolina University (WCU; NC Promise Tuition Plan, 2022; The University of North Carolina System [UNC System], 2022b). Citing the increased amount of student loan debt taken on by students, North Carolina legislators created a potential solution to reduce student loan debt. The foundational concept of the program is that if students do not have to take out loans to pay for higher education to begin with, then students would be in better financial health after graduation.

However, when the legislature passed the NC Promise, public higher education appropriations per full-time equivalent (FTE) student in North Carolina were $10,846. This represents only a 3.97% increase since 1980 and a 19.62% decrease since 2001 (Laderman & Kunkle, 2022). Taylor (2022) noted that North Carolina had not kept up state support with increased costs and enrollment growth, so tuition rates have increased. Specifically, Taylor (2022) said, "North Carolina remained one of the states with the highest per-student state appropriations in 2017, even as this level of support represents a substantial decline from the state's own history" (p. 100). Nevertheless, "By 2017, state appropriations per FTE had fallen 16.5 percent from pre-recessionary levels" (p. 100). Given these funding levels, North Carolina policymakers may have sought ways to increase support.

Each of these universities has experienced positive institutional shifts since NC Promise was implemented, including increased applications, enrollment, and infusion of funds (Brown, 2022; Stancill, 2018a, 2018b). This infusion in funds is a direct result of increased enrollment, which means the state must increase the amount of funding to close the revenue gap since all undergraduate students' tuition was drastically reduced during the Fall 2018 semester.

In exchange for the low tuition rate, the state replaces the lost tuition revenue through annual appropriations as a “buy-down” (NC Promise Tuition Plan, 2022; UNC System, 2020, 2021, 2022f, 2023). The buy-down amount is set annually and based on the combination of a base tuition rate and FTE enrollment. The details of the buy-down are discussed in Chapter 2. Overall, the buy-down is the logistical part of the program. The purpose of the program, though, is clearly defined.

The goals of the NC Promise are to (a) increase educational access, (b) reduce student debt, and (c) grow [North Carolina’s] economy (UNC System, 2022b). While the UNC System is evaluating the outcomes of the NC Promise, the available research is limited (Brown, 2022). In this study, I examined the impact of the NC Promise on the average student loan debt taken on by undergraduate students at three NC Promise campuses. A fourth campus and a Historically Black College or University, FSU, joined the NC Promise program in the Fall 2022 semester (FSU, 2022; Murphy, 2021). I did not include this campus in the study treatment group because of the availability of student loan data following the implementation of the NC Promise.

Specifically, I focused on reducing student debt and assess if the program meets that goal. Additionally, I investigated whether there was any change from 2012 to 2022 in the cost of mandatory fees, meal plans, and housing at three campuses. This secondary focus was to determine if fees and other non-tuition expenses were increasing at a rate that would mitigate the impact of the reduced tuition from the NC Promise.

When reviewing literature or hearing policymakers speak, the phrase “free college” is often heard. This phrase and “promise program” are used interchangeably but most often refer to programs that focus on community colleges. One reason is that Obama created America’s College Promise, pushing states to implement free community college programs (Salazar, 2023). Since the NC Promise program only pertains to public bachelor’s degree-granting institutions, the primary focus of this study was those institutions.

Higher education in North Carolina is organized as a consolidated system where each of the 15 public 4-year institutions, a school of arts, and a science and math high school reports to the Board of Governors. Each campus operates with some autonomy and has its own Board of Trustees. Much of the funding for the UNC System comes from the North Carolina General Assembly in the form of appropriations of taxpayer dollars. The Board of Governors then appropriates those state funds to each member institution. However, each campus can set its tuition and fee structure within established policies and is subject to final approval from the Board of Governors (UNC System, 2022a; 2022c).

***NC Promise Schools***

There is little publicly known information as to why each school was selected to be part of this program. Initially, the group included five schools across North Carolina: ECSU, FSU, Winston-Salem State University, UNCP, and WCU. One reason given at that time was that 90% of North Carolina residents lived within 150 miles of one of those schools (Anderson, 2016; Brown, 2022; Murphy, 2021). This came with accusations of racism and an attack on HBCUs through defunding since three of the five schools are HBCUs: ECSU, FSU, and Winston-Salem State University.

This is supported by Taylor (2022), who compared the rate of tuition increases at each UNC System school from 2007 to 2017. They found that “tuition hikes were not evenly distributed across public colleges and universities. Increases were far sharper at some campuses than others” (Taylor, 2022, p. 100). The significant finding in Taylor’s (2022) research is that:

> [ECSU] and [FSU] increased net tuition revenues at less than the rate of inflation. In other words, even at a time of public divestment, the average student at these two campuses paid *less in real dollars* in 2017 than had been the case a decade earlier. (p. 100)

The divestment of HBCUs would be a central point for those advocating not to be included in the NC Promise program.

To understand the full impact of the NC Promise program, we must understand more about each school. Eventually, three schools were included in the 2016 legislation: ECSU, UNCP, and WCU. FSU was added in 2022, representing the first expansion of NC Promise (Anderson, 2016; Brown, 2022; Murphy, 2021; Taylor, 2022). This section will outline a profile of each NC Promise school included in the treatment group by providing some historical context and undergraduate student demographic information. Table 1 presents each school's student population demographic data and enrollment data as of Fall 2022.

**Table 1**

*Fall 2022 Undergraduate Enrollment Demographic Data*

| Category | ECSU | | UNCP | | WCU | |
|---|---|---|---|---|---|---|
| | *n* | % | *n* | % | *n* | % |
| Total Undergraduate Enrollment | 2,033 | - | 5,643 | - | 10,377 | - |
| Race | | | | | | |
| *American Indian or Alaskan Native* | 11 | 0.50 | 726 | 13.00 | 96 | 0.94 |
| *Asian* | 8 | 0.40 | 48 | 1.00 | 130 | 1.3 |
| *Black or African American* | 1,465 | 68.20 | 1,531 | 28.00 | 618 | 6.20 |
| *Hispanics of any Race* | 93 | 4.30 | 584 | 11.00 | 789 | 7.92 |
| *Multiple Race/Ethnicity* | 122 | 5.70 | 385 | 7.00 | 358 | 3.59 |
| *Native Hawaiian of Other Pacific Islander* | 0 | 0 | 0 | 0 | 14 | 0.14 |
| *White* | 369 | 17.20 | 2,001 | 37.00 | 7,607 | 76.40 |
| *Unknown/International* | 81 | 3.10 | 182 | 3.00 | 344 | 3.54 |
| Gender | | | | | | |
| *Female* | 1,179 | 58.00 | 3,499 | 62.00 | 5,915 | 57.00 |
| *Male* | 854 | 42.00 | 2,144 | 38.00 | 4.462 | 43.00 |
| Residency | | | | | | |
| *In-State* | 1,596 | 74.30 | 5,135 | 89.00 | 9,904 | 85.12 |
| *Out-of-State* | 553 | 25.70 | 508 | 11.00 | 1,731 | 14.88 |
| Pell Grant Recipient | 1,046 | 51.45 | 2,549 | 45.17 | 3,099 | 29.86 |

*Note.* Data are adapted from the institutions' Fall 2022 student body profile. Numbers and percentages are published by each institution. ECSU = Elizabeth City State University; UNCP = University of North Carolina Pembroke; WCU = Western Carolina University.

**ECSU.** ECSU is a historically Black university located in the northeastern region of North Carolina. The school was founded in 1891 as a teaching school with the purpose of "teaching and training teachers of the colored race to teach in the common schools of North Carolina" (ECSU, 2022a, para. 1). The school became an official campus of the UNC System in 1972 when the North Carolina General Assembly completed the consolidation of the 15 public 4-year higher education campuses. The mission of ECSU is based on access to student-centered experiential learning. In 2021, ECSU offered over 30 undergraduate and graduate degree programs in education, business, aviation, and emergency management and has a Carnegie Classification as a baccalaureate college with diverse fields. (ECSU, 2022a; National Center for Education Statistics [NCES], 2022).

In the fall of 2022, the total undergraduate enrollment was 2,033. In-state students numbered 1,596 (74.3%), and out-of-state students numbered 553 (25.7%). Black students represented almost three-quarters (68.2%) of the undergraduate student population, with 17.2% identifying as White. Students who identify as two or more races represented 5.7% of the student population, and 4.3% identified as Hispanic (ECSU, 2022b). Notably, 1,046 undergraduate students at ECSU are Pell Grant recipients. Although this number is the smallest of the NC Promise schools, it represented just over half (51.45%) of the undergraduate student population, the most significant percentage of the NC Promise schools (ECSU, 2022b).

**UNCP.** The General Assembly of North Carolina established a school for the American Indians of Robeson County in 1887 named Croatan Normal School. In 1909, the school relocated to its current location, Pembroke, North Carolina, in the state's south-central region. The school began accepting members of all federally recognized American Indian Tribes in 1949**,** and the name changed to Pembroke State College. Following the *Brown v. Board of Education* decision in 1954, the school was made available to all qualified applicants, having just begun accepting White students a year earlier with a cap of no more than 40% of enrollment. This expanded access and increased enrollment for several years (UNCP, n.d.-b).

Almost a decade later, the North Carolina General Assembly declared UNCP North Carolina’s Historically American Indian University. In 1969, the school had evolved into a regional university and wanted to expand into graduate education. The school joined the UNC System during consolidation in 1972. The most recent name change occurred in 1996 when Pembroke State University became UNCP (n.d.-a). The mission of UNCP is rooted in a diverse study body and inclusion. The university has degree programs at the bachelor’s, master’s, and professional doctoral levels. This puts the Carnegie Classification at the master’s colleges and universities with larger program levels (NCES, 2022).

Fall 2022 undergraduate enrollment totaled 5,643, with 89% of students classified as in-state. Almost half (45.17%) of undergraduate students received the Pell Grant. Although most students identify as White (37%), students identifying as American Indian represent 13% of the student population, and Black or African American students comprise 28% (UNCP, n.d.-b). Of the three NC Promise schools in the treatment group, UNCP sits between ECSU and WCU regarding the undergraduate population and some demographic measures. It is no surprise, consistent with the campus's history and location, that UNCP has the largest American Indian student population of the schools in this study.

**WCU**. WCU was established in 1889 as Cullowhee High School in the Appalachian Mountains of western North Carolina to provide competent teachers for rural classrooms. WCU is a comprehensive regional university with programs in education, health sciences, business, construction management, etc. In the years preceding the consolidation of state public higher education, the North Carolina General Assembly elevated the school to a university (WCU, 2022a). Western Carolina Teachers College was elevated to university status in 1967 and joined the UNC System in 1972. The mission of WCU is centered on academic excellence, affordability, and access, and it distinguishes itself as a regional comprehensive university. WCU has the highest Carnegie Classification of the NC Promise schools, being a doctoral/professional university (NCES, 2022; WCU, 2022a). In fall 2022, the total undergraduate enrollment was 10,377, with 85.12% of students classified as in-state. Most students identify as White (77.4%); Black or African American students account for just over 6% of the undergraduate student population. Students who identify as Hispanic represent almost 8%, and those identifying with two or more races represent 3.59%. WCU is the largest of the NC Promise schools, yet just like ECSU and UNCP, WCU is in a rural part of North Carolina, with each campus serving a different region of the state (WCU, 2023).

The structure of 4-year higher education in North Carolina represents a collective agreement to fund and support higher education in the state. The North Carolina Constitution reads, “The General Assembly shall maintain a public system of higher education, comprising The University of North Carolina and such other institutions of higher education as the General Assembly may deem wise” (N.C. Const. art. IX, § 8). The NC Promise represents a shift in that agreement to where the state provides the most support and harkens back to the 1970s and 1980s. Such support is also enshrined in the North Carolina Constitution, “The General Assembly shall provide that the benefits of the University of North Carolina and other public institutions of higher education, as far as practicable, be extended to the people of the State free of expense.” (N.C. Const. art. IX, § 9). This benefit reflects what the Carnegie Commission on Higher Education wrote about 50 years ago.

**Conceptual Framework**

In 1973, the Carnegie Commission on Higher Education (Carnegie Commission, 1973) posited that all people pay for higher education in some way, “it is an obvious, but often obscured, fact that people pay the total bill for higher education… that in turn support collegiate education” (p. 19). This report (*Higher Education: Who Pays? Who Benefits? Who Should Pay?*) aims to answer the questions of who pays and who should pay. Their assertion that everyone pays for higher education reflects a collectivist system. How people pay for higher education—direct payment for enrollment, state and federal taxpayer funds, and private donations to institutions—are the pillars of the collective financial system that supports higher education. The report adds, “In these various forms and through these agencies, the current burden is shared among users and nonusers, the well-to-do and the less well-to-do, older and younger generations” (Carnegie Commission, 1973, p. 19). This report’s unique premise is that people collectively pay for higher education in the U.S.

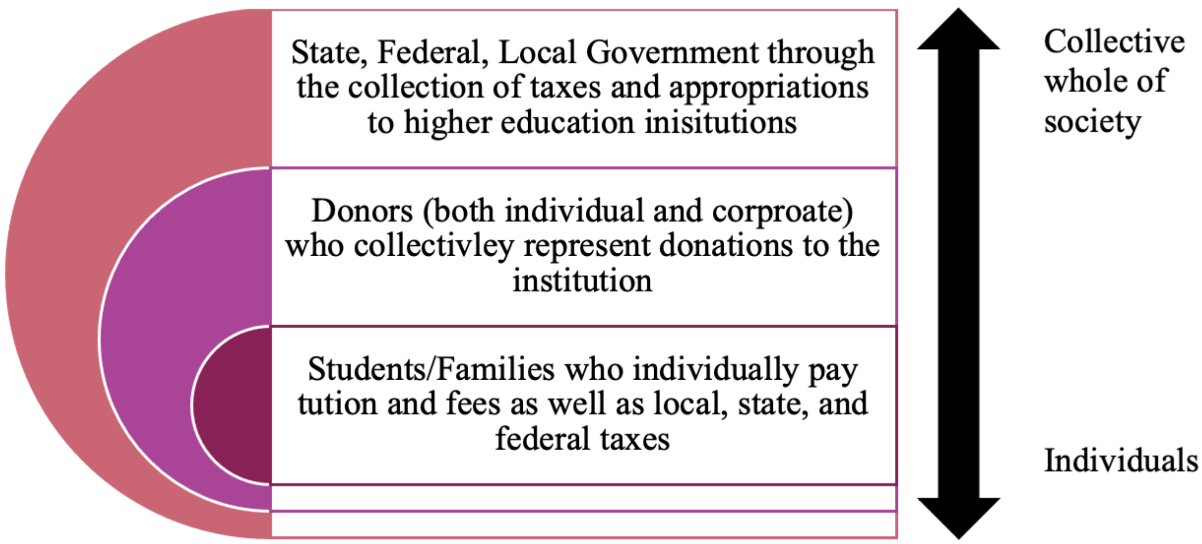
The Carnegie Commission identified three groups of people that contribute to funding higher education, “Viewed in the aggregate, the costs of higher education are shared by individuals as users (students and their parents), by taxpayers, and by private philanthropy” (Carnegie Commission, 1973, p. 29). Quadlin and Powell (2022) used slightly different categories that supported higher education—the individual student, the student’s family, and the state and federal government. Like the Carnegie Commission (1973), Quadlin and Powell (2022) noted that these entities distribute the cost of higher education. Each entity’s contribution is fluid and changing. This collective responsibility, or collectivism, will be used as a conceptual framework for this study.

Hui (1988) sought to measure individualism and collectivism in human behavior. They saw individualism and collectivism on opposite ends of the spectrum. In their study, Hui (1988) defined collectivism as “those who see the self as an aspect of a group and who value interdependence, even to the extent of submerging the individual in the group. These people consider the group… or the collective as the basic unit of survival” (p. 18). This definition, while used to study individual human behavior, is applicable in the larger context of higher education financing because, as the Carnegie Commission (1973) posited, *people* are those who pay for higher education. Additionally, “collectivism is a syndrome of feelings, emotions, beliefs, ideology, and actions related to interpersonal concern” (Hui, 1998, p. 19). This is where the politicization of higher education can be framed.

Figure 1 illustrates the Carnegie Commission’s (1973) group of people who pay for higher education would fall on the individualism and collectivism spectrum based on Hui (1988). On the individualist side are students and families who pay for higher through paying directly to the institution and collecting taxes at the various levels of government. On the collectivist side, the collective whole of society pays for higher education by appropriating collected taxes. These can be through financial aid to students, research grants to institutions, or direct funding support. In the middle are donors who are both individuals and a group of individuals who privately donate directly to an institution.

**Figure 1**

*Illustration of the Collectivist Framework*




*Note.* Adapted from Carnegie Commission (1973) and Hui (1988)

In the collectivism framework, the individual student's responsibility for paying for higher education is represented by the money paid directly to the institution they are attending or the money the student is paying back to the federal government in the form of student loan debt payments. Family responsibility is like their students' responsibility, except that the money paid to the institution, or the federal government comes from their pockets, not the students'. The state and federal government's contribution to paying for higher education comes in many forms. At the state level, direct tax dollars go directly to public institutions. This can be for student financial aid support, building and facility costs, research dollars, and employee wage and benefits support. At the federal level, support is in the form of oversight of a student loan system, research and development grants and contracts, and federal programs like the Pell Grant of federal work-study (Quadlin & Powell, 2022).

The question of *who should* pay for higher education is the basis of a study Quadlin and Powell (2022) published. They use data to show the public perception of who should pay for higher education and how it has changed over time. However, in this study's collectivist framework, the question is, *who pays* for higher education? This framework will help examine the shift in public opinion that Quadlin and Powell (2022) showed is being realized in practice. For example, the NC Promise program shifts much of the responsibility for paying for tuition away from students and their parents. The state government takes more responsibility as a subsidy available to all undergraduates at participating schools. The collectivist framework and the question of *who is* paying for higher education form the foundation for this study and inform the research questions and hypothesis.

This conceptual framework will aid in answering the research questions I pose in this study by framing the federal government, state government, taxpayers, and students as individual contributors to funding higher education and as a collective whole. The conceptual framework will assist with visualizing how the individual parts contribute to the whole of funding for a student's education and how those contributions change with the NC Promise program.

**Research Questions and Hypothesis**

I used a causal-comparative design with a difference-in-differences (DID) method for this study (St. Clair & Cook, 2015). This method is appropriate for this study because it compares a pre-post change to an affected group and the change over time to an unaffected group (Furquim et al., 2020). The NC Promise campuses, excluding FSU, was considered the treatment group, and all other public 4-year degree-granting universities in North Carolina was the comparative groups. Based on the Carnegie Classification, there will be broad and narrow comparison groups. The details of this design and the selection process for each group are outlined in Chapter 3. Data collected from the Integrated Postsecondary Education Data System (IPEDS) included the 6 years before NC Promise, 2012-2018, and 4 years after the implementation, 2018-2022. This time series helped establish a clear trend before implementing the NC Promise program.

Multiple analyses are part of the overall design of this study because student loan data and tuition and fee data can be defined differently. For the analysis, the independent variable is the NC Promise program, and the dependent variable is the average amount (in dollars) of student loans awarded to undergraduate students at the three NC Promise campuses by asking:

1. Does the average amount of undergraduate student loans awarded change at ECSU, UNCP, and WCU compared to non-Promise schools after implementing the NC Promise program?
2. Does the cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU increase at a higher rate compared to non-Promise schools after implementing the NC Promise program?

Consistent with the stated goals of NC Promise, the following hypotheses are linked with the research questions:

1. The average amount of student loans for undergraduate students at ECSU, UNCP, and WCU decreases after implementing the NC Promise program.
2. The cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU does not increase faster after implementing the NC Promise program.

While this study looks at the cost of higher education at the schools included, it also looks at loans. Since these loans are awarded in direct response to the cost at the time of the award, and this study is investigating the cost over time, there is no need to adjust the cost for inflation. The loan amount awarded at a particular time is not adjusted for inflation or other reasons.

**Significance of the Study**

There are three primary contributions I aim to make from this study. The first will be adding to the literature on promise programs. Since 2005, with the creation of the Kalamazoo Promise, similar programs have emerged across the U.S. in large numbers (Perna & Leigh, 2020). The Kalamazoo Promise is a privately funded program that "covers four years of tuition and fees regardless of other federal and state grant aid received" to students in Kalamazoo, Michigan, and is often referred to as one of the first promise programs (Perna & Smith, 2020, p. 6). Subsequently, the literature reviewing these programs has also increased. However, until about 2016, most research on promise programs looked at the most prominent programs like the Kalamazoo Promise or the El Dorado Promise (Perna & Smith, 2020). The literature review will discuss the foundational aspects of promise programs, beginning with a brief history and definitions.

The second significant contribution will be the addition of research linking promise programs to student loan outcomes. Currently, one study reviews the effect a promising program has on student loan debt. That study, published in 2021 by Odle et al., looked at the impact of the Tennessee Promise program on student loan outcomes. To my knowledge and affirmed by Odle et al. (2021), there are no other studies on the effect a promise program has on student loan outcomes. The same can be said for any published studies on the NC Promise program. This study will add to the knowledge of college promise programs and their effect on student loan debt.

The third significant contribution will be a published study about a promise program characterized as a state subsidy for all undergraduate students. Since the NC Promise program funding is allocated to the campus, the program is considered a subsidy in the form of a buy-down (NC Promise Tuition Plan, 2022; UNC System, 2020, 2021, 2022f). Perna and Leigh (2018) included in their typology promise programs that are regarded as financial aid because funds are allocated to the student as part of an overall financial aid package. However, the distinction as a state subsidy program afforded to all undergraduate students sets the NC Promise outside the promise program typology created by Perna and Leigh (2018). This study also seeks to make a case for the NC Promise program to be included in promise program typologies.

**Definitions of Terms**

This section details the definition of terms used in this study to provide clarity and structure.

Baccalaureate Colleges—General: “An institutional classification coding structure developed by the Andrew W. Carnegie Foundation for the Advancement of Teaching. Baccalaureate Colleges—General are primarily undergraduate colleges with major emphasis on baccalaureate programs. During the period studied, they awarded less than half of their baccalaureate degrees in liberal arts fields.” (NCES, 2022, p. 4)

Books and Supplies: “The average cost of books and supplies for a typical student for an entire academic year (or program). Does not include unusual costs for special groups of students (e.g., engineering or art majors), unless they constitute the majority of students at an institution” (NCES, 2022, p. 6).

Carnegie Classification: “An institutional classification coding structure developed by the Andrew W. Carnegie Foundation for the Advancement of Teaching” (NCES, 2022, p. 6)

Causal Comparative: research examines where a naturally occurring intervention affects an outcome of interest (McMillan, 2008).

Collectivism: “those who see the self as an aspect of a group, and who value interdependence, even to the extent of submerging the individual in the group. These people consider the group… or the collective as the basic unit of survival” (Hui, 1988, p.18)

Cost of Attendance: “The amount of tuition and fees, room and board, books and supplies, and other expenses that a full-time, first-time degree/certificate-seeking student can expect to pay to go to college for an academic year. Costs reported to IPEDS by the institution are those amounts used by the financial aid office to determine a student's financial need for the academic year, which is typically nine months” (NCES, 2022, p. 11)

Deinstitutionalization: the practice of undermining established social practices by removing resources (Taylor, 2022).

Dependent variable: is the second variable affected or predicted by the independent variable (McMillan, 2008).

Doctoral/Research Universities—Extensive: “An institutional classification developed by the Andrew W. Carnegie Foundation for the Advancement of Teaching. Doctoral/Research Universities - Extensive typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. During the period studied, they awarded 50 or more doctoral degrees per year across at least 15 disciplines” (NCES, 2022, p.12)

Doctoral/Research Universities—Intensive: “An institutional classification developed by the Andrew W. Carnegie Foundation for the Advancement of Teaching. Doctoral/Research Universities - Intensive typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the doctorate. During the period studied, they awarded at least ten doctoral degrees per year across three or more disciplines, or at least 20 doctoral degrees per year overall" (NCES, 2022, p. 12)

Educational Subsidies: "Funds provided from either public or private sources to reduce the cost of education to the student" (Carnegie Commission, 1973, p. 27).

Elizabeth City State University (ECSU): is a historically Black university and a campus of the UNC System serving the northeastern part of North Carolina and located in Elizabeth City (ECSU, 2022b).

Fayetteville State University (FSU): is a historically Black university and a campus of the UNC System serving the central part of North Carolina and located in Fayetteville (FSU, 2022).

First-Dollar Program: when the scholarship dollars for a promise program are applied before other scholarships and financial aid are awarded (Miller-Adams, 2015).

FTE of Students: "The full-time equivalent (FTE) of students is a single value providing a meaningful combination of full-time and part-time students. IPEDS data products currently have two calculations of FTE students, one using fall student headcounts and the other using 12-month instructional activity" (NCES, 2022, p. 18).

Full-Time Student: "Undergraduate: A student enrolled for 12 or more semester credits, or 12 or more quarter credits, or 24 or more clock hours a week each term" (NCES, 2022, p. 19).

HBCU: "The Higher Education Act of 1965, as amended, defines an HBCU as: '… any historically [B]lack college or university that was established prior to 1964, whose principal mission was, and is, the education of [B]lack Americans. Moreover, that is accredited by a nationally recognized accrediting agency or association determined by the

Secretary [of Education] to be a reliable authority as to the quality of training offered or is, according to such agency or association, making reasonable progress toward accreditation.' Federal regulations (20 USC 1061 (2)) allow for certain exceptions to the founding date" (NCES, 2022, p. 21).

Independent variable: the variable that comes first and influences or predicts the dependent variable (McMillan, 2008).

In-State Student: "A student who is a legal resident of the state in which [they] attend[s] school" (NCES, 2022, p. 21).

In-State Tuition: "The tuition charged by institutions to those students who meet the state's or institution's residency requirements" (NCES, 2022, p. 21).

Interest: "a loan expense charged for the use of borrowed money and is paid by a borrower to a lender. The expense is calculated as a percentage of the unpaid principal amount of the loan" (Federal Student Aid, n.d.).

Last-Dollar Program: when the scholarship funds are applied after other scholarships, grants, or loans are awarded (Odle et al., 2021).

Loan: "any monies that must be repaid to the ending institution for which the student is the designated borrower. Includes all Title IV subsidized and unsubsidized loans. Does not include PLUS and other loans made directly to parents" (NCES, 2022, p. 26).

Loan Principal: "the money that [is] originally agreed to pay back" (Consumer Financial Protection Bureau, 2020).

Master's Colleges and Universities I: "An institutional classification developed by the Andrew W. Carnegie Foundation for the Advancement of Teaching. Master's Colleges and Universities I typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the master's degree. During the period studied, they awarded 40 or more master's degrees per year across three or more disciplines" (NCES, 2022, p. 22)

Master's Colleges and Universities II: "An institutional classification developed by the Andrew W. Carnegie Foundation for the Advancement of Teaching. Master's Colleges and Universities II typically offer a wide range of baccalaureate programs, and they are committed to graduate education through the master's degree. During the period studied, they awarded 20 or more master's degrees per year" (NCES, 2022, p.22)

Middle-Dollar program: a financial aid program that "guarantees aid to all eligible students either in the form of stipends for educational expenses or minimum scholarship amounts (for example, $1000), regardless of students' eligibility for federal and state grant aid" (Billings et al., 2023, p. 10).

Net Price Calculations: "Average net prices…are calculated by subtracting from published process average grant aid per first-time full-time undergraduate student in each sector. Prices are from the College Board's Annual Survey of Colleges. Average grant aid is calculated using the IPEDS Student Financial Aid survey. Grant aid includes federal, state, and institutional grants" (Ma & Pender, 2022, p. 50).

North Carolina Promise (NC Promise): is a state-funded tuition subsidy program available to all undergraduate students at ECSU, FSU, UNCP, and WCU (UNC System, 2022b).

Other Expenses- "The amount of money (estimated by the financial aid office) needed by a student to cover expenses such as laundry, transportation, and entertainment" (NCES, 2022, p. 30).

Out-of-State Student: “A student who is not a legal resident of the state in which [they] attend[s] school” (NCES, 2022, p. 31).

Out-of-State Tuition: “The tuition charged by institutions to those students who do not meet the institution's or state's residency requirements” (NCES, 2022, p. 31).

Pell Grant Program (Higher Education Act of 1965, Title IV, Part A, Subpart I, as amended): Provides grant assistance to eligible undergraduate postsecondary students with demonstrated financial need to help meet education expenses” (NCES, 2022, p. 32).

Principal: “the sum of money lent, on which interest is paid” (Federal Student Aid, n.d.)

Promise Program: a financial aid program that (a) has a primary goal of increasing higher education attainment, (b) promises a financial award to eligible students, (c) has some place requirement, and (d) is designed for promising college attainment for the traditional college-age population (Perna & Leigh, 2018).

Quasi-experimental: an experiment that seeks to determine if a specific treatment influences an outcome using nonrandomized assignments (Creswell & Creswell, 2018).

Required Fees: “Fixed sum charged to students for items not covered by tuition and required of such a large proportion of all students that the student who does not pay the charge is an exception” (NCES, 2022, p. 36)

Subsidy: a sum of money granted by the government or public body to assist an industry or business so that the price of a commodity or service may remain low or competitive (Oxford English Dictionary, n.d.).

Tuition: “The amount of money charged to students for instructional services. Tuition may be charged per term, per course, or per credit” (NCES, 2022, p. 42).

Tuition and fees (published charges): The amount of tuition and required fees covering a full academic year most frequently charged to students. These values represent what a typical student would be charged and may not be the same for all students at an institution. If tuition is charged on a per-credit-hour basis, the average full-time credit hour load for an entire academic year is used to estimate average tuition. Required fees include all fixed sum charges that are required of such a large proportion of all students that the student who does not pay the charges is an exception" (NCES, 2022, pp. 35-36)

Typology: classification according to general type, especially in archeology, psychology, or the social sciences (Oxford English Dictionary, n.d.).

Undergraduate: "A student enrolled in a 4- or 5-year bachelor's degree program, an associate's degree program, or a vocational or technical program below the baccalaureate" (NCES, 2022, p. 42)

University of North Carolina (UNC) System: The public higher education system of North Carolina comprises 15 4-year campuses, a school of arts, and a high school. While each campus has a board of trustees, the system falls under a central Board of Governors (UNC System, 2022d).

University of North Carolina at Pembroke (UNCP): is a campus of the UNC System serving the south-central part of North Carolina and located in Pembroke. The history of the campus is also interconnected with the Lumbee Nation of North Carolina (UNCP, n.d.-a).

Western Carolina University (WCU): is a regional comprehensive university and a campus of the UNC System serving the western part of North Carolina and is in Cullowhee (WCU, 2022a).

**Conclusion**

Over the last 40 years, the collective system of financing higher education has seen many shifts. States are decreasing their appropriations (Kelchen, 2018; Laderman & Kunkle, 2022; Taylor, 2022); the cost of higher education is increasing faster than the rate of inflation (Kelchen, 2018; Laderman & Kunkle, 2022); and enrollment is growing across the country (Kelchen, 2018; Laderman & Kunkle, 2022; Taylor, 2022). These forces all contribute to the increase in reliance on federal student loans to pay for higher education (Laderman & Kunkle, 2022). This also creates an environment for policymakers to find ways to shift the responsibility of paying for higher education away from students and families.

The overall policy strategy of the NC Promise program is to reduce student loan debt for students at four North Carolina schools. This strategy is unique to many other promise programs because the NC Promise is a subsidy program for undergraduates. In contrast, almost all promise programs are part of a student's financial aid package (Perna & Leigh, 2018). The literature on promise programs lacks an agreed-upon definition, and in recent years, there have been attempts to define college promise programs. Since there are different elements like funding sources, eligibility requirements, residency requirements, and institutions the program supports, a working definition continues to evolve as the programs develop.

However, promise programs have common aspects that set them apart from traditional financial aid programs like the Federal Pell Grant Program (Perna & Smith, 2020). Callahan et al. (2019) surmised that "the field lacks a clear and explicit framework that can be used to identify and compare statewide college promise programs" (p. 4). This lack of a clear and explicit framework is because there are several different elements and ways to define a program;

as previously mentioned, the programs are created and implemented at the local and state government level, contributing to a patchwork system.

In Chapter 2, I explore the history of promise programs in the U.S., outline definitions and types, and review studies on promise programs. Then, I provide further discussion on student loan debt and the promise to reduce debt, followed by further exploration of who should pay for higher education. Chapter 2 concludes with a more in-depth review of the NC Promise schools included in this study, outlining the NC Promise program's history and policy context. In Chapter 3, I outline the methods of this study. Beginning with an overview of the DID method, I outline the treatment and comparison groups. Then, I outline the data source and collection, followed by details of the data analysis. Chapter 3 concludes by addressing threats to validity, reviewing limitations, acknowledging assumptions, and noting ethical concerns. Chapter 4 is a review of the results of the study and the major finding related to each research question and shows results from the data analysis. In the final chapter, Chapter 5, I review and discuss the major findings from the study, recommend policy changes, and offer recommendations for future research.

The overall purpose of this study was to highlight the NC Promise as a unique program and one state's attempt at lowering the cost of higher education for students. With this study, I also contribute to the research on promise programs and outline the collectivist system in which higher education in the U.S. is financed.

# CHAPTER 2

# LITERATURE REVIEW

Promise programs are a recent tool for addressing higher education costs and increasing access to higher education for underrepresented minority groups. The programs are structured, funded, designed, and made available to eligible students in several ways. However, the recent popularity of these programs in the U.S. has outpaced research on their effectiveness (Odle et al., 2021). The literature on promise programs reveals the need for a consensus definition of a promise program. Miller-Adams (2015) published one of the first definitions, and Perna and Leigh (2018) later authored a typology study to create a definition that became more widely used. These definitions and their components will be explored after a brief history of promise programs.

Published literature linking promise programs to student loan outcomes is even rarer than a common definition. Odle et al. (2021) published the first study on student loan outcomes using the Tennessee Promise. This is a program in which aid to students covered tuition and fees after scholarships and grant aid but before student loans were needed. This promise program applied to students in Tennessee attending community college with the promise to reduce the number of loans taken on by students. While the Odle et al. (2021) study is the basis for this study, other promise programs that preceded the NC Promise are important to investigate.

I begin this chapter with an overview of the history of promise programs and a summary of three prominent promise programs reviewed in the literature. Then, reviewing definitions of promise programs, studies related to outcomes other than student loans, focusing on student loan debt, and data on who should pay for college following. The concluding sections of the chapter are a review of the UNC System, a brief overview of the initial three schools included in the NC Promise, and an overview of the NC Promise program. The chapter ends with an overview of the existing policy context within the UNC System, including the non-resident cap policy and fixed-tuition payment program.

**History of Promise Programs**

The promise to educate citizens can be found in many historical moments since the founding of the U.S. The first instance can be found in 1787 with the Northwest Ordinance that stated, “schools and the means of education shall forever be encouraged because knowledge is necessary to good government and the happiness of mankind” (Millett et al., 2020, p. 17). Another critical moment in the educational promise was the establishment of land grant colleges and universities with the Morrill Acts of 1862 and 1890. These acts provided land to states and territories to establish higher education institutions to benefit agriculture and mechanical industries. In 1944, the promise to educate soldiers returning home from World War II was made with the enactment of the G.I. Bill. This provided funds for service members to attend college, and that promise continues today (Millett et al., 2020). A more modern promise to educate citizens was enshrined in the state constitution of North Carolina in 1971. It asserted that “the General Assembly shall provide that the benefits of The University of North Carolina and other public institutions of higher education, as far as practicable, be extended to the people of the State free of expense” (N.C. Const. art. IX, § 9). These moments in history have laid the foundation for the “free college” movement we see today.

Fast forward to 2009, when President Barack Obama made a call to action to increase access to higher education by saying, “America cannot lead in the 21st century unless we have the best-educated, most competitive workforce in the world" (Obama, 2009, para. 4). Three slightly different promise programs had already been established, prior to this call to action. The Kalamazoo Promise was established in 2005 in Kalamazoo, Michigan, with private individuals funding the program. Soon after, in 2007, a private company launched the El Dorado Promise in El Dorado, Arkansas. In 2008, the Knox Achieves, now Tennessee Promise, began in Knoxville, Tennessee, with a public funding model (Millett et al., 2020). The following section will cover these programs as foundational program models that informed a rapid expansion of promise programs from 2015 to 2018.

### *Kalamazoo Promise*

The Kalamazoo Promise is widely regarded as the first place-based promise program. In November 2005, the program was established, beginning with the high school class of 2006 from Kalamazoo, Michigan. A scholarship was made available to eligible students to incentivize college attendance. High school graduates had to be continuously enrolled in the Kalamazoo Public School (KPS) system since ninth grade to be eligible for the program, but no merit bases or financial need requirements existed to become eligible (Bartik et al., 2021).

The scholarship paid up to 100% of tuition and fees at any public college or university in Michigan. While enrolling in KPS since ninth grade made a student eligible, they only received full tuition and fees if they were enrolled since kindergarten. If the student enrolled later, the total amount available decreased. The smallest amount available was 65% for students enrolled in the KPS system in the ninth grade. In addition to eligibility requirements based on residency, students had scholastic requirements to maintain the scholarship. They have 10 years from graduating high school to use the scholarship and must maintain full-time enrollment status once enrolled. They also must maintain above a 2.0 GPA (Bartik et al., 2021; Ritter & Swanson, 2020).

An anonymous donor privately funded the Kalamazoo Promise. Through 2014, the total amount of scholarships paid out was $61 million. By 2011, spending had consistently reached $10-$11 million annually. As of the fall of 2014, about 1,400 students were using scholarship funds (Swanson et al., 2020). For 2017-2018, the scholarship "would pay $14,460 for a student's tuition and fees at Michigan State University" (Swanson et al., 2020, p. 36). In 2019, the program paid out about $117 million, and about 7,000 students from KPS attended a 4-year university or community college because of the program (Carmody, 2019). This program is considered a first-dollar program, meaning that the funds from this scholarship would be applied before other scholarships, grants, or federal loans. Since the scholarship covers a percentage based on how long the student was enrolled in the KPS system, other financial aid sources could cover any remaining costs (Bartik et al., 2021; Ritter & Swanson, 2020; Swanson et al., 2020).

The success of the Kalamazoo Promise has been widely documented. Bartik et al. (2021) found sizable effects on college choice and attainment of postsecondary colleges. They also found that teachers and staff in the KPS system had been working to encourage a college-going culture (Billings, 2020). It was also discovered that the program had helped increase the number of families relocating to the Kalamazoo area for their students to become eligible, which was one of the intended goals of the promise. This documented success influenced other areas to replicate the program, which the Murphy Oil Company did in El Dorado, Arkansas.

***El Dorado Promise***

The El Dorado Promise is a first-dollar program in which students enrolled in the El Dorado school district since at least ninth grade can receive scholarship funds. Launched in

2007, the El Dorado Promise is modeled after the Kalamazoo Promise in almost every way. The Murphy Oil Company created a $50 million endowment fund to establish the program. However, two significant differences in the societal contexts of the El Dorado Promise were likely made to adjust to the community's needs. First, the El Dorado school district is in a rural community in southern Arkansas with a declining population. There were about 1,500 students in the school district, and enrollment has steadily declined since 1990 (Ritter & Swanson, 2020).

Second, the scholarship funds can be used at "any accredited two- or four-year college or university, private or public, in the country, for regular undergraduate coursework" (Ritter & Swanson, 2020, pp. 96-97). However, the funds are capped at the highest resident tuition and fees at an Arkansas public university; in the 2017-2018 academic year, that was $9,062. With El Dorado located close to three other states, a student's likelihood of attending a college outside of Arkansas may be higher (Ritter & Swanson, 2020).

These two departures from the Kalamazoo structure demonstrate the ability of policymakers to create a program unique to the local area's needs. A challenge, though, is that the El Dorado Promise has received less research focus. As Ritter and Swanson (2020) noted, estimating the El Dorado Promise's overall impact is challenging because such unique characteristics require long-term research investment.

***Tennessee Promise***

What began in 2009 as a local Knox Achieves program grew into the first statewide promise program called Tennessee Promise in 2014-2015 (Odle et al., 2021). This program is "a last-dollar program, covering 2 years (or five semesters) of tuition and mandatory fees, available to recent high school graduates who pursue an associate degree or technical certificate at…13 public community colleges or 27 colleges of applied technology" (Odle et al., 2021, p. 6). In addition to the scholarship funds, the program relies on three privately funded partner organizations that provide mentorship resources to students in the program at the local level (House & Dell, 2020).

In a departure from the Kalamazoo Promise and El Dorado Promise, the eligibility requirements consist of completing a short application, completing the Free Application for Federal Student Aid (FAFSA), attending mentoring meetings, and completing eight hours of community service during their senior year of high school (House & Dell, 2020). To continue to receive the scholarship funds, the students must continue with the mentorship meetings, log community service hours, maintain full-time enrollment, and have above a 2.0 GPA (House & Dell, 2020; Odle et al., 2021).

The program has been successful since its inception and subsequent growth from a local county-level program to a statewide one. Success related to a reduction in student loans (Odle et al., 2021) is discussed later in this chapter. However, there have been some other notable findings. In the first year (2014-2015), the college-going rate in Tennessee increased by 5.9%, from 58.1% to 64%. That same year, overall community college enrollment increased by 27.7%, from 17,379 to 22,190 first-time freshmen (Odle et al., 2021; Tennessee Higher Education Commission, 2019). House and Dell (2022) found that "the Tennessee Promise had a significant and positive effect on total enrollment and enrollment of certain subgroups" (p. 165). These positive effects are noteworthy, and this program can serve as a model for other states that want to increase community college enrollment and college-going students and reduce student loans.

**Definitions of Promise Programs**

Since 2015, researchers have attempted to define college promise programs. With differing structures such as funding sources, eligibility requirements, residency requirements, and schools the programs support, a working definition will evolve as the programs develop. However, the programs' common aspects set them apart from traditional financial aid programs, like the Federal Pell Grant Program (Perna & Smith, 2020), designed for undergraduate students with the most financial need (Federal Student Aid, 2023b).

Perna and Leigh (2018) used cluster analysis and reported 289 promise programs in the U.S. Their research and typology were the precursors to a database that tracks promise programs. As of the latest update in April 2020, the database reported 425 programs across the U. S. (Perna & Leigh, 2020). The rapid pace at which these programs were established contributes to the need for a consistent definition of promise programs. With such a wide array of programs with different aspects, locations, and funding sources, it can be challenging to arrive at a working definition.

In 2020, Delaney and Hemenway recounted the wide range of programs tracked by various organizations and studies. For example, the Upjohn Institute counted 192 programs, and the College Promise Campaign counted 368. This disparity in definitions and organizations tracking programs leads to disagreements in the literature about which programs should be counted as promise programs (Delaney & Hemenway, 2020; Perna & Leah, 2018).

Miller-Adams (2015) settled on standard features as their definition and published one of the first definitions of promise programs. These features are that promise programs (a) transform their communities by making long-term investments in education, (b) are place-based scholarships, (c) have a goal to expand access to higher education, (d) increase the college-going culture in the K-12 system and the community, and (e) support local economic development. These aspects mirror the goals of the Kalamazoo Promise because the main subject of Miller-Adams' (2015) book is the Kalamazoo Promise. This definition also introduced to the literature a definition of place-based scholarships. The place-based scholarship is a central tenet in a college promise program. In other words, the scholarship is for a specific group based on location.

Kanter et al. (2016) wrote that promise "programs have multiple benefits: boosting students' and families' confidence that they can still be part of the American dream; demonstrating that education beyond high school is for all and not just the rich" (p. 6). There can also be an economic element when articulating the goals or defining a program. After 16 years of providing scholarships, the Kalamazoo Promise has increased the number of families staying in the Kalamazoo area by more than 250 each year; graduates of KPS are more likely to own a home later in life with both Black and White graduates with higher home ownership, and average earnings by graduates are boosted by about 6% a decade after high school graduation (Bolter & McMullen, 2022).

Later research by Perna and Leigh (2018) indicated that place-based scholarships had become one category of promise programs because the place a scholarship is located has expanded. An article by Mishory (2018) specifically outlined statewide college promise programs available for eligible residents of a particular state and funded by the state. However, eligibility requirements, the type of institution, and how the funds can be used vary widely. Their definition included two goals that a promise program needed to have: (a) address the rising cost of college and student loan burdens and (b) capture the positive effect a clear message of affordability can have on students who might not otherwise attend college (Mishory, 2018).

Another tenant of promise programs is that financial assistance needs to be made available to students based on something other than merit, for example, high school completion, residency, or college enrollment (Mishory, 2018; Perna & Smith, 2020). This distinguishes promise programs from merit-based scholarship programs, like the Georgia HOPE Scholarship.

The Georgia HOPE scholarship is funded through lottery revenue and awarded to residents of Georgia who attended a Georgia public university and maintain a specific GPA and course progression requirements during college. Additionally, to be eligible for the scholarship, students must meet academic and residency requirements in high school (Georgia Student Finance Commission, 2023; Perna & Smith, 2020).

To be eligible for the Georgia HOPE scholarship, students must graduate from an approved high school with a 3.0 GPA and meet residency requirements. Once the student enrolls in an eligible college or university in Georgia, the student must maintain a 3.0 GPA and satisfactory academic progress to continue to receive the scholarship. Students must adhere to several other specific residency, eligibility, and verification requirements (Georgia Student Finance Commission, 2023).

However, many scholars believe students should also be awarded funds from a promise program regardless of family income or academic achievement (Delaney & Hemenway, 2020). The Georgia HOPE Scholarship is counter to this belief. In an attempt to further define promise programs, Perna and Leigh (2018) conducted a cluster analysis, including programs that (a) had a primary goal of increasing higher education attainment, (b) promised a financial award to eligible students, (c) had a place-based requirement, (d) were designed for promising college attainment for the traditional college-age population, and (e) had available essential characteristics information. This cluster analysis further defined promise programs.

The NC Promise program meets several parts of these definitions. Since the program is made available to all undergraduate students at the participating schools, the program meets access and equity qualifications (Delaney & Hemenway, 2020; Mishory, 2018; Perna & Leigh, 2018). Because the program is limited to four North Carolina schools, NC Promise is a place-based program (Delaney & Hemenway, 2020; Miller-Adams, 2015; Mishory, 2018; Perna & Leigh, 2018). Finally, with a stated goal to influence the North Carolina economy (UNC System, 2022b), the program also satisfies economic impact qualifications (Miller-Adams, 2015; Mishory, 2018; Perna & Leigh, 2018). What sets the NC Promise apart from these is that the funding model is best defined as an education subsidy rather than financial aid because the funding is allocated to the institution as a collective lump sum rather than an individual student based on eligibility requirements.

However, an agreed-upon definition is unlikely. As Monaghan and Attewell (2023) put it, “the meaning of ‘Promise program’ has mutated rapidly, bedeviling would be definers” (p. 3). They noted that the definition from Miller-Adams (2015), mentioned above, focused on the place-based scholarship being at the local level, while the Tennessee Promise, a statewide program, was established in 2015. They also pointed out that Perna and Leah (2018) expanded their definition to include state residency but had a conflict with programs that have merit requirements, like the Georgia HOPE Scholarship (Monaghan & Attewell, 2023; Page et al., 2019). Overall, Monaghan and Attewell (2023) summarized the issue by saying that “policymaking, not academic definition, is in the driver’s seat” (p. 3).

Moving forward, Monaghan and Attewell (2023) have put forth the most up-to-date and broad framework for defining promise programs. They found that almost all promise programs coalesce around three or four axes: (a) generosity, (b) eligibility, (c) applicability, and—sometimes—(d) funding/operation. In their framework, generosity refers to what and how much is awarded, eligibility refers to who is eligible, applicability refers to where one can use the award, and funding/operation refers to who funds and operates the program.

The NC Promise is in an interesting situation for aligning the program with academic definitions. NC Promise fits with some parts of definitions but not all, even though it uses the word promise in the name of the program. This is evident in that NC Promise is not included in any lists or databases of promise programs (College Promise, 2021; Perna & Leigh, 2020). Monaghan and Attewell (2023) also stated that “definitions fail because analysts lack authority to impose them on policymakers” (p. 3). Although there are similarities in the design and construction of promise programs, a consensus around one definition emerging from academic research is out of reach for the time being.

## Studies on Promise Programs

Since the definitions of promise programs vary widely, so does the research on promise programs. This is because studies on promise programs focus on the effectiveness and outcomes of the program design or structure. Monaghan and Attewell (2023) articulated axes for promise program definitions that research can be grouped based on research focus. Their research focus groups are (a) community development, (b) K-12 outcomes, and (c) postsecondary outcomes. This section highlights some studies on promise programs and their findings based on Monaghan and Attewell’s (2023) research focus groups.

### *Community Development*

The community development research focus includes goals and outcomes intended to affect the local community where the Promise program is established. The clearest example is the Kalamazoo Promise, where scholarship funds are tied to the length of attendance at KPS and are only available for KPS students (Bartik et al., 2021; Carmody, 2019; Miller-Adams, 2015). Bolter and McMullen (2022) found that the Kalamazoo Promise increased earnings for graduates, decreased the amount of debt of graduates, increased the number of graduates living in Kalamazoo, Michigan, from less than 16% to 49%, and increased KPS enrollment by 24%. These findings are after the Kalamazoo Promise existed for 16 years.

In contrast, Ritter and Swanson (2020) found that the El Dorado Promise slightly increased local school district enrollment. However, they noted there are challenges to the research due to available data. They surmised that "challenging as it is to estimate the overall impacts of the El Dorado Promise, it is even more challenging to summarize the evidence of the effectiveness of promise programs broadly, as each program has distinct characteristics" (pp. 114-115). Policymakers have the challenge of designing a promise program that meets their community needs, and because policymakers have policy options, those options can pose challenges to researchers.

### *K-12 and College Attainment*

Outcomes focusing on students' K-12 experience and increasing college attainment are an area with some variability in promise program design. Again, the Kalamazoo Promise was designed with this in mind. As mentioned above, the longer a student is enrolled at KPS, the more scholarship funding they will receive. Additionally, the scholarship funds can only be used to attend a public Michigan college or university (Bartik et al., 2021; Carmody, 2019; Miller-Adams, 2015). Bolton and Mullen (2022) found that the Kalamazoo Promise increases the likelihood of college enrollment. Specifically, they found "a 14% increase in the likelihood that students enroll in any college within six months of graduation and a 23% increase in the likelihood that students enroll in a four-year college within six months of graduation" (Bolter & McMullen, 2022, p. 3).

The Kalamazoo Promise also improved access to college for Black Indigenous and People of Color (BIPOC) students (Martínez et al., 2023). This is accomplished by "mitigating the influences of socioeconomic advantage and precollege performance from the decision to enroll in college immediately right after high school graduation" (Martínez et al., 2023, p. 8). In contrast, not all programs have similar results. House and Dell (2020) looked at the Tennessee Promise program's outcomes related to enrollment. They found that while there was a positive impact on total enrollment and the enrollment of some subgroups, "the Tennessee Promise has not resulted in a positive impact for all racial and ethnic groups" (p. 165). Although matriculation from high school to college is an intended goal of Promise programs, findings suggest that Promise programs have influenced K-12 academic achievement.

Ritter and Swanson (2020) found that "the El Dorado Promise did lead to improvements in students'K-12 academic achievement" (p.110). They also found that academic improvements were seen in math for elementary and middle school students. This supports the concept that promise programs may be linked to academic improvements across the school district for which they are established.

***Postsecondary Outcomes***

Postsecondary outcomes are one of the few common outcome types across promise programs. The programs can be created in such a way as to influence where students enroll. For example, the Kalamazoo Promise scholarship can be used at any public university or community college in Michigan, while the El Dorado Promise can be used at any accredited higher education institution in the U.S. (Bartik et al., 2021; Ritter & Swanson, 2020; Swanson et al., 2020). In contrast, the Tennessee Promise is only available to community college students (Odle et al., 2021). For these programs, postsecondary outcomes are a goal, but the elements of the program represent different approaches.

A way to classify the approach of a promise program would be to assess the scope on a spectrum with expansive on one end and restrictive on the other. Miller-Adams (2015) described an expansive program as allowing students to use scholarship funds beyond the local area where the program was established. The program can be described as restrictive if scholarship funds are limited to specific institutions. For example, the El Dorado Promise program can be described as expansive because scholarship funds can be used at any accredited higher education institution in the U.S. However, the cap on the scholarship dollars is limited to the amount for attending a public university in Arkansas (Ritter & Swanson, 2020; Swanson et al., 2020).

In this study, the NC Promise program is considered restrictive because the number of schools in the program is limited to the four schools in the UNC System. An important note with postsecondary outcome definitions is that the expansive and restrictive descriptors apply to the number of institutions students can use scholarship funds to attend rather than the number of students for whom scholarship funds are available or the amount of scholarship funds available to students.

Despite these structural differences, Swanson et al. (2020) found that promise programs positively affected postsecondary outcomes. Specifically, “Here we see positive postsecondary effects from a university promise (Kalamazoo) as well as positive effects from merit-based programs (New Haven and Pittsburgh)” (p. 50). They also conclude that “the evidence suggests that promise programs of all designs have the potential to improve postsecondary outcomes” (Swanson et al., 2020, p. 50). This conclusion includes both first-, middle-, and last-dollar programs.

**First-Dollar, Middle-Dollar, and Last-Dollar**

One of the areas of variability in the structure and intervention design of promise programs is when the scholarship funds are applied or provided to a student's account. First-dollar programs are when the scholarship dollars for a promise program are applied before other scholarships and financial aid are awarded (Miller-Adams, 2015; Swanson et al., 2020). This means that if the student attends a college with a low cost of attendance and the scholarship dollars are significant, a student will not need additional scholarships, grants, or loans. In this case, the institution could reallocate those financial aid dollars to other students, and the student does not have to take out loans to meet their financial need.

The El Dorado Promise and Kalamazoo Promise are both first-dollar programs. Meaning, that when a student enrolls at an eligible institution of higher education, the promise program funds are applied first, along with other first-dollar programs like the Federal Pell Grant. If those promise program funds are enough to cover a student's expenses (tuition, fees, room and board, etc.), then the student might not need to take out student loans to cover the gap in the cost of attending. If those promise programs do not meet the students' total financial needs, other funds would be needed to meet that gap in financial aid. These sources could be institutional scholarships or grants, private scholarships, or student loans.

Some promise programs have a cap on the maximum funds available to students. In 2017-2018, the El Dorado Promise cap was $9,062. For the Kalamazoo Promise, it would cover $14,460 that same year which is tuition and fees for an in-state student attending Michigan State University, for example (Swanson et al., 2020). The Kalamazoo Promise funds can only be used for public institutions in Michigan. The amount of scholarship funds available to students, eligibility requirements, and institutions the funds can be used vary widely and can also be classified as expansive or restrictive. First-dollar programs are more costly than other types of programs. One reason is that eligible students often receive more funding under first-dollar programs (Billings et al., 2023).

Last-dollar programs, by contrast, are when the scholarship funds are applied after other scholarships, grants, or loans are awarded. For example, the Tennessee Promise that Odle et al. (2021) studied is a last-dollar program. In this program, promise program funds are awarded to eligible students who enroll in a Tennessee Community College. Once funds from first-dollar programs like the Federal Pell Grant, institution scholarships and grants, or private scholarships are awarded to the student's financial aid package, the Tennessee Promise funds are awarded, but only until the total cost of attendance is covered. This last-dollar type of program usually means the scholarship funds for students are lower. In the case of the Tennessee Promise, the average award was just over $2,000 (Odle et al., 2021).

Last-dollar programs are the least costly since other financial aid is dispersed before promise program aid. This model can lead to less money for low-income students because low-income students may already qualify for more aid (Billings et al., 2023; Odle et al., 2021). It is important to distinguish that the Federal Pell Grant program is considered an entitlement program. This means that if a student is eligible to receive a Pell Grant, regardless of amount, that student will receive the Pell Grant regardless of other scholarships, grants, loans, or other financial aid (Federal Student Aid, 2023b).

Billings et al. (2023) noted that middle-dollar programs are becoming more prominent. These programs have lower costs compared to first-dollar programs and still have a guarantee for eligible students. The guarantee can be in the form of a stipend or minimum scholarship amount, and they are provided to eligible students regardless of other financial aid eligibility (Billings et al., 2023).

The sources of funding also correlate to the design of the promise program. Billings et al. (2023) noted that sources of revenue come from public funds, private funds, or a combination of both. They also noted that about a third of promise programs are publicly funded, one-third are privately funded, and the remaining third are a combination of public and private funds. Last-dollar programs are typically publicly funded because of the lower costs associated with funding the program. First-dollar programs are typically privately funded with a higher up-front cost from a large donor or corporation (Billings et al., 2023).

While some have described the NC Promise as a first-dollar program (Brown, 2022), this description may not be accurate. With first-, middle-, and last-dollar programs, scholarship funds are awarded to the individual student by adding the funds to their institution account. In the case of the NC Promise, the funds are awarded to the institution based on FTE enrollment as a lump sum appropriation from the UNC System and the North Carolina government. This financial setup would more accurately be described as an education subsidy because the state government is subsidizing the cost of tuition for all undergraduate students at NC Promise schools. This setup also provides a lower tuition bill to students rather than charging students the full amount and applying for financial aid. Students at those schools are still entitled to Federal Pell Grant, institution scholarships and grants, or private scholarships if eligible. If a student still has unmet financial need once they are awarded other financial aid, they may have to take out loans to meet that financial gap. The goal of the NC Promise is that the amount of loans a student needs, if any, is lower because of the educational subsidy that lowers the tuition.

## Student Loan Debt

Student loans are an essential part of the higher education financing system. This study focuses on student loans funded by the U.S. Federal Government because they are one of the enormous amounts of debt held by U.S. citizens, second only to home mortgages, and there is also significant publicly available data. As previously mentioned, the ballooning student loan debt portfolio is due to a combination of factors: (a) decreased state funding for higher education, (b) increased costs of higher education, (c) increased enrollment in higher education, and (d) unpaid interest accrual (Beamer & Steinbaum, 2023; Kelchen, 2018; Taylor, 2022).

To illustrate this increase, it can be helpful to look at historical data. The U.S. Department of Education has made student loan portfolio data available since 2007. According to these data, the total student loan portfolio has increased from $516 billion in 2007 to a height of $1.6445 trillion in the second quarter of 2023; it has more than tripled over the past 16 years. The number of borrowers has also steadily increased over that same time. In 2007, there were 28.3 million borrowers with federal student loan debt. In the first quarter of 2023, that number had risen to an all-time high of 43.8 million during the first quarter of 2023. There is a recent downward trend. In the second half of 2023, July through December, the total student loan debt has decreased by $42.3 million and 400,000 borrowers (Federal Student Aid, 2023a). This debt increase has also influenced policymakers and the public's thoughts on student loan debt.

### *A Promise to Reduce Student Loan Debt*

Since the 2005 creation of the Kalamazoo Promise, policymakers nationwide have sought and implemented programs to help address the student loan issue. However, these programs became popular with policymakers at a pace beyond evaluating their effectiveness and leaving some outcomes—like student loan borrowing—lacking in research (Odle et al., 2021; Page et al., 2019).

Odle et al. (2021) studied the Tennessee Promise program and explored whether that program reduced student loans. This program was the first statewide promise program in the U.S., beginning with the 2015-2016 academic year, and a last-dollar program. The program covers tuition and fees to attend community college or technical college in Tennessee as an in-state student for two years (Odle et al., 2021). According to their study, the average award for the first three cohorts was $2,021. The authors note that students could still borrow to cover the total cost of attendance, but these amounts would be reduced because of the structure of the Tennessee Promise program (Odle et al., 2021). Using the difference-in-difference (DID) method, the authors compared borrowing behavior across colleges and inter-temporal variation. They also assessed this borrowing behavior within Tennessee and outside the state. Overall, they found that the Tennessee Promise program effectively replaced student loan dollars and reduced the amount of loans a student needed to borrow. Additionally, they found that the program decreased the number of students needing to borrow and the average amount of borrowed loans (Odle et al., 2021).

Odle et al. (2021) noted that Tennessee community colleges' average tuition and mandatory fees ($4,335) are below the Federal Pell Grant. Which for the 2023-24 award year, the Federal Pell Grant has a maximum of $7,395 (Federal Student Aid, 2023b). This means that Pell Grant funds could cover these costs, and any remaining funds can be used for other expenses like books and technology needs for the student. It also means that a student who receives the Pell Grant might not be awarded any Tennessee Promise funds because the Pell Grant meets their financial need. They also noted that Tennessee has merit- and need-based scholarships, and with these sources contributing to a student's financial aid package, the Tennessee Promise's support as part of the student's overall financial aid package is low (Odle et al., 2021). However, with the Tennessee Promise program considered a last-dollar program, the benefit amount to middle- or low-income students is small.

The authors found that this can be a criticism of last-dollar programs and their impact on middle- or low-income students. These students likely already have access to other financial aid sources and do not necessarily need a program like the Tennessee Promise as a significant source of financial aid (Odle et al., 2021). The difficulty in connecting this study to the NC Promise program is that the Tennessee Promise provides dollars to students to close the financial aid gap, and the cost of attendance is not reduced. The NC Promise, however, reduces the cost of attendance by setting tuition and providing dollars directly to the institution through a subsidy buyout. The dollars are introduced before a first-, middle-or last-dollar financial aid program (NC Promise Tuition Plan, 2022; UNC System, 2020, 2021, 2022b, 2022f). The NC Promise applies to bachelor's degree-granting institutions, not community colleges, as in the Tennessee Promise. This is noteworthy because the Tennessee Promise covers up to 5 semesters of tuition and mandatory fees for a two-year associate degree, whereas the NC Promise applies to all semesters a student pursues a bachelor's degree (Odle et al., 2021; UNC System, 2022b).

Notably, Billings et al. (2023) stated, "The order in which promise scholarship funds are applied to a student's educational expenses makes a difference in the amount of funding they receive, especially if they are eligible for state and federal need-based aid" (p. 11). This finding is at the core of the design of the NC Promise because promise program funds are applied to every student in the same way by lowering tuition. The question is, does this design result in lower student loan amounts?

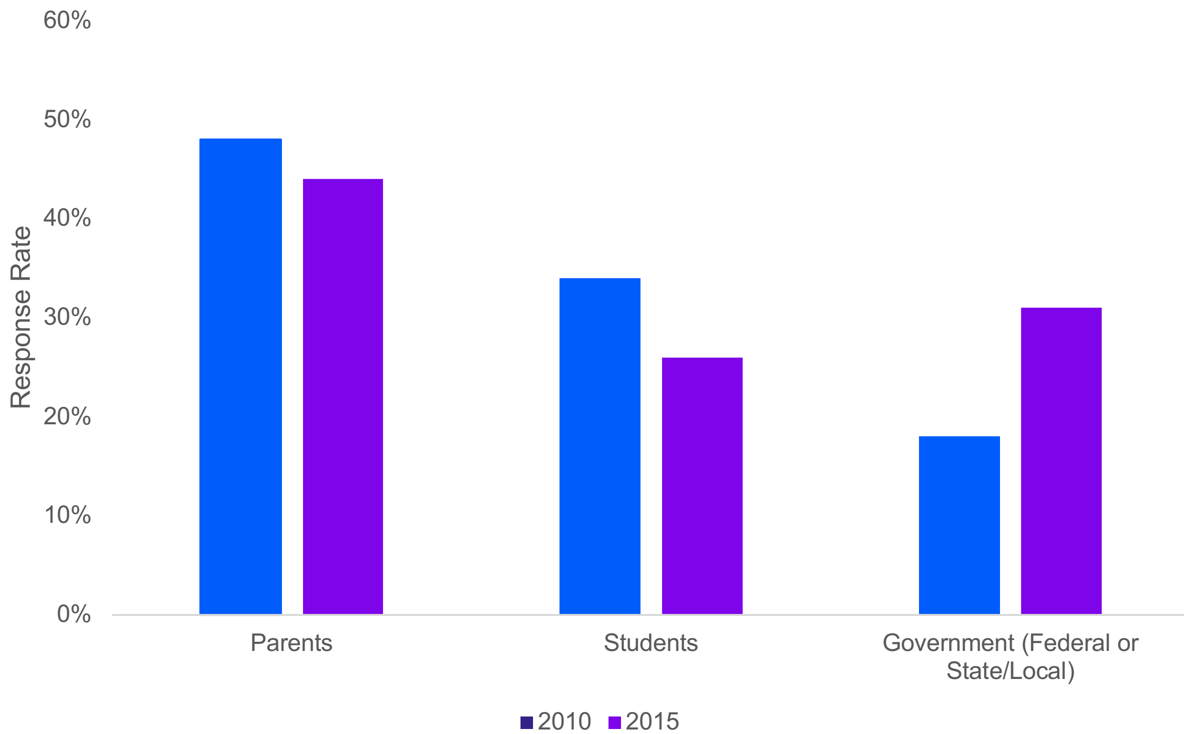
### ***Who Should Pay?***

The proliferation of promise programs in the last decade has been well documented (College Promise, 2021; Millet et al., 2020; Perna & Leigh, 2018). It is also well-documented that a shift in who is most responsible for paying for higher education has shifted (Laderman & Kunkle, 2022). However, data on the public perception of promise programs have yet to be widely reported. Quadlin and Powell (2022) used data from the Constructing the Family and Higher Education surveys from 2010 and 2015. Additional surveys were conducted in the fall of 2019 to provide other data. These authors found a clear shift in public perception of who should pay for higher education away from the individual student and parents toward the government (state or federal).

As Figure 2 shows, in 2010, the percentage of respondents who reported that parents should pay for higher education represented 48%. Five years later, in 2015, the rate decreased to 44%. There was a similar shift in respondents who said individual students should pay for higher education, with 34% of respondents in 2010 to 26% in 2015. The most dramatic shift was in the percentage of respondents who said the government (Federal, State, or Local) should pay for college. In 2010, this group represented just 18% of respondents. That number jumped to 31% 5 years later, in 2015 (Quadlin & Powell, 2022).

**Figure 2**

*Who Should Have the Main Responsibility for the Cost of Education Beyond High School? A Comparison of 2010 and 2015 Survey Responses*

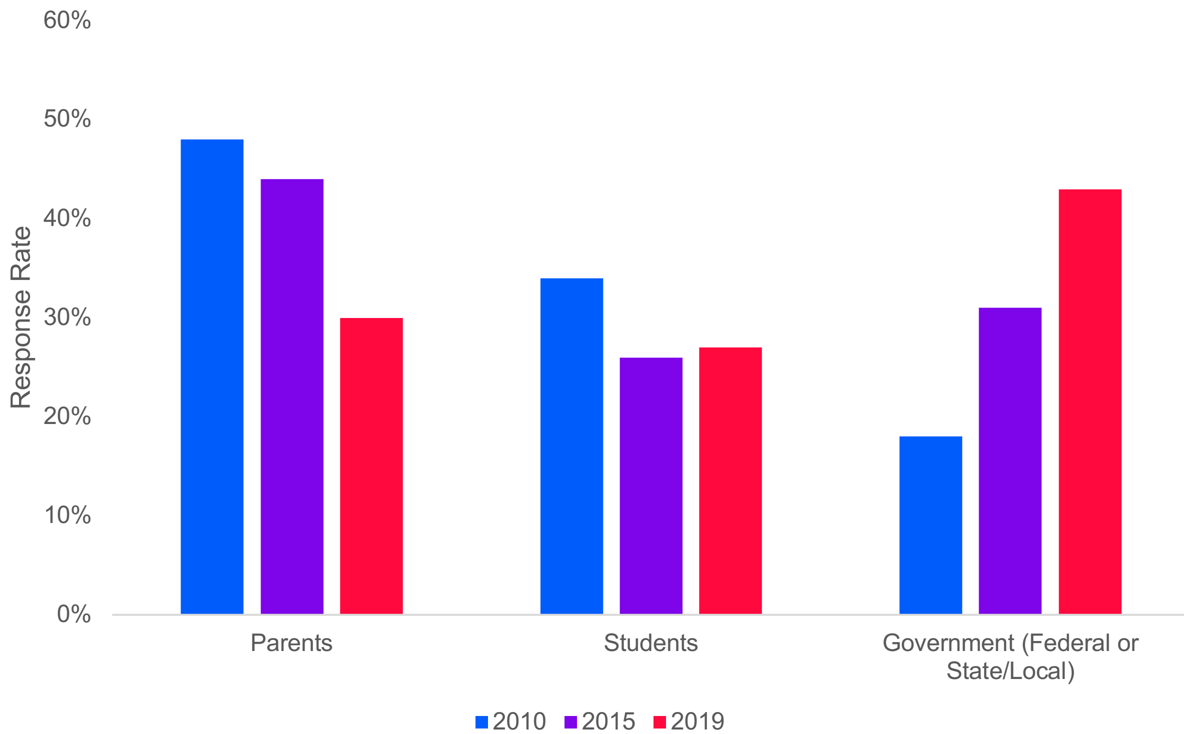



*Note.* Percentages may not add up to 100 due to rounding. Adapted from Quadlin and Powell (2022).

The authors noted that while the decreases observed in the parents' and students' response groups alone do not seem significant, they represent a dramatic shift. They also noted a "significant shift in public opinion in a relatively short time—one that rivals, or is even greater than, changes in public opinion regarding same-sex marriage and the legalization of marijuana in terms of both timeframe and magnitude" (Quadlin & Powell, 2022, p. 37). This dramatic shift in public perceptions of who should be primarily responsible for paying for higher education precedes the inception of the NC Promise program. However, the 2019 data shown in Figure 3 indicate that shifting perceptions continued as the NC Promise program was implemented, where entities—students, parents, and government—could be responsible for paying for college. Quadlin and Powell (2022) looked at this in their study; the findings are shown in Figure 4.

**Figure 3**

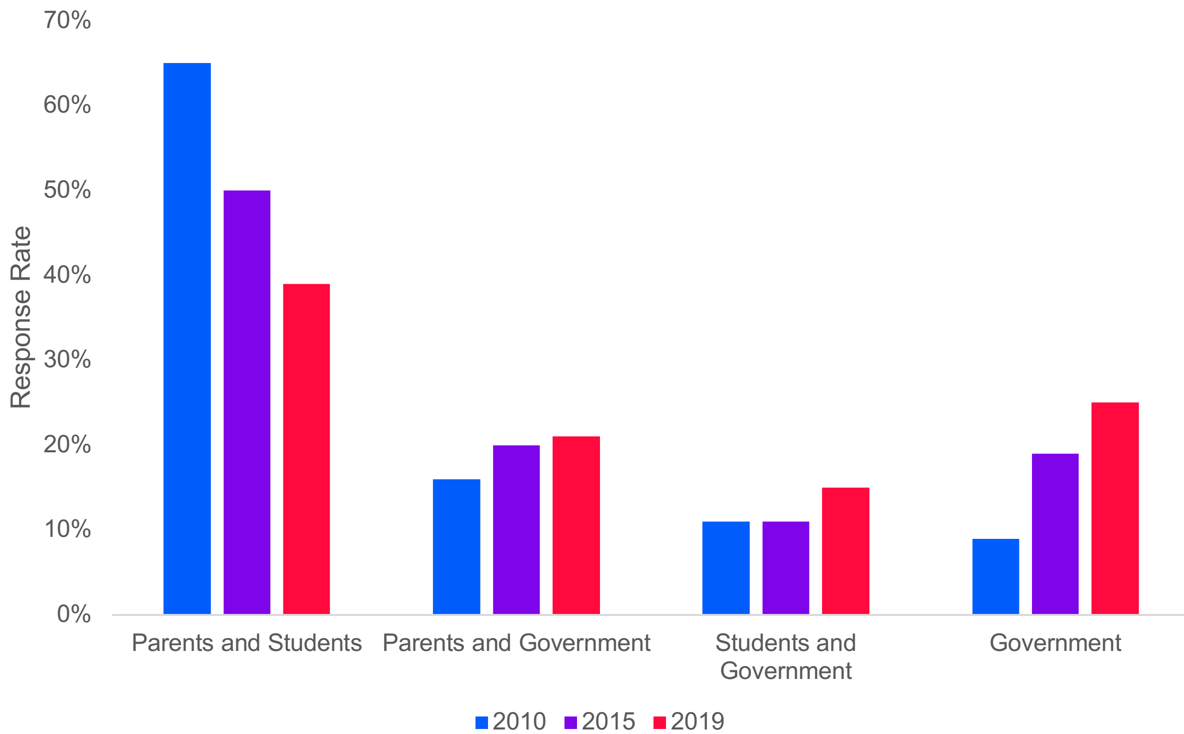
*Who Should Have the Main Responsibility for the Cost of Education Beyond High School? A Comparison of 2010, 2015, and 2019 Survey Responses*




*Note.* Percentages may not add up to 100 due to rounding. Adapted from Quadlin and Powell (2022).

**Figure 4**

*Beliefs About Responsibility for Funding Higher Education: Comparisons of Combinations in 2010, 2015, and 2019 Survey Responses*




*Note.* Percentages may not add up to 100 due to rounding. Adapted from Quadlin and Powell (2022).

In 2019, similar data showed a continued shift in who should be responsible for paying for college. Of the respondents who said parents should have the primary responsibility, 30%, while 27% said students should. Similarly, the percentage of respondents who said the government primarily pay for college was 43% (Quadlin & Powell, 2022). This increase in the perception of who should pay for college parallels the rise in promise programs across the U.S. Funding sources for promise programs originate from different entities, like private foundations or state taxpayer dollars. Still, the concept of the promise program also promotes the shift away from the individual responsibility to pay for college to the government.

Another concept of a collectivist framework is that one single entity is not entirely responsible for the greater good. In the collective system of financing higher education, multiple participants, when asked to choose two of three entities that contribute to paying for college, the pair that includes parents and students fell from 65% of respondents in 2010 to 39% in 2019. At the same time, the percentage of respondents who think both parents and the government should pay for college increased from 16% in 2010 to 21% in 2019. The most significant increase was when respondents said the government should be the only entity that pays for college. In 2010, the percentage of respondents was 9% and increased to 25% in 2019. The authors concluded that Americans are even more likely to believe that the government should fund college as the primary stakeholder or with parents and students. They added that many Americans prefer an individualist solution; however, that group has become smaller over time (Quadlin & Powell, 2022).

While the data in this study are national in scope, as Quadlin and Powell (2022) wrote, “One principle that has been demonstrated repeatedly in social science research is that public opinion both shapes and is shaped by public policy” (p. 5). The findings in this study can be used as a signpost for what became policy in North Carolina. However, since this is the only study to my knowledge that published findings on public perceptions, it may only be one signpost in the lead-up to the NC Promise.

Another signpost that reinforces the shift in public perceptions is what the State Higher Education Executive Officers Association released in their fiscal year 2022 report on state higher education finances. They found, "for the first time since the Great Recession, inflation-adjusted education appropriations per FTE were greater than pre-recession funding levels in 2008” (Kunkle & Laderman, 2023, p. 8). However, North Carolina’s fiscal year 2022 per-FTE appropriations are 13.2% below 2001 levels, according to the State Higher Education Executive Officers Association. Surprisingly, per-FTE state appropriations in North Carolina are 12% above 1980 levels, while most states are below their 1980 funding levels (Kunkle & Laderman, 2023). North Carolina may be considered an outliner in state appropriations because of the state's organizational structure of higher education.

The NC Promise represents a shift back to the state as the primary funding source. However, what the federal student loan system represents in logistical terms allows institutions to shift the responsibility to the student. As Beamer and Steinbaum (2023) opined:

> This situation is the fruit of a tacit agreement among state legislators, college administrators, and the federal government dating back to the 1970s: defund the public colleges and universities and shift them to a tuition-based revenue model, with the federal government backstopping the system with student debt so that more students can continue to obtain more expensive education. (para. 8)

By providing constant funding in the form of federal student loan dollars, states have been able to decrease direct funding to institutions. The NC Promise fundamentally shifts some of the flow of funding back to the state.

There are mixed signs that the trend on the cost of higher education is shifting. As mentioned in Chapter 1, a recent State Higher Education Executive Officers Association report stated that the student share of public institution revenue is 42.2%, up from 20.9% in 1980. The peak was 47.5% in 2013. However, the report notes that the recent declines in student share are due to a decrease in FTE enrollment and net tuition (Kunkle & Laderman, 2023). This decrease in net tuition represents increased state appropriations and, therefore, a shift back to the state, even if the shift is slight. Another sign from the College Board Trend Report found that published tuition and fees, published tuition and fees and room and board, and published cost of attendance have all declined since 2020. Additionally, net tuition and fees, net tuition and fees and room and board, and net cost of attendance has been in decline since 2016 (Ma & Pender, 2022). This is good news for students and families who will be entering college in the coming years.

**UNC System**

Higher education in North Carolina has a storied history. With UNC-Chapel Hill claiming to be the first public university in the U.S., the university has been considered the crown jewel of North Carolina (Solow, 1999). In the post-World War II era, the U.S. saw increased higher education enrollment. As a result, North Carolina decided to invest in its higher education institutions partly because of this increase in college-going citizens. By the 1970s, the state legislature began consolidating public colleges and universities into one organization. This organization would be called The University of North Carolina and would eventually comprise 16 campuses and one high school across the state (Solow, 1999; UNC System, 2022d). Each campus operates individually, with its chief executive officer holding the title of Chancellor and its own Board of Trustees (UNC System, 2022c, 2022d).

The mission of the UNC System has four stated objectives. They are to (a) foster the development of a well-planned and coordinated system of higher education, (b) improve the quality of education, (c) extend educational benefits beyond campus, and (d) encourage efficient and effective use of the state's resources (UNC System, 2022d). With a system that includes 16 campuses with eight different Carnegie Classifications, the needs and scope of each campus vary widely.

The Board of Governors oversees the system, and the General Assembly appoints its members. While each campus Board of Trustees is authorized to make decisions for their campus, some decisions must also gain approval from the UNC Board of Governors. Most notably, tuition and fee changes, and Chancellor appointments require the Board of Governors' approval. The Board of Governors allocates campus funding, sets performance metrics, and dictates system-wide policies such as the cap on non-resident undergraduates and the fixed-tuition program (UNC System, 2022c). In 2022, there were 390,900 FTE students enrolled at 2-year and 4-year public institutions in North Carolina, making North Carolina the fifth largest FTE public institution enrollment. The UNC System included 218,686 FTE students, 55.9% of total public institution FTE enrollment in 2022 (Kunkle & Laderman, 2023).

The UNC System's funding model includes campus tuition and fees, external sources, research funding, base funding distributed by the Board of Governors, and line-item budget allocations for specific projects. Tuition, fee-based funding, and funding from external revenue sources like research grants are generated at the campus level and are allocated for that campus. Base funding is a lump sum of the state legislature's funds to the Board of Governors. One of the roles of the Board of Governors is to decide how to distribute funds to each campus. The state legislature can also make line-item budget allocations to a specific campus for any reason. This type of funding is typically used for capital projects, like replacing the steam plant at Western Carolina University (Kays, 2021; UNC System, 2022c).

This consolidated higher education system creates a unique relationship between the UNC System and the state government. This relationship sets the policy context for how the NC Promise program was drafted and implemented.

**North Carolina Promise**

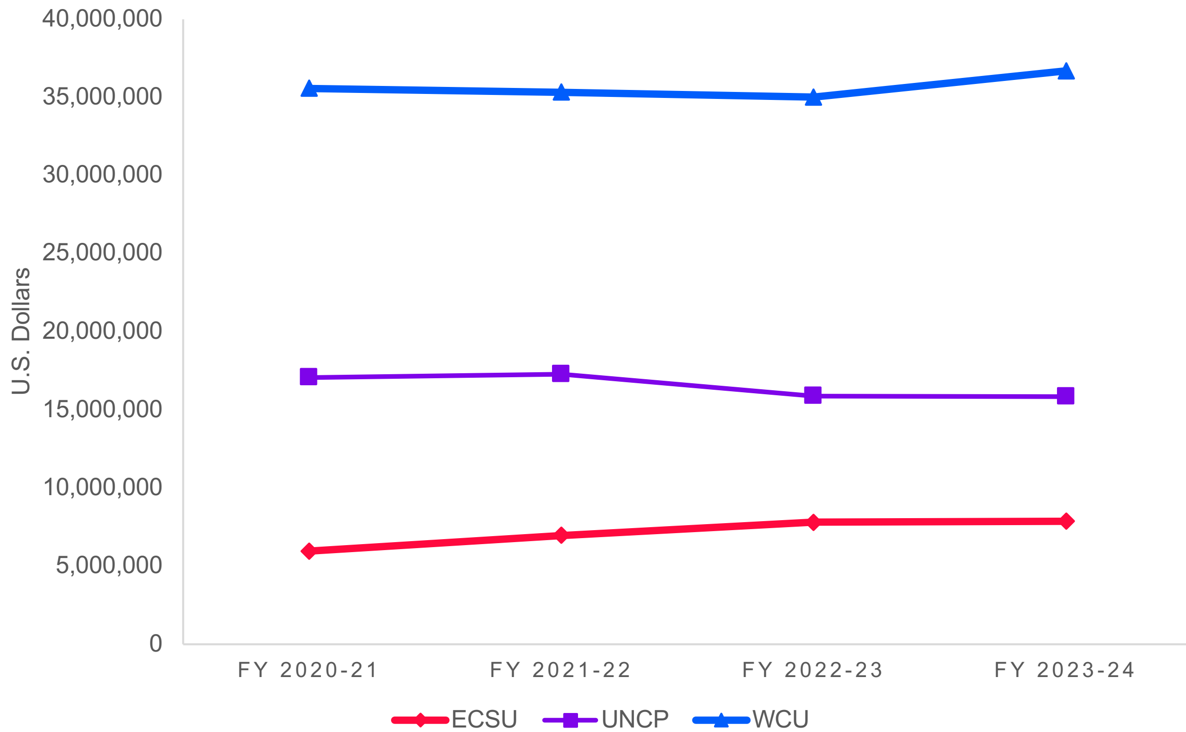
Within the scope of promise programs, the source of funding, how funding is awarded, and to whom funding is allocated can vary widely. Until 2016, state-funded programs were generally funded by a state lottery revenue and used as scholarship money awarded for continued performance in college, like the HOPE Scholarship in Georgia (Georgia Student Finance Commission, 2023). The Republican-controlled legislature of North Carolina proposed NC Promise in 2016. This proposed promise program would subsidize tuition at some UNC System schools. It was criticized and caused two HBCUs to ask to be removed from the program: Fayetteville State University (FSU) and Winston-Salem State University (Anderson, 2016; Brown, 2022; Murphy, 2021).

The program was signed into law in 2016, and the implementation of the NC Promise Program began in the fall 2018 semester. This allowed time for the campuses to prepare for the implementation and marketing of the program. In the first year of the program's implementation, state legislators appropriated $51 million for the three campuses (Brown, 2022). What remained to be discovered was the increase in funding needed because enrollment at each campus was expected to grow.

The NC Promise program's funding model requires a significant state investment to replace the lost revenue from drastically lower tuition. When developing the program, the state legislature had to account for the loss of tuition revenue for each campus. Therefore, the General Assembly began requiring a report from the UNC System by October 1 of each year that outlines enrollment, base tuition, and how much state appropriations each campus should receive in the form of a “buy-down” (NC Promise Tuition Plan, 2022). The reports available begin with the fiscal year 2020-21 and conclude with the fiscal year 2023-24. Figure 5 shows the total buydown amount for Elizabeth City State University (ECSU), the University of North Carolina Pembroke (UNCP), and Western Carolina University (WCU) during these 4 years.

**Figure 5**

*Total Buy-Down for NC Promise Schools 2020-2024*

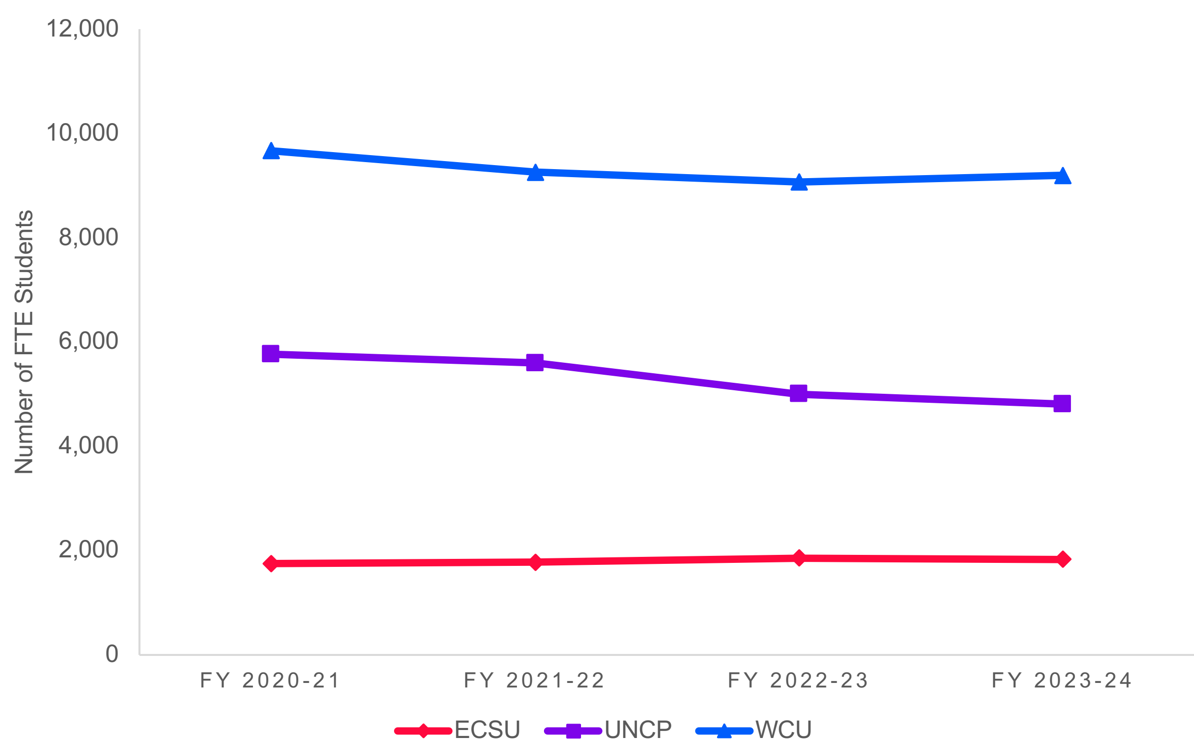



*Note.* Adapted from the NC Promise Tuition Plan annual reports 2020-2024 (UNC System, 2020; 2021; 2022f, 2023). ECSU = Elizabeth City State University; NC= North Carolina; UNC= University of North Carolina; UNCP = University of North Carolina Pembroke; WCU = Western Carolina University.

In the fiscal year (FY) 2020-21, the NC Promise schools received $58,623,781. Three years later, that number had increased by about $1.7 million, with a total buy down of $60,418,142. WCU received the most significant portion at $35,571,292 in 2020-21 and slightly more in 2023-2024 at $36,699,184. UNCP was the only school to have a decline in the buy-down amount over 4 years, with a reduction of $1,240,795 in 2023-2024. ECSU saw the largest increase in buy-down amount with a $1,907,264 increase from 2020-2024 (UNC System, 2020; 2021; 2022f, 2023). The cause of this decrease for UNCP and increases for ECSU and WCU can be partly attributed to a change in enrollment. Using fall semester FTE numbers only, Figure 6 shows a slight downward trend in enrollment for both UNCP and WCU and a slight increasing trend for ECSU.

**Figure 6**

*Fall FTE Enrollment for NC Promise Schools 2020-2024*

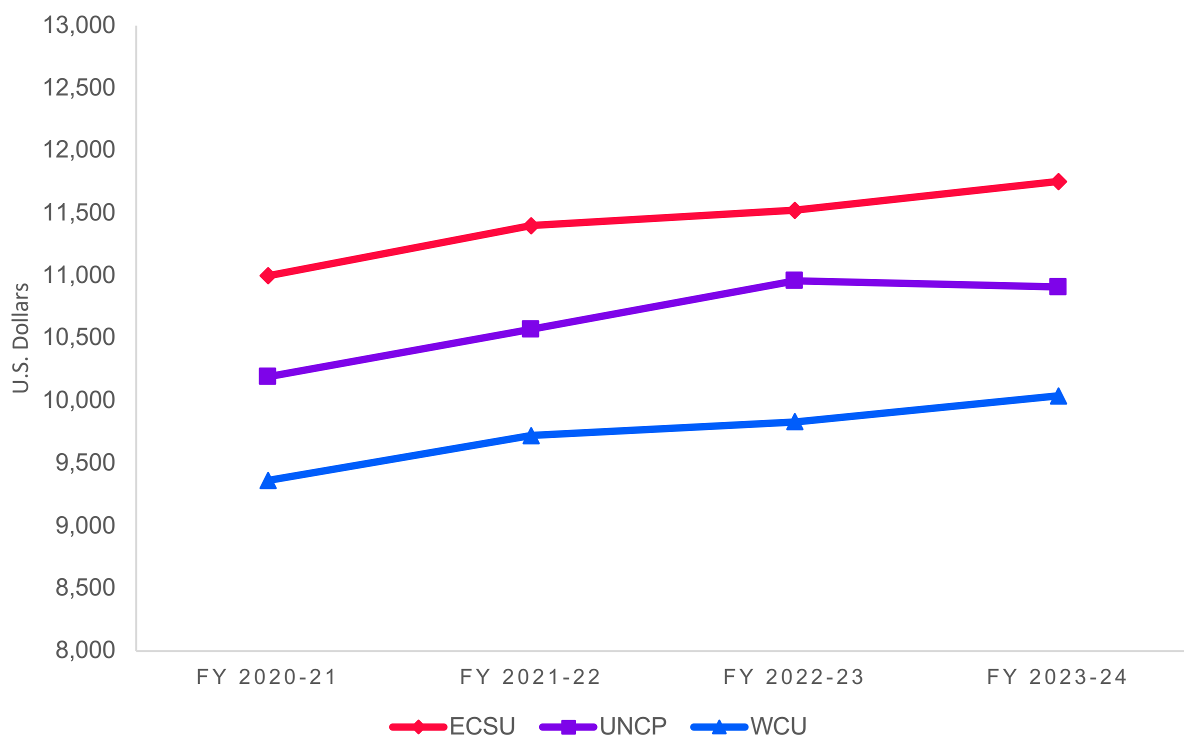



*Note.* Adapted from the NC Promise Tuition Plan annual reports 2020-2024 (UNC System, 2020; 2021; 2022f, 2023). ECSU = Elizabeth City State University; FTE= Full-Time Equivalent; NC= North Carolina; UNCP = University of North Carolina Pembroke; WCU = Western Carolina University.

UNCP had a decrease in fall FTE enrollment of 957 students over 4 years, and WCU had a decline of 469 students during the same time. However, ECSU slightly increased by 83 students (UNC System, 2020, 2021, 2022f, 2023). Another contributing factor to the change in total buy-down is the change in the base tuition rate used to calculate the buy-down. For FY 2020-21 through FY 2022-23, the based tuition rate for in-state students remained constant. The in-state rate is $1,856 for ECSU, $2,602 for UNCP, and $2,971 for WCU per FTE. However, as Figure 7 shows, all three schools' out-of-state base tuition rates increased over the 4 years that reports are available.

**Figure 7**

*Out-of-State Base Tuition Rate for 2020-2024*




*Note.* Adapted from the NC Promise Tuition Plan annual reports 2020-2024 (UNC System, 2020; 2021; 2022f, 2023). NC= North Carolina; UNC= University of North Carolina.

A notable trend is that while WCU is the largest of the three NC Promise schools, it has the lowest out-of-state base tuition rate, at $9,346 in 2020-21 and $10,041 in 2023-2204. The rate of increase is also similar to other schools, apart from the rise for UNCP from 2021-22 ($10,573) to 2022-23 ($10,960). Overall, the changes in the out-of-state buydown are that ECSU had a $755 increase, UNCP increased by $717 increase, and WCU saw a $375 increase over the last 4 years.

Another way to look at the reduction in tuition and the increase in state appropriations is to translate these data points in a way that affects students. Table 2 outlines the estimated savings for in-state and out-of-state students over 4 years, beginning with the Fall 2022 semester (ECSU, n.d.; FSU, 2022; UNCP, n.d.-b; WCU, 2022b). It is important to note that the NC Promise program only applies to undergraduate tuition. The program does not set the price of mandatory fees, meal plans, and housing. However, according to the Policy on Student Fees in *The Code and UNC Policy Manual*, the UNC System only allows for an increase in mandatory student fees more significant than 3% per year if approved by the Board of Governors (UNC System, 2022c).

**Table 2**

*Estimated Savings for Students Over 4 Years*

| School | **Savings** | |
|---|---|---|
| | In-State | Out-of-State |
| Elizabeth City State | $7,400 | $44,000 |
| Fayetteville State | $3,700 | $18,800 |
| UNC Pembroke | $10,400 | $40,000 |
| Western Carolina | $12,000 | $37, 456* |

*Note.* Compiled from ECSU, FSU, and UNCP promise program websites on October 25, 2022. WCU in-state savings information is based on the 2022-23 Student Body Profile information. Values are in U.S. dollars. ECSU = Elizabeth City State University; FSU= Fayetteville State University; NC= North Carolina; UNCP = University of North Carolina Pembroke.
*based on pre-NC Promise tuition for the 2016-17 academic year

It is easy to see that the most significant savings are for out-of-state students. ECSU estimates that an out-of-state student would save about $44,000 over 4 years. Also, the estimated savings for an out-of-state student at WCU ($37,456) is based on the 2016-17 academic year; 2022-23 was unavailable from WCU (T. Metz, personal communication, April 10, 2023).

It is also essential to see the overall tuition and fee rates at all the schools included in this study. Table 3 illustrates the tuition and fees for each UNC System campus for the 2022-2023 academic year to give a sense of the total cost of attending a public university in North Carolina. Each NC Promise school's full in-state tuition and fees, all lower than $4,000, represent the lowest in the UNC System. They also represent the lowest out-of-state tuition and fees in the UNC System, all lower than $8,000 (WCU, 2022c). The highest total in-state cost in the UNC System is North Carolina State University at $8,918.25. For out-of-state students, the highest total cost in 2022-23 is UNC-Chapel Hill at $37,312.46.

**Table 3**

*UNC System Tuition for Full-Time Undergraduate Students 2022-2023*

| School | Tuition | | Total General Fees | Debt Service Fee | Total Fees | Total In-State Tuition & Fees | Total Out-of-State Tuition & Fees |
|---|---|---|---|---|---|---|---|
| | In-State | Out-of-State | | | | | |
| Appalachian State | 4,242.00 | 20,246.00 | 2,413.00 | 634.00 | 3,047.00 | 7,289.00 | 23,293.00 |
| East Carolina | 4,452.00 | 20,728.00 | 2,257.00 | 445.00 | 2,702.00 | 7,154.00 | 23,431.00 |
| Elizabeth City State* | 1,000.00 | 5,000.00 | 2,356.00 | - | 2,356.00 | 3,356.00 | 7,356.00 |
| Fayetteville State* | 1,000.00 | 5,000.00 | 2,127.00 | 335.00 | 2,462.00 | 3,462.00 | 7,462.00 |
| North Carolina A&T State | 3,540.00 | 17,050.00 | 2,483.31 | 588.00 | 3,071.31 | 6,611.31 | 20,121.31 |
| North Carolina Central | 3,728.00 | 16,764.00 | 2,164.21 | 570.00 | 2,734.21 | 6,462.21 | 19,498.21 |
| North Carolina State | 6,535.00 | 28,276.00 | 1,884.25 | 499.00 | 2,382.25 | 8,918.25 | 30,659.25 |
| UNC Asheville | 4,122.00 | 21,470.00 | 2,698.00 | 394.00 | 3,092.00 | 7,214.00 | 24,562.00 |
| UNC-Chapel Hill | 7,019.00 | 35,580.00 | 1,585.61 | 146.85 | 1,732.46 | 8,751.46 | 37,312.46 |
| UNC Charlotte | 3,812.00 | 17,936.00 | 2,491.00 | 720.00 | 3,211.00 | 7,023.00 | 21,147.00 |
| UNC Greensboro | 4,422.00 | 19,581.00 | 2,250.00 | 707.00 | 2,957.00 | 7,379.00 | 22,538.00 |
| UNC Pembroke* | 1,000.00 | 5,000.00 | 2,288.76 | 206.00 | 2,494.76 | 3,494.76 | 7,494.76 |
| UNC Wilmington | 4,443.00 | 19,060.00 | 2,314.51 | 376.00 | 2,690.51 | 7,133.51 | 21,753.51 |
| Western Carolina* | 1,000.00 | 5,000.00 | 2,454.00 | 523.00 | 2,977.00 | 3,977.00 | 7,977.00 |
| Winston-Salem State | 3,401.00 | 14,057.44 | 2,142.16 | 423.00 | 2,565.16 | 5,966.16 | 16,622.60 |

*Note.* Adapted from "UNC System 2023-2023 Undergraduate Tuition & Fees," by Western Carolina University, 2022c, Tuition and fees committee, retrieved October 25, 2022, from https://www.wcu.edu/apply/tuition-and-fees/tuition-fee-committee.aspx. All values are in U.S. dollars and values represent tuition and fees for a full academic year or 2 semesters. UNC= University of North Carolina.
*NC Promise School

## NC Promise in the Context of UNC Policy

As previously discussed, higher education in North Carolina is structured as a single system with 16 campuses reporting to a Board of Governors. This means that enacted policies and decisions can apply to one, some, or all campuses and often occur within an environment where policies can interact. The NC Promise is an excellent example of this. In addition to the NC Promise, other tuition and fee-related policies can interact with and affect the outcomes of the NC Promise. This section will briefly detail those policies.

### *Policy on Non-Resident Enrollment*

Since 1988, each of the schools in the UNC System has limited the number of non-resident or out-of-state students. In April 2022, the UNC Board of Governors adopted an updated policy capping the percentage of first-time undergraduate students. Under this revised policy, 11 of the 15 campuses have an 18% non-resident cap, including UNCP and WCU. FSU and Winston-Salem State University have a 25% cap; two schools, North Carolina A&T State University and North Carolina Central University, have a 35% cap, and ECSU has the highest cap at 50% (Killian, 2022; UNC System, 2022c). Table 4 illustrates the revised cap on non-resident undergraduate enrollment. By 2023, East Carolina University, UNC Asheville, UNC Greensboro, UNC Pembroke, and Western Carolina University had joined the 25% group (Dean, 2023b). Before the decision to increase the cap on non-resident enrollment, all campuses in the UNC System had an 18% cap on non-resident undergraduate enrollment (Killian, 2022).

While the reasons for increasing the cap on non-resident enrollment are unclear, a few reasons emerge when assessing other available information. For example, ECSU, located close to the Hampton Roads region of Virginia and the smallest undergraduate student population of NC Promise schools, has the largest non-resident cap at 50% (Dean, 2023b; Killian, 2022; UNC

System, 2022c). Based on this information, increasing the non-resident cap for ECSU and the other campuses is creating space for enrollment growth in the non-resident sector of the student population. Even as the cap on non-resident enrollment increases, the UNC Board of Governors will hold campuses accountable to the policy. In November 2023, UNCW was fined $4.1 million for exceeding the non-resident cap for 2 consecutive years (Dean, 2023b). This is also an example of the policy environment the UNC System creates.

**Table 4**

*Non-Resident Undergraduate Enrollment Cap for UNC Schools*

| School | Non-Resident Cap |
|---|---|
| Appalachian State | 18 |
| East Carolina | 25 |
| Elizabeth City State* | 50 |
| Fayetteville State* | 25 |
| North Carolina A&T State | 35 |
| North Carolina Central | 35 |
| North Carolina State | 18 |
| UNC Asheville | 25 |
| UNC-Chapel Hill | 18 |
| UNC Charlotte | 18 |
| UNC Greensboro | 25 |
| UNC Pembroke* | 25 |
| UNC Wilmington | 18 |
| Western Carolina* | 25 |
| Winston-Salem State | 25 |

*Note.* Values are a percentage of the total number of first-time undergraduate students. NC= North Carolina; UNC= University of North Carolina.
*NC Promise school.

More specifically, when focusing on ECSU and the school's proximity to the Hampton Roads region of Virginia, the increase of the cap in non-resident enrollment allows ECSU to capitalize on the reduced tuition price against other universities in the area. For example, the fall

2022 in-state undergraduate tuition for Old Dominion University, a public university in Norfolk, Virginia, is $4,862 for 15 credit hours per semester (Old Dominion University, 2022). Another example is Norfolk State University, a public HBCU in Norfolk, Virginia. The Fall 2022 in-state undergraduate tuition is $2,876 for a 15-credit hour semester (Norfolk State University, n.d.). This means that a resident of Virginia would pay the in-state price at Old Dominion and Norfolk State but would pay the out-of-state price at ECSU. With the NC Promise program, out-of-state undergraduate tuition for ECSU is $2,500 per semester (ECSU, n.d.). This price is lower than Old Dominion and Norfolk State in the same region.

***Fixed-Tuition Benefit***

A fixed tuition benefit was another program that came into effect at the time of the NC Promise. Passed by the NC General Assembly in 2016, the fixed tuition benefit freezes undergraduate tuition for 4 years, or eight consecutive semesters excluding summer, for undergraduates at the other public bachelor's degree-granting universities in North Carolina that are not part of the NC Promise. However, this program only applies to students deemed to be residents of North Carolina or in-state students (Fixed Tuition Payment, 2016; UNC System, 2022c). Although mandatory fees, room rates, and meal plan costs may increase yearly, the tuition will remain the same if a student continuously enrolls for 8 consecutive fall and spring semesters. This program has gained less attention than the NC Promise.

Further study would be needed to compare the year-over-year increase for incoming first-year undergraduates and the tuition price set for each cohort of students. The fixed tuition payment program may show a trend in the comparison groups. Since this program only concerns tuition, the impact on the study will be minimal because tuition represents only a portion of the total cost. There may be some influence in the financial aid variables; however, since this study focuses on the average amount of federal student loans awarded to undergraduates and the combined fees, a fixed tuition program may only have minimal impact. This also applies to the policy where tuition for UNC System schools has remained flat since 2016-2017 (Dean, 2023a). At the same time, the NC Promise is a form of the fixed-tuition program since the participating schools have also had their tuition fixed as part of the program. How I addressed this in data analysis is outlined in Chapter 3.

To summarize, the increase in the cap of non-resident enrollment and the fixed tuition benefit work with the NC Promise to increase enrollment and offer tuition savings to students attending a UNC System school. These policies are also considered a threat to validity, discussed in Chapter 3, as they may have some influence on the outcome.

**Chapter Summary**

Promise programs are becoming a more popular tool for policymakers to address various issues. Some programs aim to increase the college-going rate, improve high school graduation rates, increase access to higher education for first-generation and minority students, or even reduce the cost of higher education that students and parents take on. The research on these programs is an emerging field and matches the wide variety of program structures and intervention designs.

With only one other study linking a promise program to student loan outcomes (Odle et al., 2021) and no other published study on the NC Promise program, the design of this study will add to the literature on promise programs. The structure of the NC Promise program has some unique differences from many other Promise programs. As a state-funded subsidy program, the NC Promise has a unique intervention design with the goal of reducing the amount of federal loans students take on.

# CHAPTER 3

# METHODOLOGY

The number of promise programs in the U.S. has increased dramatically over the last 15 years (College Promise, 2021; Perna & Leigh, 2020). At first, these programs were primarily privately funded, as in the Kalamazoo Promise (Miller-Adams, 2015). However, state governments increasingly see promise programs as interventions to increase access to higher education in their state, reduce the cost of college or student loan debt, and grow their economy by investing in higher education. This represents a shift in the collective funding system for higher education, where the state government takes on more financial responsibility. This is the case with the NC Promise program.

The NC Promise is a state-funded education subsidy program that sets the tuition price at 4 public universities in North Carolina at $500 per semester for in-state students and $2,500 per semester for out-of-state students. The program began with the fall 2018 semester and applied to all undergraduate students. Initially, three schools were part of the program: Elizabeth City State University (ESCU), the University of North Carolina Pembroke (UNCP), and Western Carolina University (WCU). A fourth school, Fayetteville State University (FSU), was added in the Fall 2022 semester (Brown, 2022; Stancill, 2018a, 2018b; UNC System, 2022b).

I posed two research questions with this study:

1. Does the average amount of undergraduate student loans awarded change at ECSU, UNCP, and WCU compared to non-Promise schools after implementing the NC Promise program?

2. Does the cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU increase faster compared to non-Promise schools after implementing the NC Promise program?

The first research question is designed to assess if the NC Promise is achieving one of the stated goals of reducing student loan debt. The second research question is intended to explore if other fees associated with the total cost of attending college increase to make up for the lost revenue of lower tuition.

The method to analyze data was a difference-in-difference (DID) analysis. This quasi-experimental causal-comparative design compares pre- and post-change for an affected group against a comparison group (Furquim et al., 2020). In this design, the intervention is the NC Promise, and the affected group comprises the three universities initially part of the program in the fall of 2018: ECSU, UNCP, and WCU. The comparison groups include the other 12 public 4-year bachelor's degree granting universities in North Carolina that were not initially part of the program. The UNC School of the Arts is not included in the study since that school only offers programs in the arts and uses a conservatory model (UNC System, 2022e). Since FSU joined the NC Promise in the Fall 2022 semester, it was included in the comparison groups because the time series in the study design precedes FSU's inclusion in the NC Promise (Murphy, 2021). Therefore, the missing data are average tuition and the average amount of federal student loans awarded to undergraduates after implementing the NC Promise. Without these data, FSU was not included in the treatment group.

In this chapter, I will review the methodology and design of this study. Specifically, I will examine the DID method, define the treatment and comparison groups, and outline data sources and collection. The steps for data analysis are presented, followed by a review of threats to validity, limitations, and assumptions.

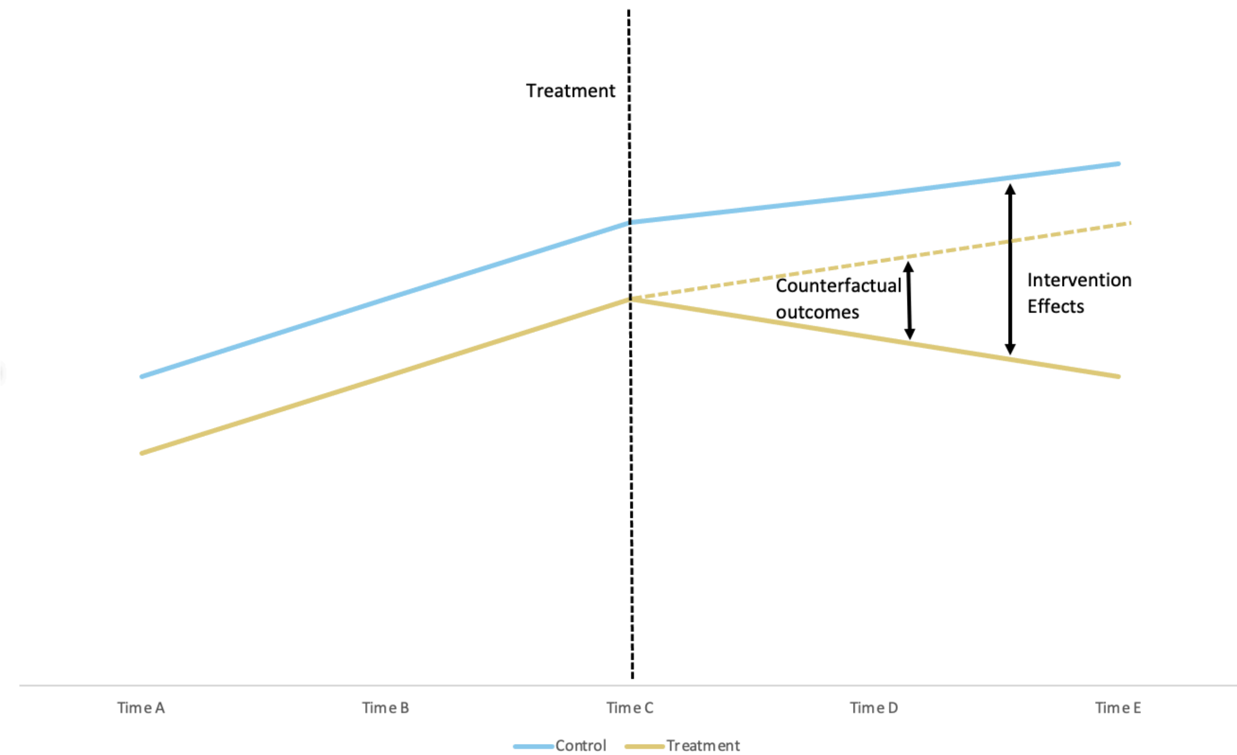
**DID Overview**

For this study, I used the DID method of analysis. The DID method is described as a "design with many time points is itself a more sophisticated version of an interrupted time series, in which a treatment group (without a comparison time series) is analyzed before and after the treatment occurs" (St. Clair & Cook, 2015, p. 321). This method is appropriate because the NC Promise is a treatment for the increased student loan debt students take on when attending college. The analysis will include data before and after the NC Promise was implemented to determine if the program is linked to decreased student loan debt for students at the treatment schools. There will also be comparison groups outside the treatment with the same time series.

Figure 8 illustrates what is hypothesized in this study using the DID method.

**Figure 8**

*Illustration of the Hypothesized DID Method*




*Note.* The X-axis represents the time series and displays the repeated measures over time. The dashed line in the center of the figure represents when the treatment occurred. In this case, the treatment is the NC Promise. The lower solid line represents the treatment group, and the upper line in blue represents the comparison group. DID= Difference-in-Difference; NC= North Carolina.

As Figure 8 shows, the control and treatment groups increased in a parallel trend before the treatment. Following the treatment, the trend decreases for the treatment group and represents the impact of the treatment, in this case, the NC Promise. The upper solid line increases at a slower rate following the treatment and, in this case, represents the Fixed-Tuition policy discussed in Chapter 2. In a scenario where the control group had no intervening effect, the trend line would have continued at the same rate post-treatment. This illustration was designed for this study's parameters, and since the control group had the Fixed-Tuition policy implemented, this was incorporated into this illustration. The intervention effects are the difference between the trend of the control and the trend of the treatment following the treatment.

The dashed line that continues the trend of the treatment group after the treatment represents what would have occurred if the treatment was not implemented. Measuring the difference between the predicted trend and the actual trend following the treatment is the counterfactual outcome. A DID analysis measures the difference between the counterfactual outcomes and the intervention effects. In other words, the difference between the predicted trend of the treatment group and the actual trend between the control and treatment groups.

**Treatment and Comparison Groups**

The treatment group for this study included the three schools included in the NC Promise when first implemented in the fall of 2018: ECSU, UNCP, and WCU. To increase reliability, two comparison groups were created. The first was labeled the *broad comparison* group. All 12 4-year public bachelor's degree-granting institutions in North Carolina not initially part of the NC Promise was included in this group. The second group was labeled the *narrow comparison* group. Membership in the narrow comparison group was determined by selecting public bachelor's degree-granting institutions in North Carolina with Carnegie Classifications similar to those of the schools in the treatment group. Using that criteria, five schools were selected for the narrow comparison group: Appalachian State University, North Carolina Central University, FSU, and University of North Carolina Asheville.

NC Promise was expanded with the 2021-2023 North Carolina State budget to include FSU beginning with the Fall 2022 semester (Murphy, 2021). Data from FSU will only be available before the program is implemented for FSU; therefore, FSU was included in the comparison groups rather than the treatment group. A complete list of UNC System schools and their inclusion in the comparison or treatment groups is reflected in Table 5.

**Table 5**

*Group Composition and Their Carnegie Classification*

| School | Carnegie Classification | Group | | |
|---|---|---|---|---|
| | | Treatment | Broad Comparison | Narrow Comparison |
| Appalachian State | Master's Colleges & Universities Large Programs | | X | X |
| East Carolina | Doctoral Universities: High Research Activity | | X | |
| Elizabeth City State[a] | Baccalaureate Colleges: Diverse Fields | X | | |
| Fayetteville State[a] | Master's Colleges & Universities: Medium Programs | | X | X |
| NC A&T State | Doctoral Universities: High Research Activity | | X | |
| NC Central | Master's Colleges & Universities Large Programs | | X | X |
| NC State | Doctoral Universities: Very High Research Activity | | X | |
| UNC Asheville | Baccalaureate Colleges: Arts & Sciences Focus | | X | X |
| UNC-Chapel Hill | Doctoral Universities: Very High Research Activity | | X | |
| UNC Charlotte | Doctoral Universities: High Research Activity | | X | |
| UNC Greensboro | Doctoral Universities: High Research Activity | | X | |
| UNC Pembroke[a] | Master's Colleges & Universities Large Programs | X | | |
| UNC Wilmington | Doctoral Universities: High Research Activity | | X | |
| Western Carolina[a] | Doctoral/ Professional Universities | X | | |
| Winston-Salem State | Doctoral/ Professional Universities | | X | X |

*Note.* NC= North Carolina; UNC= University of North Carolina.
[a]NC Promise School

These comparison groups will help increase the reliability of the DID analysis for two reasons. First, the NC Promise program, while available to all undergraduate students, both in-state and out-of-state, is a location-based program limited to attending schools that are part of the program. Second, since the funding is state taxpayer dollars, it is unlikely that funds will be available for North Carolina students to attend schools outside the state.

To reduce bias in the DID method, the comparison groups include schools with similar observable data as if randomized. This approach is called matching, and St. Clair and Cook (2015) described matching as “procedures [that] pair treatment and comparison units on baseline characteristics to create comparison groups that are similar to the treatment group in observables as they would under randomization" (p. 328). The baseline characteristics for the comparison groups are all public bachelor’s degree-granting institutions in North Carolina and similar Carnegie classifications. The institutions in the comparison groups are similar in that they represent the public universities in the state. They are all part of a consolidated higher education system and have a similar operation scope with a similar Carnegie Classification. Using a small comparison group without doctoral universities with very high research activity, the study design considered their influence from their operational scope.

**Data Source and Collection**

The data source for this study is the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS) for institutional data (NCES, n.d.). Table 6 outlines the variables used in the study, the data source, which research question each variable is linked to, and the time frame of data for the variable. For this study, the IPEDS definition of loans was used, which states, "any monies that must be repaid to the ending institution for which the student is the designated borrower. Includes all Title IV subsidized and unsubsidized loans.

Does not include PLUS and other loans made directly to parents" (NCES, 2022, p. 26). This will ensure the use of a standardized definition in this study.

### *Time Series*

NC Promise began in the fall of 2018 semester, 2 years after the program was signed into law. Thus, I defined the academic years before 2018-2019 as the pretreatment period. The NC Promise period starts with the 2018-2019 academic year and includes the present, which defined the treatment period. Therefore, I constructed a panel that begins with the 2011-2012 academic year and ends with the 2020-2021 academic year for the student loan-related variables. The tuition and fee-related variables started with the 2012-2013 academic year and ended with the 2021-2022 academic year. Table 6 lists the variables and their associated time series. This means the pretreatment period is 6 years (2011-2018), and the treatment period is 4 years (2018-2021) for a complete time series of 10 years (2011-2021) regarding the student loan variables.

Regarding the tuition and fee variables, the pretreatment period is 6 years (2012-2018), and the treatment period is 4 years (2018-2022). It is important to note that reporting financial aid data is one year behind other reported data and is considered a lagging variable.

## Data Analysis

The analysis began with collecting data from IPEDS for all schools in the treatment and comparison groups for each year and variables listed in Table 6. The data were uploaded to Microsoft Excel and reviewed for any missing or incomplete data.

**Table 6**

*Variable and Data Source for Research Questions*

| Variable | Data Source | Research Question (RQ) | Time Frame |
|---|---|---|---|
| Number of undergraduate students awarded federal student loans | IPEDS | RQ1 | 2011-2021 |
| Percent of undergraduate students awarded federal student loans | IPEDS | RQ1 | 2011-2021 |
| Total amount of student loans awarded to undergraduate students | IPEDS | RQ1 | 2011-2021 |
| Average amount of federal student loans awarded to undergraduate students | IPEDS | RQ1 | 2011-2021 |
| In-state average tuition for full-time undergraduates | IPEDS | RQ2 | 2012-2022 |
| In-state required fees for full-time undergraduates | IPEDS | RQ2 | 2012-2022 |
| Out-of-state average tuition for undergraduates | IPEDS | RQ2 | 2012-2022 |
| Out-of-state required fees for undergraduates | IPEDS | RQ2 | 2012-2022 |
| Books and Supplies | IPEDS | RQ2 | 2012-2022 |
| On-Campus Room and Board | IPEDS | RQ2 | 2012-2022 |
| On-Campus Other Expenses | IPEDS | RQ2 | 2012-2022 |

Note. IPEDS= Integrated Postsecondary Education Data System; RQ= Research Question.

***Parallel Trend Assumption***

Once data were collected from IPEDS, the mean was calculated for the treatment group, the broad comparison group, and the narrow comparison group for each pre-treatment year in the time series. Then, the mean was plotted and repeated for each variable using only the pre-treatment years. These plots were visually inspected for a parallel trend. This vital step is to ensure that a foundational assumption exists for DID to work; that in the absence of the treatment (NC Promise), the difference between the treatment group and the comparison group would remain constant (Angrist & Pischke, 2009; Columbia University Mailman School of Public Health [Columbia University], 2023). This parallel trend assumption must be established for DID to be an appropriate analysis.

Data for each variable were analyzed in isolation because it mimics the finance policy environment of the UNC System, where tuition, fees, room and board, and books and supplies are all set with some individual variance. At the same time, there is a cap on the annual increase of fees (UNC System, 2022c). The fee amount at each school is different and can increase or decrease at a different rate. Therefore, the assumption would exist for the remainder of the study by inspecting each variable for a parallel trend assumption in isolation. This allowed for outliers or anomalies in the data to be identified and investigated. In addition to using raw data for the parallel trend assumption, the percent change year over year and amount change year over year helped identify whether the parallel trend assumption exists.

For the parallel trend assumption, the time series for each variable will be the pre-treatment period for that variable or 6 years of data. There are two reasons for using this shortened time series. First, the shorter the time series tested for a parallel trend, the more likely the assumption exists (Columbia University, 2023). Second, by using pre-treatment data, we can identify any external forces that may have influenced the comparison and treatment groups before the treatment was applied. By creating opportunities for any assumption violations or internal validity threats to emerge at this stage, the data analysis could be adjusted to compensate. If a violation of the parallel trend assumption exists for a variable or an outlier is discovered, the data will be investigated and corrected. If the data are accurate and a parallel trend assumption is violated, then a specific school or variable may be removed from the study.

***Variable Grouping***

Following the parallel trend assumption, the variables related to tuition and fees was composed into variable groups. The first variable group included in-state average tuition for full-time undergraduates, in-state required fees for full-time undergraduates, books and supplies, on-campus room and board, and on-campus other expenses. This established a single variable group for in-state undergraduate tuition and fees and be labeled "In-State." The second variable group comprised out-of-state tuition for full-time undergraduates, out-of-state required fees for full-time undergraduates, books and supplies, on-campus room and board, and other on-campus expenses. This will establish a single variable group for out-of-state undergraduate tuition and fees and be labeled "Out-of-State." Since books and supplies, on-campus room and board, and on-campus other expenses are the same for in-state and out-of-state students; these variables will be applied to both variable groups.

The third variable group that will be created will consist of books and supplies, on-campus room and board, on-campus other expenses, and in-state required fees for full-time undergraduates. This variable group was labeled "Combined Fees." A comparison was conducted between in-state required fees for full-time undergraduates and out-of-state required fees for full-time undergraduates and found that these data match for each school and each year. Therefore, the in-state required fees for full-time undergraduate's variable was used, and only one combined fee group was composed. This third variable group will be essential to answering Research Question 2.

IPEDS has multiple variables for tuition. The published in-state tuition and fees and out-of-state tuition and fees were collected to ensure accuracy. These data were compared to the variable groups created, as previously mentioned. It was determined that the published in-state tuition and fees and out-of-state tuition and fees matched for each school and the in-state and out-of-state variable groups created each year.

Creating variable groups for in-state and out-of-state tuition and fees and combined fees will allow for increased data management and similar data across schools. Table 7 outlines each variable and what variable group they were placed in. Since each school has different student fee amounts, having one variable group for in-state tuition and fees and one for out-of-state tuition fees will also allow for a change in trend to better emerge. The combined fee variable group allowed for a trend related to fees and independent of tuition to emerge and be used to answer Research Question 2. Suppose the trend for these variable groups appears incompatible with other data. In that case, the group will then be decomposed, and the analysis will run again to try and identify what caused the issue.

**Table 7**

*Variable Grouping Composition*

| Variable | Variable Symbol | Group Combination | Group Label |
|---|---|---|---|
| In-state average tuition for full-time undergraduates | A | A, B, E, F, G | In-State |
| In-state required fees for full-time undergraduates | B | | |
| Out-of-state average tuition for undergraduates | C | C, D, E, F, G | Out-of-State |
| Out-of-state required fees for undergraduates | D | | |
| Books and Supplies | E | B, E, F, G | Combined Fees |
| On-Campus Room and Board | F | | |
| On-Campus Other Expenses | G | | |

Using Microsoft Excel, I used the raw data and determined the year-over-year change in dollars and percentage for each variable, variable group, and school. This resulted in having three sets of data for each school: the raw data from IPEDS, the year-over-year change in dollars, and the year-over-year percentage change. These different data sets allowed for a fairer comparison between schools and groups because each data set may reveal a slightly different trend. This also considers that each school has different sizes and scopes in the comparison and treatment groups.

For example, as Table 2 in Chapter 2 shows, the 2022-2023 lowest total in-state undergraduate tuition and fees in the UNC System is ECSU ($3,356), and the highest is North Carolina State University ($8,918.25). The difference between these schools is $5,562.25, and the out-of-state difference is even more prominent. The highest total undergraduate out-of-state tuition and fees are for the University of North Carolina at Chapel Hill ($37,312.46), and the lowest is ECSU ($7,356). This represents a difference of $29,956.46 (WCU, 2022c). Suppose the analysis utilized just the individual variable data from IPEDS; the large spread between numbers might impact the ability to identify trends. Simply put, the plot lines for schools will be farther apart. The plot lines will be closer using the year-over-year change in dollars and percent; therefore, trends may be more pronounced.

Three reasons exist for having in-state, out-of-state, and combined fees grouping variables for each school. The first is that mandatory fees, room and board charges, books and supplies, and other expenses can change at a different rate than tuition. As shown in Table 2, a debt service fee is charged to students based on a school's long-term capital debt. Mandatory fees can include fees for services like campus recreation, information technology, student health centers, and others. Second, the variable group represents the total amount a full-time undergraduate student living on campus would pay if they paid the full price. This is a consistent threshold to measure at the individual level and does not need to be adjusted for each school. Third, all of these charges would be part of a student’s cost of attendance and, therefore, can be covered by federal financial aid. Overall, the data can remain as consistent between schools as possible using a panel of variables comprising tuition, fees, and other expenses.

This is not the case with the total cost of attendance. Lowering the total cost of attendance is the only way to reduce the amount of borrowing (Kelchen, 2018). To determine the total cost of attendance, institutions must include costs of books, transportation, supplies, etc., based on estimated local rates. Since each school is in different cities and regions of North Carolina, there would be too much variability and inconsistency in determining that number.

As previously noted, the fixed-tuition payment program was implemented simultaneously for other UNC System schools not part of the NC Promise. This program and the flat tuition policy may also present a trend in the comparative groups but may be less pronounced. This program only impacts tuition, and since tuition represents a portion of the overall cost, the program's influence should be minimal. Additionally, the variables for research question two all pertain to fees, which are not impacted by this program. The data cleanup, variable grouping, and validity testing will be necessary to ensure the DID analysis is valid.

Finally, a DID regression analysis will be run using Stata statistical software for all research question one variables, the In-State, Out-of-State, and Combined Fees variable groups. The outcome will be three DID runs for each variable and variable group for the raw data, the year-over-year change in dollars, and the year-over-year percent change. The output was then analyzed to determine if the hypotheses are accepted or rejected.

**Addressing Threats to Internal Validity**

Although the DID method is an appropriate tool to analyze the impact of implementing a policy or program, these policies and programs do not operate in an environment of their own. External and internal policy influences may also account for the intended outcome. Furquim et al. (2020) and Shadish et al. (2002) outlined nine critical threats to internal validity. Eight are relevant to this study: (a) attrition, (b) history, (c) instrumentation, (d) regression, (e) selection problem, (f) temporal precedent, (g) testing, and (h) additive and interactive threat. In this section, I will review these threats to internal validity and how the study design addresses these threats.

*Attrition* happens when participants withdraw from the study or are not documented throughout the analysis (Furquim et al., 2020; Shadish et al., 2002). This threat is not an issue in this study for four reasons. The first is that the NC Promise is only in the 4th year of implementation, and the impact has yet to be published. The second is that since the public schools in North Carolina are all part of the UNC System and an extension of the North Carolina state government, leaving the NC Promise would need approval from the state legislature since the program is codified in state statute.

Third, the immediate impact of leaving the program would mean a drastic and sudden increase in the cost of tuition for every undergraduate student at each school. This drastic increase would have significant adverse effects on students and families and is unlikely. Finally, attrition could also occur if there was missing data. Since the data source is a database where data submission is required by law, the likelihood of missing data is low. If missing data does occur, that school, variable, or year would be evaluated for exclusion from the study.

*History* is a threat that refers to all other events that occur at the start or during the treatment that could influence the outcome (Furquim et al., 2020; Shadish et al., 2002). As previously mentioned, the policy environment of which the NC Promise is part needs to be accounted for. In addition to the NC Promise, the NC General Assembly implemented a fixed tuition policy where incoming undergraduate students would not increase during their 4 years as an undergraduate (Fixed Tuition Payment, 2016; UNC System, 2022c). For example, a student entering their first year at any UNC school in the comparison group in 2016 would have the same tuition in their final year in 2020. This policy may also reduce the number of student loans because the fixed tuition limits the annual increase. Since this policy applies to each school in the comparison groups, the threat is mitigated and was evident in the data during the treatment period.

Additionally, this policy was implemented simultaneously with the NC Promise program, so the parallel trend in the pre-treatment period would not be affected. There may, however, be a slight decrease in the comparison groups post-treatment trend because of the implementation of the fixed tuition payment program and the flat tuition policy. The variables for Research Question 2 will not be impacted because of this policy since fees are impacted by the fixed tuition program.

An *instrumentation* threat occurs when the measure is changed, and because of the change, there is the appearance of the treatment (Furquim et al., 2020; Shadish et al., 2002). This threat is mitigated using IPEDS data from the U.S. Department of Education. The National Center for Education Statistics, which oversees IPEDS, last updated its statistical standards in 2012, which coincides with the start of the time series for this study (NCES, 2012).

Furquim et al. (2020) explained that "Regression occurs when observations that are farthest from the average tend to get closer to the average over time, regardless of treatment condition" (p. 686). The *regression* threat in this study is mitigated by the assumption that the amount of student loan debt students take on in the treatment group increased during the pre-treatment period. That assumption is based on the trend that higher education costs continue to rise, and state funding has not kept up with the increased cost (Kelchen, 2018; Taylor, 2022).

Additionally, regression is mitigated because of the repeated measures over time. Using a time series of 10 years, there are 10 measurements for each school and variable. If this number were reduced, regression would likely impact the results. Therefore, the schools selected for the NC Promise were not chosen because the amount of student loan debt was decreasing, and the addition of the NC Promise would continue that trend.

A *selection problem* occurs when the treatment group and the comparison groups are systematically different from one another when the treatment occurs (Furquim et al., 2020; Shadish et al., 2002). As mentioned in Chapter 1, the public reasons for selecting the schools included in the NC Promise have yet to be fully known. However, a mitigating factor here is that the schools included in the treatment and comparison groups are all campuses of the UNC System and represent all the public bachelor's degree-granting institutions in North Carolina. While there are different types of campuses regarding regional serving, HBCUs, large research, etc., each school included in this study is part of the same consolidated UNC System, and all report to the UNC Board of Governors (UNC System, 2022a). The NC Promise program could easily have included any combination of these campuses.

To further mitigate this threat, the study uses two comparison groups: a broad group that includes all public bachelor’s degree-granting institutions that are part of the UNC System and a narrow group of seven public bachelor’s degree-granting institutions that are similar in Carnegie Classification as the schools in the treatment group. Table 5 includes the Carnegie Classification and the group the school is included in. Each school in the narrow comparison group has a Carnegie Classification that is the same or lower than a school in the treatment group. The definitions of the Carnegie Classifications are outlined in Chapter 1.

Each run of a DID analysis will be conducted twice, once with the broad comparison group and then with the narrow comparison group. By taking the added step, the analysis should be more reliable because the influence of the larger flagship and research universities like UNC Chapel Hill and North Carolina State University will be considered.

*Temporal precedence* means the cause must come unambiguously before the effect (Furquim et al., 2020; Shadish et al., 2002). In this design, I used a panel of data that precedes the NC Promise program implementation for 6 years, allowing a trend in student loan outcomes and fee increases to emerge before NC Promise was implemented. The NC Promise period years include measures of student loan outcomes after the program was implemented, and tuition was drastically reduced for all undergraduate students at the treatment schools. That is, the NC Promise unambiguously came into effect before the measures of student loan outcomes for the NC Promise period (2018-2022). This also means the temporal order of events should allow for causal identification.

When multiple treatments influence the outcome of the treatment, that threat to validity is referred to as *testing* (Furquim et al., 2020; Shadish et al., 2002). Since this study looks at just one treatment for the treatment group, there is sufficient evidence that no other treatment has been applied (Brown, 2022; Murphy, 2021; UNC System, 2022c), and the testing threat is mitigated. This is especially true since the variables for research question two are related to fees and are not impacted by the fixed-tuition program.

Finally, Shadish et al. (2002) recommend that researchers analyze the threats to validity and how they may interact with one another, which is an *additive and interactive effect*. I am primarily concerned with this study's temporal precedence, selection, and history. For example, with the combination of the pre-treatment period and treatment period totaling 10 years (temporal precedence), there is the possibility that other policies could have been implemented, and external factors like the COVID-19 pandemic could influence the treatment outcome (history). These external factors should appear in the parallel trends assessment between the treatment and comparison groups.

Another example is the interaction between selection and history. For this study, the criterion for inclusion is a public bachelor's degree-granting institution in North Carolina (selection). By including this smaller group of schools (n=15), the impact of state government policy changes on funding or other areas of operation (history) could have an unintended influence on the outcome. If private bachelor's degree-granting institutions were included, this would expand the number of schools (selection). Since these schools operate independently, the changes in tuition and fees are unpredictable and may present a regression issue. These exclusions, however, also show some limits to this study.

**Limitations**

As Brown (2022) pointed out, the NC Promise is set apart from other promise programs because of the funding source, limited participating schools, and the higher education policy environment of North Carolina. A limitation of this study is that there are few, if any, comparison programs to NC Promise. This limitation means the study has a smaller group of possible schools for a comparison group. It also means the study may not be generalizable across a large group or outside the state of North Carolina. Instead, the program's framework may be transferable to other states or campuses.

Another limitation of the study is that individual student financial aid data is confidential and inaccessible to research. This limitation does not allow a researcher to use individual students as a case study analysis to analyze how the NC Promise changes a student's financial aid package. For example, Brown (2022) noted that NC Promise is a first-dollar program, meaning the funding kicks in before federal dollars; it remains to be seen what the impact on a student eligible for a Pell Grant is. For example, if a student receives the full Pell Grant, does the lower tuition mean the Pell Grant can cover the total cost of attendance? If not, what additional financial aid is offered, like scholarships, grants, or student loans? These questions are for future research and represent some limitations of the study.

**Assumptions**

Overall, this study is based on one primary assumption: the data submitted to IPEDS is accurate. IPEDS is part of NCES and has standards for collecting, disseminating, and reviewing submitted data. The data submitted is also for compliance with federal law. Even though these standards are in place, there is still a potential for human error in collecting and submitting data. However, the standards set by NCES and the federal government mitigate this error, so confidence in the data is high (NCES, 2012).

Additionally, four assumptions are necessary for the DID method to be valid. As explained earlier in this chapter, the first is the parallel trend assumption. This is where the difference between the comparison and treatment groups would be consistent over time in the absence of the treatment (Columbia University, 2023). Second, the intervention was not distributed or established based on the outcome. This means that the schools that participate in the NC Promise program were not selected because of the outcome of the NC Promise. This assumption exists in this study because the selection of schools has been documented and is not linked to the outcome of the NC Promise. Given that no other published studies on the NC Promise exist and no report of outcomes has been made available, it can be concluded that the selection of schools was not related to the outcome of the NC Promise (Anderson, 2016; Brown, 2022; Columbia University, 2023; Murphy, 2021; Stancill 2018a, 2018b).

The third assumption that needs to exist for the DID method to be valid is that the composition of the treatment and comparison groups is stable over time. This assumption is addressed in the threats to internal validity section related explicitly to attrition, history, and selection problem. The schools in the UNC System have been consistent since consolidation in 1972, and the addition of FSU to the NC Promise program for the 2022-2023 academic year has been addressed (Columbia University, 2023; Shadish et al., 2002; Solow, 1999).

The fourth assumption needed for the DID method is that there is no spillover effect, meaning that there is no indirect effect on schools that are part of the treatment group that is not directly part of the treatment (Columbia University, 2023). This assumption exists in this study because of the organization and policy environment in which the UNC System operates. As discussed in Chapter 2, the UNC System schools have some degree of operational autonomy but changes to tuition and fees must be approved and cannot arbitrarily occur (UNC System, 2022c). Also, the variables used for the study are limited to tuition and fees and federal financial aid, all of which are outcomes of a complex higher education financing system. Therefore, the assumption that the NC Promise will only impact the student loan outcomes of the schools in the program exists because the study only looks at student loan outcomes.

**Ethical Concerns**

There is little ethical concern with this study for two reasons. First, data retrieved from IPEDS are publicly available and meant to be used for research and benchmarking purposes. Second, data from IPEDS are aggregated across the undergraduate population and cannot be personally identifiable. This prevents researchers from using individuals' information protected by Federal Law. Data files will be secured electronically and password-protected by the researcher to provide additional privacy protection.

## Chapter Summary

Overall, the landscape of student loans is complex and made up of a patchwork of local, state, and federal programs. However, these programs need to do more to affect the rising cost of higher education. Promise programs represent local and state attempts to lower the cost of higher education being passed onto the student. The NC Promise program represents a unique way of addressing the student loan crisis.

As the researcher, I investigated if the NC Promise program delivers on one of its state goals: reducing student loans for undergraduate students at ECSU, UNCP, and WCU. I also investigated if fees and other costs increased at a higher rate to offset the lower tuition. Using a DID method, I hypothesized that the NC Promise reduces the amount of student loans needed to attend NC Promise schools, and fees and other costs did not rise faster than what was allowed by the UNC System policy. If effective, the NC Promise could be a framework for other states to create their version to help address the student loan crisis. Chapter 4 will review and discuss the results of the study.

# CHAPTER 4

# RESULTS

The central problem being investigated for this study is whether the North Carolina Promise (NC Promise), a state tuition subsidy program, achieves one of the stated goals: to reduce the amount of student loans undergraduate students need to complete their degree. This subsidy program reduces tuition at participating schools to $500 per semester for in-state undergraduates and $2,500 per semester for out-of-state undergraduates. (NC Promise Tuition Plan, 2022; UNC System, 2022b). I ask two research questions to guide this study. First, does the average amount of undergraduate student loans awarded change at Elizabeth City State University (ECSU), University of North Carolina Pembroke (UNCP), and Western Carolina University (WCU) after implementing the NC Promise program? This research question is tied to one of the program's goals, and the hypothesis for this research question is that the average amount of student loans awarded to undergraduate students at ECSU, UNCP, and WCU decreases after implementing the NC Promise program.

The second research question I ask in this study is: does the cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU increase at a higher rate compared to non-Promise schools after implementing the NC Promise Program? This research question asks if institutions and policymakers increase fees to recoup lost revenue from lowering tuition. I hypothesize that the cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU does not increase faster after implementing the NC Promise program. This chapter will begin with a review of the steps taken to conduct this study and then review the major findings for each research question.

**Methodology Review**

A difference-in-difference analysis (DID) was used to answer these questions, and data from the Integrated Postsecondary Education Data System (IPEDS) were collected for several variables. Table 6 in Chapter 3 outlines the variables collected and the time frame used to create the time series panel. These data were collected from each public bachelor's degree-granting institution in North Carolina, all part of the UNC System, from 2012 to 2022. Table 5 in Chapter 3 overviews the institutions used for this study and their Carnegie Classification and Table 8 displays the composition of each group in this study. The initial three institutions of the NC Promise comprise the treatment group, ECSU, UNCP, and WCU. The remaining 12 schools formed the broad comparison group. The narrow comparison group consisted of five schools with the same or lower Carnegie Classification as those in the treatment group.

**Table 8**

*Group Composition*

| Group | School |
|---|---|
| Treatment | Elizabeth City State<br>UNC Pembroke<br>Western Carolina |
| Broad Comparison | Appalachian State<br>East Carolina<br>Fayetteville State<br>North Carolina A&T<br>North Carolina Central<br>North Carolina State<br>UNC Asheville<br>UNC-Chapel Hill<br>UNC Charlotte<br>UNC Greensboro<br>UNC Wilmington<br>Winston-Salem State |
| Narrow Comparison | Appalachian State<br>Fayetteville State<br>North Carolina Central<br>UNC Asheville<br>Winston-Salem State |

*Note.* Schools in the narrow comparison are also included in the broad comparison. A&T= Agricultural and Technical; UNC= University of North Carolina.

Once data were collected from IPEDS, it was reviewed for missing information, omissions, or outliers. This review was continued throughout the study, and no missing data were discovered. Therefore, no schools were removed or excluded from the study. Additionally, no deviations or adjustments to the study design were made during the study. For Research Question 2, a variable composition was undertaken. As displayed in Table 7 in Chapter 3, variables were composed to create an in-state tuition and fees variable, out-of-state tuition and fees variable, and combined fees for in-state and out-of-state. These variable groups allowed the analysis to isolate the variables for easy review and data management.

Then, the raw number year-over-year change and the percent change year-over-year were calculated for each variable. For a DID analysis to work, a parallel trend assumption must be determined to exist in the pre-treatment time series. This means that in the interval before the intervention, in this case, the NC Promise, the trend of the treatment and comparison group(s) is the same. The assumption is that the pre-treatment trend would continue for all groups if the treatment were not implemented. Figure 8 in Chapter 3 illustrates the hypothesized DID analysis for this study.

For each variable, the average of the treatment group and the comparison groups were calculated and plotted. Using visual inspection and the raw data from IPEDS, a parallel trend was determined for the variables central to answering the research questions. Data were then composed into a format compatible with Stata. For example, the pre-treatment years were assigned “0,” and the post-treatment years were given “1.” This is what Stata uses to distinguish between pre- and post-treatment time series. Once data were uploaded into Stata, I conducted the DID analysis for each variable in raw number form, raw number change year over year, and percent change year over year. A DID analysis was run for each variable using the broad and narrow comparison groups for a total of 120 DID runs. Once the DID analysis was complete, the output data were reviewed to determine findings related to the research questions. The following sections provide further detail about the results for each research question.

**Results for Research Question 1**

Research Question 1 focuses on the average amount of federal student loans awarded to undergraduates. Table 9 outlines each DID run for Research Question 1 and if that variable is statistically significant. Five DID runs were statistically significant for research question one at $p < 0.05$ or $p < 0.01$. However, the average amount of federal loans awarded to undergraduates was not found to be statistically significant. A DID analysis found that a statistically significant change in the average amount of federal student loans awarded after the implementation of the treatment does not exist, so the null hypothesis is accepted. In other words, a change in the average amount of federal student loans awarded to undergraduates is not linked to the NC Promise. However, the data show that there is a decrease in the average amount of student loans awarded for the treatment group since the implementation of the NC Promise. What the DID analysis show is that the decrease that occurred did not decrease differently because of the NC Promise program.

**Table 9**

*Results From Difference-in-Difference Analysis for Research Question 1 Variables*

| Variable | Broad Comparison | | Narrow Comparison | |
|---|---|---|---|---|
| | $\|t\|$ | $p>\|t\|$ | $\|t\|$ | $p>\|t\|$ |
| Number of undergraduate students awarded federal student loans | 0.28 | 0.781 | 0.31 | 0.753 |
| Number of undergraduate students awarded federal student loans change year-over-year | 2.65 | 0.009*** | 3.83 | 0.000*** |
| Number of undergraduate students awarded federal student loans percent change year-over-year | 3.84 | 0.000*** | 1.49 | 0.139 |
| Total amount of federal student loans awarded to undergraduate students | 0.48 | 0.632 | 0.52 | 0.606 |
| Total amount of federal student loans awarded to undergraduate students change year-over-year | 1.38 | 0.005*** | 2.82 | 0.039*** |
| Total amount of federal student loans awarded to undergraduate students percent change year-over-year | 2.09 | 0.170 | 0.84 | 0.404 |
| Average amount of federal student loans awarded to undergraduate students | 0.81 | 0.421 | 0.40 | 0.693 |
| Average amount of federal student loans awarded to undergraduate students change year-over-year | 1.35 | 0.178 | 0.60 | 0.550 |
| Average amount of federal student loans awarded to undergraduate students percent change year-over-year | 1.40 | 0.162 | 0.57 | 0.569 |

**$p<0.05$ ***$p<0.01$

The focus on the specific variable average amount of federal student loans awarded to undergraduate students is because this variable would provide the clearest indication of how much federal student loans would be part of a student's overall financial aid package, on average. It is essential to remember that a student may be awarded multiple types of financial aid or a single kind of aid in various amounts. These types of aid include grants and scholarships from the institution, grants and scholarships from outside the institution, Federal Pell Grant, or others. Federal student loans are one of the last types of aid included in a student's overall financial aid package. Because of this timing, this variable can also provide a glimpse into how much aid students need to meet their financial needs. To understand this finding, it is necessary to understand the background of this variable. According to IPEDS, the average amount of federal student loans awarded to undergraduates is calculated by dividing the total federal student loans by the number of undergraduates awarded federal student loans (NCES, 2022). Table 10 displays the total amount and the average federal student loans awarded to undergraduate students for the treatment group schools.

**Table 10**

*Total Amount and Average Federal Student Loans Awarded to Undergraduate Students for NC Promise Schools 2012-2022*

| Year | ECSU | | UNCP | | WCU | |
|---|---|---|---|---|---|---|
| | Total | Average | Total | Average | Total | Average |
| 2012-2013 | $12,664,048 | $5,962 | $19,700,689 | $5,583 | $27,108,475 | $6,200 |
| 2013-2014 | $13,408,056 | $6,349 | $21,815,327 | $5,912 | $29,770,632 | $6,436 |
| 2014-2015 | $12,237,352 | $6,768 | $21,856,968 | $6,018 | $32,730,345 | $6,810 |
| 2015-2016 | $9,243,117 | $6,650 | $21,471,147 | $5,883 | $33,608,775 | $6,650 |
| 2016-2017 | $7,606,735 | $6,638 | $26,146,505 | $6,843 | $32,958,867 | $6,463 |
| 2017-2018 | $6,002,793 | $6,427 | $26,063,481 | $6,980 | $36,369,217 | $6,643 |
| 2018-2019* | $5,152,884 | $5,943 | $25,827,380 | $6,992 | $37,182,356 | $6,665 |
| 2019-2020 | $5,811,634 | $5,760 | $24,600,733 | $6,615 | $33,772,715 | $6,103 |
| 2020-2021 | $6,630,304 | $6,017 | $25,462,291 | $6,765 | $32,926,806 | $6,149 |
| 2021-2022 | $6,443,540 | $5,912 | $23,514,571 | $6,926 | $29,621,577 | $5,796 |

*Note.* Values are in U.S. dollars. ECSU = Elizabeth City State University; NC= North Carolina; UNCP = University of North Carolina Pembroke; WCU = Western Carolina University.
*NC Promise was first implemented.

On a simple read of the numbers after the NC Promise implementation, the data show about a $1.2 million increase in these funds for ECSU, about a $2.3 million decrease for UNCP, and a $7.5 million reduction for WCU. Additionally, for UNCP and WCU, the recent amount of funds awarded is still higher than the 2012-2013 year. ECSU is the notable difference, sharply declining from 2015-2016. This could be attributed to a steady decline in enrollment at ECSU during the study period. It has been documented that there was a decline in enrollment leading up to the discussions of the NC Promise as ECSU leadership was interested in changes at the school (Brown, 2022; Stancill, 2018a, 2018b).

When looking at the average amount of student loans awarded, WCU had a consistent decrease since 2018-2019, year both ECSU and UNCP saw brief decreases and an increase in the 2021-2022 year. Looking over the past 10 years, ECSU saw a slight decrease while WCU saw a $404 decrease. UNCP has as $1,343 increase over the study period. The number of undergraduates awarded federal aid also reveals a similar trend, as shown in Table 11. During the 10 years this study reviews, ECSU went from 2137 to 1090 students awarded federal student loans. UNCP went from 3529 to 3395, and WCU went from 4372 to 5111 undergraduates awarded federal student loans. After the NC Promise program was implemented beginning with the Fall 2018 semester, the number of students awarded federal student loans at ECSU increased by 223. At the same time, UNCP and WCU each saw slight declines in the number of students awarded federal student aid.

In other words, for both UNCP and WCU, the number of students awarded federal student loans and the total amount of federal student loans awarded to undergraduates have decreased since the implementation of the NC Promise. However, ECSU had these numbers increase during the same period. This increase could be attributed to an increase in enrollment following the NC Promise implementation. Each school in the treatment group did see a sharp rise in applications and enrollment leading up to and just as the NC Promise was implemented (Stancill, 2018a, 2018b).

Fewer students being awarded federal student loans may be a positive finding. However, the focus of the NC Promise is not reducing the number of undergraduate students awarded federal student loans; the focus is on reducing the amount of federal student loans awarded per student when a student accepts that type of financial aid.

**Table 11**

*Number of Undergraduate Students Awarded Federal Student Loans for NC Promise Schools 2012-2022*

| Year | ECSU | UNCP | WCU |
|---|---|---|---|
| 2012-2013 | 2137 | 3529 | 4372 |
| 2013-2014 | 2112 | 3690 | 4626 |
| 2014-2015 | 1808 | 3632 | 4806 |
| 2015-2016 | 1390 | 3650 | 5054 |
| 2016-2017 | 1146 | 3821 | 5100 |
| 2017-2018 | 934 | 3734 | 5475 |
| 2018-2019* | 867 | 3694 | 5579 |
| 2019-2020 | 1009 | 3719 | 5534 |
| 2020-2021 | 1102 | 3764 | 5355 |
| 2021-2022 | 1090 | 3395 | 5111 |

*NC Promise was first implemented. ECSU = Elizabeth City State University; NC= North Carolina; UNCP = University of North Carolina Pembroke; WCU = Western Carolina University.

In other words, a student who needs student loans to meet their financial need should need less of those federal loan dollars to meet their financial need. It is also plausible that students who are no longer awarded federal student aid may no longer need it. The critical distinction to determine is does the student no longer needs the aid because their financial need is met by another type of aid that is not to be repaid? Or do they simply no longer want the aid but still have unmet financial needs. Further research would need to be undertaken to investigate. Table 12 displays the average amount of federal student loans awarded to undergraduates. The change since 2012-2013 has mixed trends; ECSU has seen a $14 decrease, WCU has a $404 reduction, and UNCP has a $1,343 increase.

**Table 12**

*Average Amount of Federal Student Loans Awarded to Undergraduate Students for NC Promise Schools 2012-2022*

| Year | ECSU | UNCP | WCU |
|---|---|---|---|
| 2012-2013 | $5,926 | $5,583 | $6,200 |
| 2013-2014 | $6,349 | $5,912 | $6,436 |
| 2014-2015 | $6,768 | $6,018 | $6,810 |
| 2015-2016 | $6,650 | $5,883 | $6,650 |
| 2016-2017 | $6,638 | $6,843 | $6,463 |
| 2017-2018 | $6,427 | $6,980 | $6,643 |
| 2018-2019* | $5,943 | $6,992 | $6,665 |
| 2019-2020 | $5,760 | $6,615 | $6,103 |
| 2020-2021 | $6,017 | $6,765 | $6,149 |
| 2021-2022 | $5,912 | $6,926 | $5,796 |

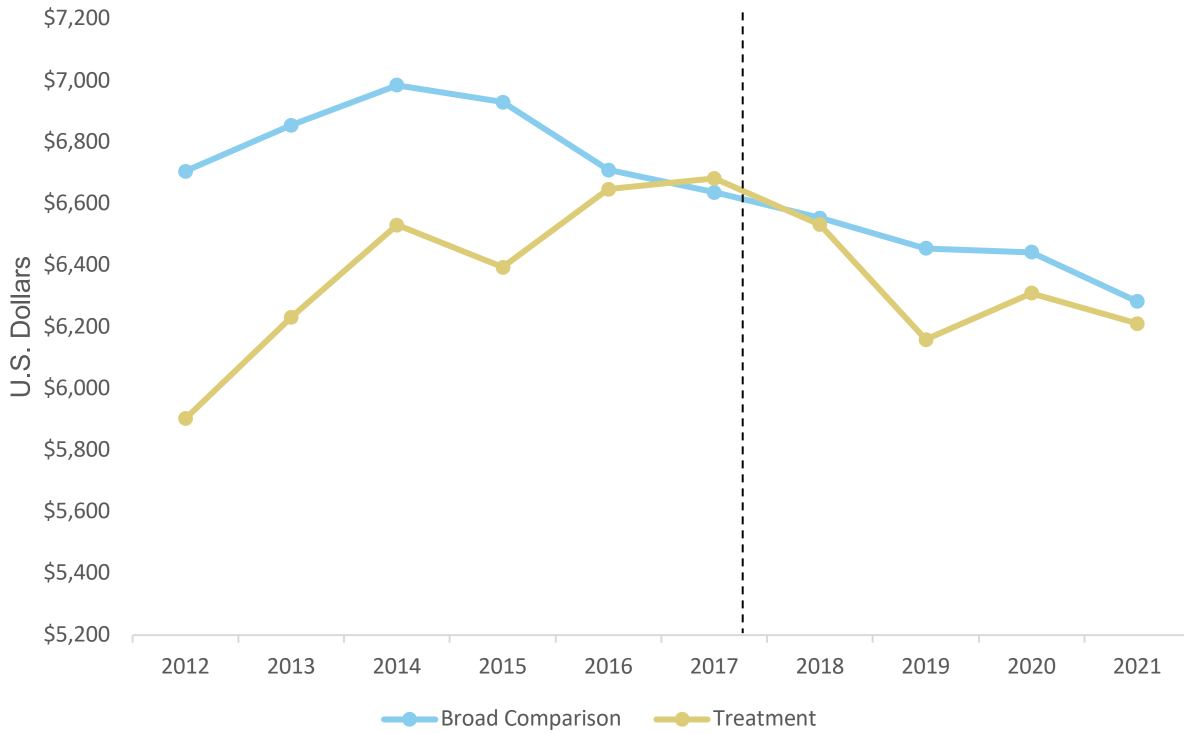
*Note.* Values are in U.S. dollars. ECSU = Elizabeth City State University; NC= North Carolina; UNCP = University of North Carolina Pembroke; WCU = Western Carolina University.
*NC Promise was first implemented

Looking more narrowly at the time since the NC Promise program was implemented, each institution has seen a decline in the average amount of federal student loans awarded to undergraduates, with ECSU having a $31 decrease, UNCP a $64 decrease, and WCU an $869 reduction. Each school saw an increase in the 2020-21 year, which could be related to the COVID-19 pandemic and more aid being awarded through one-time acts of Congress. It is important to note that this variable is an average. Some students may have higher student loans than the average, and some may have lower. As mentioned as a limitation in Chapter 3, it is not possible to know the details of an individual student's financial aid package for this study.

Figure 9 shows the broad comparison group and treatment group analysis during the study period.

**Figure 9**

*Broad Comparison Group DID Analysis of Average Amount of Federal Student Loans Awarded to Undergraduates*




Note. DID= Difference-in-difference.

The lack of a clear trend in the average amount of federal student loans awarded to undergraduates, the total federal student loans awarded, and the number of undergraduate students awarded federal student loans contributes to the inability to point to the NC Promise as the reason for a reduction in the average amount of student loans awarded to undergraduates. While there has undoubtedly been a decrease since 2014, the data analysis shows that the connection to the NC Promise is not statistically significant. Table 13 shows the broad comparison group DID analysis results where p>|*t*| is 0.421 and not statistically significant and reinforces the lack of a clear trend with this variable.

**Table 13**

*Results From the Broad Comparison Group DID Analysis Average Amount of Federal Student Loans Awarded to Undergraduates*

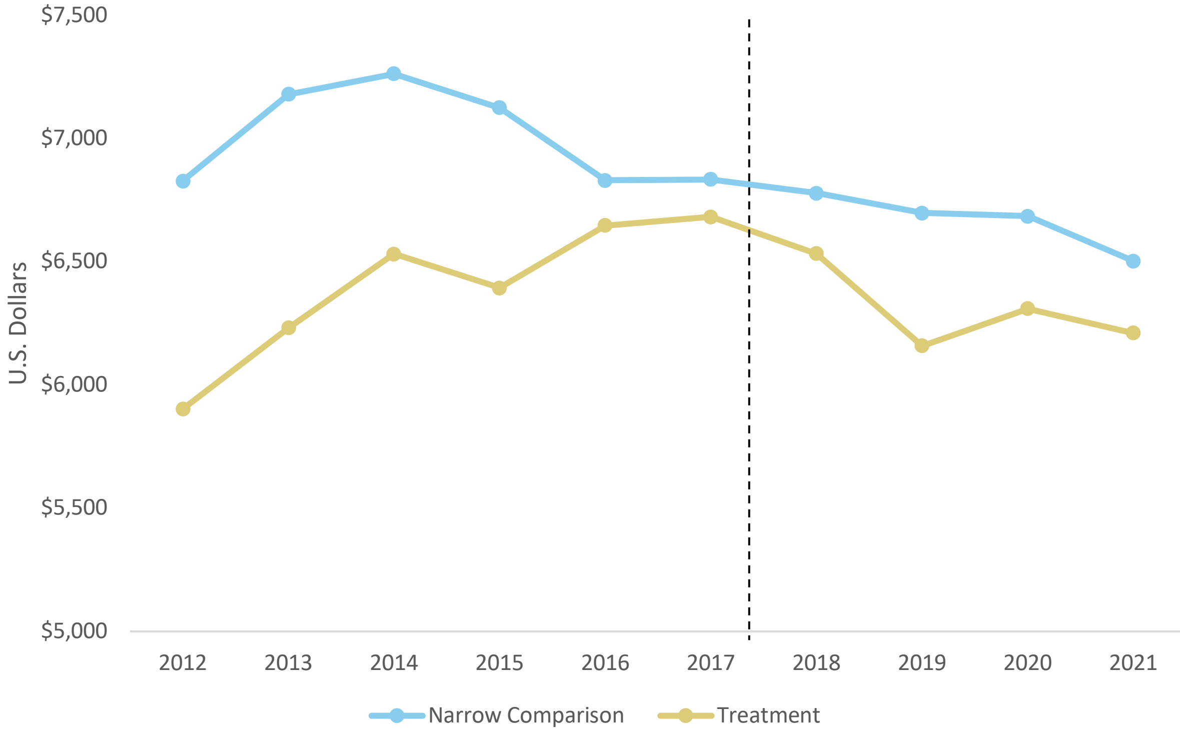
| Outcome variable | Ave_Fed_Aid | ***SE*** | \|*t*\| | P>\|*t*\| |
|---|---|---|---|---|
| Before | | | | |
| Control | 6768.833 | | | |
| Treated | 6418.048 | | | |
| Diff (T-C) | -350.786 | 124.635 | -2.81 | 0.006* |
| After | | | | |
| Control | 6394.194 | | | |
| Treated | 6227.000 | | | |
| Diff (T-C) | -167.194 | 190.384 | 0.88 | 0.381 |
| Diff-in-Diff | 183.591 | 227.552 | 0.81 | 0.421 |

*Note.* DID= Difference-in-difference.
* $p < 0.01$

To increase the reliability of the study and mitigate a selection threat to validity, as discussed in Chapter 3, a narrow comparison group was created, and the DID analysis was run. Figure 10 displays the DID analysis like Figure 9 but with a narrow comparison group. While the plots may be similar and the gradual decrease since 2014 still emerges, the DID analysis shows that the connection to the NC Promise is not statistically significant with a narrow comparison group. Table 14 shows this result with the narrow comparison group DID analysis results where p>|*t*| is 0.693 and not statistically significant.

**Figure 10**

*Narrow Comparison Group DID Analysis of Average Amount of Federal Student Loans Awarded to Undergraduates*




*Note.* DID= Difference-in-difference.

**Table 14**

*Results From the Narrow Comparison Group DID Analysis Average Amount of Federal Student Loans Awarded to Undergraduates*

| Outcome variable | Ave_Fed_Aid | ***SE*** | \|*t*\| | p>\|*t*\| |
|---|---|---|---|---|
| Before | | | | |
| Control | 6843.634 | | | |
| Treated | 6753.035 | | | |
| Diff (T-C) | -90.598 | 36.535 | -2.48 | 0.014* |
| After | | | | |
| Control | 6547.952 | | | |
| Treated | 6430.954 | | | |
| Diff (T-C) | -116.998 | 55.808 | 2.10 | 0.038* |
| | | | | |
| Diff-in-Diff | -26.399 | 66.703 | 0.40 | 0.693 |

*Note.* DID= Difference-in-difference.
*$p < 0.05$

**Results for Research Question 2**

Research Question 2 focuses on the increased fee rate that students are responsible for beyond tuition. This research question aims to see if institutions increased fees while lowering tuition through the NC Promise to compensate for lost revenue. Data from IPEDS includes five fee-related variables: (a) books and supplies, (b) on-campus room and board, (c) on-campus other expenses, (d) in-state required fees, and (e) out-of-state required fees. To ensure the ability to identify missing data or outliers, the study was designed to run the analysis with each variable isolated and composed in groups. In addition to the variables from IPEDS, three variable groups were formed: (a) in-state, (b) out-of-state, and (c) combined fees. Table 7 in Chapter 3 outlines the variables used in each group.

**Table 15**

*Results From Difference-in-Difference Analysis for Research Question 2 Variables*

| Variable | Broad Comparison | | Narrow Comparison | |
|---|---|---|---|---|
| | $\|t\|$ | $p>\|t\|$ | $\|t\|$ | $p>\|t\|$ |
| Books and supplies | 2.02 | 0.045* | 0.10 | 0.924 |
| Books and supplies change year-over-year | 0.93 | 0.357 | 1.03 | 0.303 |
| Books and supplies percent change year-over-year | 0.92 | 0.358 | 1.33 | 0.185 |
| On-campus room and board | 0.74 | 0.461 | 0.50 | 0.616 |
| On-campus room and board change year-over-year | 0.25 | 0.801 | 1.47 | 0.145 |
| On-campus room and board percent change year-over-year | 0.26 | 0.794 | 0.83 | 0.408 |
| On-campus other expenses | 0.27 | 0.790 | 1.09 | 0.279 |
| On-campus other expenses change year-over-year | 0.28 | 0.178 | 0.60 | 0.551 |
| On-campus other expenses percent change year-over-year | 0.17 | 0.863 | 0.69 | 0.489 |
| In-state required fees for full-time undergraduates | 0.39 | 0.694 | 0.20 | 0.841 |
| In-state required fees for full-time undergraduates change year-over-year | 0.42 | 0.677 | 0.48 | 0.632 |
| In-state required fees for full-time undergraduates percent change year-over-year | 0.00 | 0.997 | 0.56 | 0.580 |
| Out-of-state required fees for full-time undergraduates | 0.39 | 0.694 | 0.20 | 0.841 |
| Out-of-state required fees for full-time undergraduates change year-over-year | 0.42 | 0.677 | 0.48 | 0.632 |
| Out-of-state required fees for full-time undergraduates percent change year-over-year | 0.00 | 0.997 | 0.56 | 0.580 |
| Combined fees in-state | 0.01 | 0.992 | 0.93 | 0.353 |
| Combined fees in-state change year-over-year | 0.27 | 0.786 | 1.53 | 0.128 |
| Combined fees in-state percent change year-over-year | 0.27 | 0.787 | 1.21 | 0.230 |
| Combined fees out-of-state | 0.01 | 0.992 | 0.56 | 0.353 |
| Combined fees out-of-state change year-over-year | 0.27 | 0.786 | 0.93 | 0.128 |
| Combined fees out-of-state percent change year-over-year | 0.27 | 0.787 | 1.21 | 0.230 |

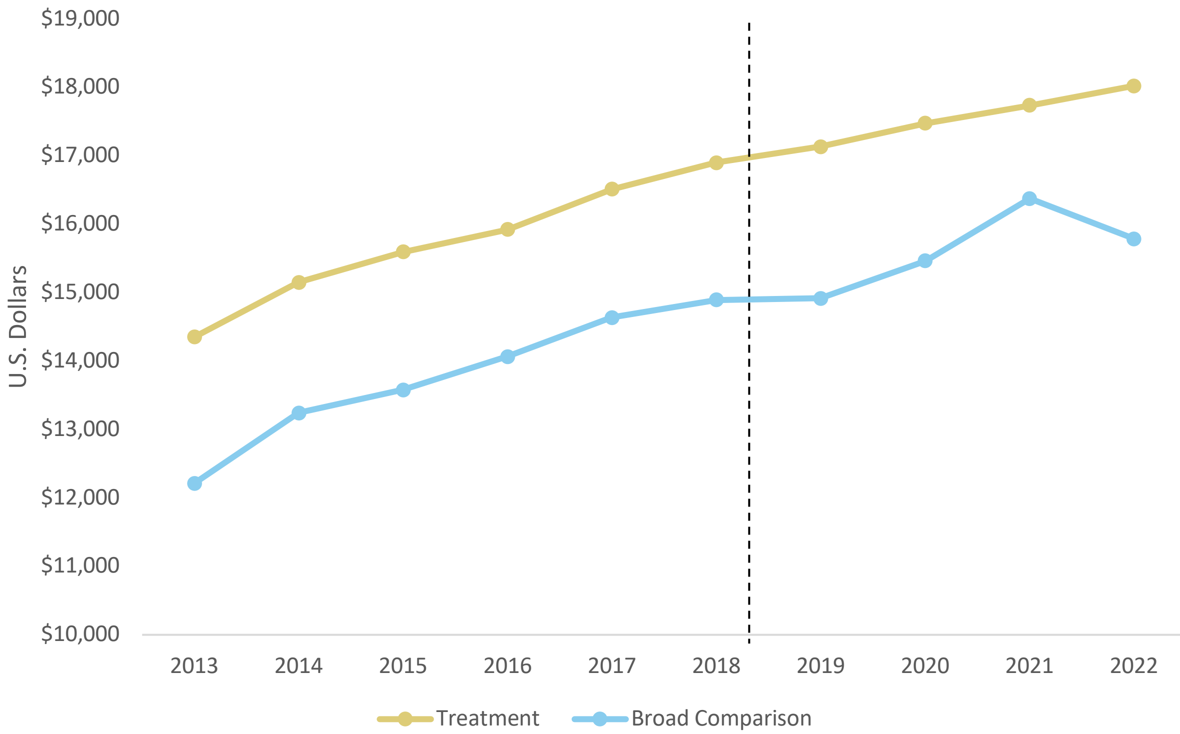
*$p < 0.05$

During the data analysis, it was determined that all data expected were present, and no missing data were detected. An additional analysis comparing in-state and out-of-state fee data was conducted. It was determined that these data were the same for each school and each year of the study period. The analysis results are displayed despite the results being the same for each variable. Therefore, the in-state variable was used in each group composition to ensure accuracy and consistency.

As previously mentioned, the raw number change year-over-year and percent change year-over-year were calculated for each variable. I ran a DID analysis using broad and narrow comparison groups. While the number of variables for this research question is substantial, the variable group that is essential to Research Question 2 is combined fees. Table 15 displays the results of the DID runs for the fee-related variables.

**Figure 11**

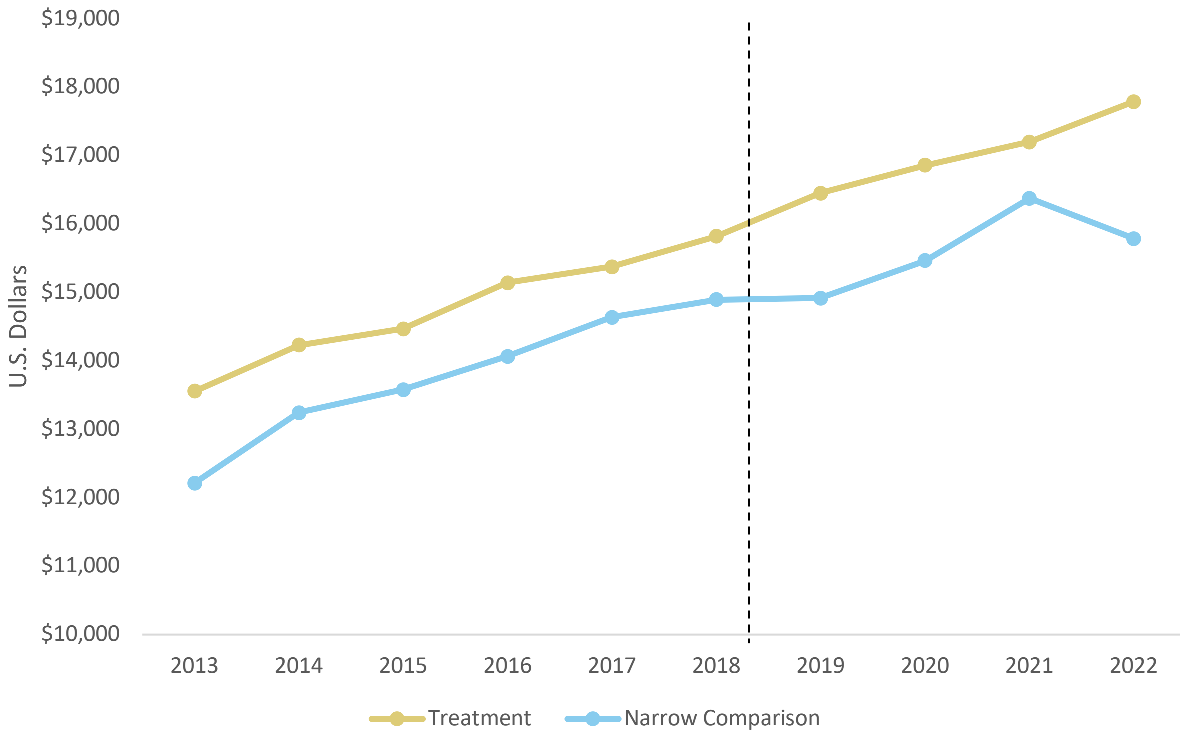
*Broad Comparison Group DID Analysis of Combined Fees for Undergraduates*




*Note.* DID= Difference-in-difference.

**Figure 12**

*Narrow Comparison Group DID Analysis of Combined Fees for Undergraduates*




*Note.* DID= Difference-in-difference.

None of the DID analyses with the narrow comparison group produced a statistically significant result. Using the broad comparison group, only the books and supplies variable had a statistically significant result at $p < 0.05$. Therefore, no significant change in the fee trend can be attributed to the NC Promise. Figure 11 displays the trend analysis of the combined fees for undergraduate students with the broad comparison group. Figure 12 depicts the trend analysis of the combined fees with the narrow comparison group. Consequently, the second hypothesis is accepted. However, this only partially shows the NC Promise's impact on the fees.

**Table 16**

*Percent Change Year-Over-Year for UNC System Combined Fees 2012-2022*

| School | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19* | 2019-20 | 2020-21 | 2021-22 |
|---|---|---|---|---|---|---|---|---|---|
| Appalachian State | 8.39% | 4.77% | -4.36% | 2.81% | 3.20% | 1.61% | 1.62% | 1.67% | 2.39% |
| East Carolina | 1.90% | 9.24% | -7.94% | 1.79% | 2.96% | -9.48% | 2.48% | 1.85% | 1.28% |
| Elizabeth City State[a] | 3.97% | 1.61% | -3.83% | 1.88% | 3.46% | -0.91% | 4.16% | 1.23% | 3.34% |
| Fayetteville State[a] | 3.61% | 5.58% | 9.04% | 9.63% | -10.21% | 1.74% | 2.40% | 0.00% | 0.84% |
| North Carolina A&T State | 2.21% | 1.87% | 7.75% | 13.44% | 2.38% | 0.24% | 6.66% | -0.50% | -5.68% |
| North Carolina Central | 9.43% | -2.02% | 2.93% | 2.47% | 3.09% | 3.93% | -8.06% | 1.41% | 1.58% |
| North Carolina State | 12.79% | 4.77% | 3.44% | 4.42% | 7.53% | 1.83% | 1.79% | 2.14% | 0.27% |
| UNC Asheville | 1.68% | 5.99% | 9.13% | 1.15% | 3.52% | 1.87% | 2.26% | 1.83% | 10.20% |
| UNC-Chapel Hill | 6.96% | 2.15% | -7.29% | 2.11% | -0.08% | 1.23% | 3.48% | 3.08% | 3.81% |
| UNC Charlotte | 2.30% | 2.13% | 6.68% | 8.74% | 3.30% | 12.02% | 0.23% | 2.81% | 0.53% |
| UNC Greensboro | 8.46% | -11.90% | 19.01% | 2.84% | 4.56% | 1.22% | 5.20% | 0.24% | 0.48% |
| UNC Pembroke[a] | 6.15% | 7.70% | 0.94% | -6.90% | 3.34% | 1.73% | 2.28% | 1.84% | 2.23% |
| UNC Wilmington | 17.68% | 1.91% | 2.44% | 0.82% | 2.29% | 6.98% | 4.48% | 7.18% | 0.24% |
| Western Carolina[a] | 7.75% | 3.09% | 1.81% | 5.49% | 0.43% | 0.41% | 0.45% | 10.53% | -10.90% |
| Winston-Salem State | 3.36% | 2.53% | 6.06% | 4.88% | 2.67% | -4.44% | 6.20% | 0.76% | 0.81% |

*Note.* Percentage change year-over-year is calculated using the combined fees for books and supplies, on-campus room and board, on-campus other expenses, and in-state/out-of-state required fees. A&T= Agricultural and Technical; UNC= University of North Carolina.

[a] NC Promise school.

*NC Promise was implemented.

Establishing a consistent trend with each variable is challenging because the percent change year-over-year is varied, and each variable can be set independently. When looking at the percent change year-over-year, as displayed in Table 16, most of the change is within line of the 3% cap in fee increase set by the UNC system. However, some exceptions to that policy exist, and the reason for these higher increases would need to be investigated.

For example, in 2019-2020 and 2021-2022, ECSU had a 4.16% and 3.34% increase in the combined fees from the previous year, respectively. WCU had a 10.53% increase in 2020-2021 but a 10.91% decrease the following year. These drastic changes contribute to the need for established trends following the implementation of the NC Promise program. A notable observation in Figures 11 and 12 is that from 2021 to 2022 year, both comparison groups have a decrease in the combined fees while the treatment group trend remains. It is unclear why this decrease occurred and the data show it is limited to a few schools in the narrow comparison group.

Table 17 outlines the total combined fees for in-state and out-of-state students at each school during the study period. It is worth noting that while there are separate variables for in-state required fees and out-of-state required fees in IPEDS, the data for these variables is the same for each instance. In 2013-2014, the combined fees for ECSU were $8,825. That number increased to $13,425 by 2022-2023. For UNCP, the combined fee was $13,375 in 2013-2014 and grew to $15,915. UNCP had the most significant combined fee in 2021-22 at $17,862. WCU has seen the most significant increase over the decade this study reviewed, with a combined fee of $14,444 in 2013-2014 and increasing to $18,018, an increase of $3,574 over 10 years.

**Table 17**

*UNC System Combined Fees 2012-2022*

| School | 2012-13 | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19* | 2019-20 | 2020-21 | 2021-22 |
|---|---|---|---|---|---|---|---|---|---|---|
| Appalachian State | 14,291 | 15,286 | 15,615 | 14,477 | 14,782 | 14,770 | 14,952 | 15,473 | 15,950 | 16,557 |
| East Carolina | 16,228 | 16,872 | 17,143 | 16,487 | 16,797 | 17,378 | 17,220 | 17,936 | 18,157 | 18,763 |
| Elizabeth City State[a] | 8,825 | 10,385 | 10,583 | 10,841 | 10,930 | 11,180 | 11,960 | 12,496 | 13,393 | 13,425 |
| Fayetteville State[a] | 11,166 | 12,111 | 10,670 | 12,698 | 13,058 | 13,654 | 13,820 | 14,539 | 14,574 | 14,644 |
| NC A&T State | 12,218 | 12,659 | 13,365 | 14,573 | 15,977 | 14,346 | 14,596 | 14,947 | 14,947 | 15,072 |
| NC Central | 14,752 | 15,092 | 15,413 | 16,443 | 17,880 | 18,470 | 20,691 | 20,738 | 21,320 | 21,432 |
| NC State | 14,896 | 16,146 | 16,916 | 16,178 | 16,632 | 17,165 | 17,442 | 17,724 | 18,020 | 18,451 |
| UNC Asheville | 14,224 | 15,099 | 16,262 | 16,415 | 15,282 | 15,793 | 16,067 | 16,433 | 16,736 | 17,109 |
| UNC-Chapel Hill | 17,272 | 17,601 | 19,227 | 17,701 | 18,017 | 18,550 | 16,792 | 17,209 | 17,527 | 17,751 |
| UNC Charlotte | 15,221 | 15,558 | 15,849 | 17,077 | 19,373 | 19,835 | 19,882 | 21,207 | 21,102 | 19,904 |
| UNC Greensboro | 13,927 | 15,240 | 14,932 | 15,370 | 15,750 | 16,237 | 16,875 | 15,515 | 15,733 | 15,982 |
| UNC Pembroke[a] | 13,375 | 14,411 | 14,856 | 15,125 | 15,955 | 16,023 | 16,088 | 16,160 | 17,862 | 15,915 |
| UNC Wilmington | 14,695 | 16,575 | 17,365 | 17,963 | 18,757 | 20,170 | 20,539 | 20,907 | 21,355 | 21,412 |
| Western Carolina[a] | 14,444 | 14,930 | 15,308 | 16,235 | 17,027 | 17,481 | 16,705 | 17,740 | 17,874 | 18,018 |
| Winston-Salem State | 13,340 | 13,564 | 14,376 | 15,688 | 15,868 | 16,426 | 16,733 | 17,111 | 17,424 | 19,202 |

*Note.* Values are in U.S. dollars. Amounts represent combined fees for a full academic year or 2 semesters. A&T= Agricultural and Technical; NC= North Carolina; UNC= University of North Carolina.

[a] NC Promise school.

*NC Promise was implemented

As previously mentioned, the combined fees in this study include on-campus room and board and other expenses. Not every student would be required or responsible for these fees, and their combined fees may be lower. These fees were included for this study to represent the most significant possible numbers and for the study's consistency. As mentioned in Chapter 3, knowing each student's specific tuition and fee calculation is impossible.

**Chapter Summary**

In summary, since the implementation of the NC Promise program, a statistically significant change in the average amount of federal student loans awarded to undergraduates does not exist and cannot be attributed to the substantial decrease in tuition. No statistically significant fee change is attributed to the NC Promise program. The impact of these findings and other implications is discussed in the next chapter.

# CHAPTER 5

# CONCLUSION

In 2016, the North Carolina General Assembly passed a law that implemented a tuition subsidy program at three campuses of the UNC System: (a) Elizabeth City State University (ECSU), (b) UNC Pembroke (UNCP), and (c) Western Carolina University (WCU). The program is called the North Carolina Promise (NC Promise), and implementation began with the Fall 2018 semester. The program set in-state tuition for all undergraduates at these schools at $500 per semester and $2,500 per semester for out-of-state students. This study aims to see if North Carolina's version of a promise program accomplished one of its goals: reducing the amount of federal student loans that students take out to obtain a college degree (UNC System, 2022b). This chapter summarizes the significant findings from this study, discusses the results, provides recommendations for policy and practice changes, and recommends future research.

The funding of higher education in the U.S. has been a debated question for over half a century. When the Carnegie Commission on Higher Education asked the question of who pays for higher education, their answer was *the people* (Carnegie Commission, 1973). The degree to which people, through collective taxes, private donations, or personal expenditures, contribute to the funding of higher education has varied through the decades. Research shows that the student share of the cost of higher education was lowest in the 1980s and has steadily increased since (Kunkle & Laderman, 2023; Laderman & Kunkle, 2022).

Promise programs overall can be structured in such a way that represents the level of responsibility to pay for higher education the government or the individual takes on. Initially reviewed in Chapter 2, first-dollar programs are where the funds from the program are applied to a student's account first and before many other types of aid. They are also the costliest for governments to fund because they cover more costs and are typically in the form of grants that are not paid back like the federal Pell Grant or institutional aid (Billings et al., 2023; Federal Student Aid, 2023b) Last-dollar programs, in contrast, represent the lowest level of funding from the program because the aid is applied to a student's account after other aid but before student loans. The programs are the least costly because they are usually only funding costs that are not covered by grants or scholarships like the Tennessee Promise (Billings et al., 2023; Odle et al., 2021).

The NC Promise program represents an increase in the responsibility of the government, through collective means, to fund higher education. As a promise program that is considered a first-dollar program, the state government is providing an education subsidy to undergraduate students with the purpose of reducing tuition. However, the results of this study show that despite lowering tuition with a subsidy, the average amount of student loans awarded did not change as a result of the program the fees that students pay continued to increase.

The NC Promise program has been linked to several changes at three public universities in North Carolina (Anderson, 2016; Brown, 2022; Murphy, 2021; Stancill, 2018a, 2018b). I pose two research questions to guide this study. First, does the average amount of undergraduate student loans awarded change at ECSU, UNCP, and WCU compared to non-Promise schools after implementing the NC Promise program? To ensure that policymakers did not use fees to make up for the lost tuition revenue, the second research question for this study asks: does the cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU increase at a higher rate compared to non-Promise schools after implementing the NC Promise program? These two questions are meant to provide a clearer understanding of the practical implications of the NC Promise program related to student loans.

Connected with each research question, I hypothesize that the average amount of student loans for undergraduate students at ECSU, UNCP, and WCU decreases after implementing the NC Promise program. After all, this hypothesis matches the desire of policymakers. Related to fees, I hypothesize that the cost of mandatory fees, meal plans, and housing at ECSU, UNCP, and WCU does not increase faster after implementing the NC Promise program. This hypothesis was derived from the UNC policies on tuition and fee increases that cap the annual increase of fees at 3%, with exceptions being approved by the UNC Board of Governors (UNC System, 2022c).

Using a difference-in-difference (DID) analysis, this study analyzed data from the Integrated Postsecondary Education Data System (IPEDS) beginning with the 2012-2013 academic year and concluding with the 2021-2022 academic year. The three initial schools of the NC Promise, ECSU, UNCP, and WCU, are part of the treatment group. The remaining public bachelor's degree-granting institutions in North Carolina comprised two comparison groups. The composition of each group is displayed in Table 8, located in Chapter 4. The analysis was run twice, each time with a different comparison group.

**Major Findings**

The Carnegie Commission in 1973 pronounced that the people, collectively, pay for higher education. How much people contribute collectively through taxes or individually through paying for tuition and fees has shifted drastically since the Carnegie Commission made this pronouncement. In the simplest form, the NC Promise is structured in a way that the state is increasing its contribution in the collective system of funding higher education. Individual students have taken on a larger share of paying for higher education since 1980 (Laderman & Kunkle, 2022; Kunkle & Laderman, 2023). The findings from this study show the beginnings of what a world would look like if the state increased its funding with the goal to reduce the amount of student loans needed to complete an undergraduate degree.

There are two significant findings from this study. First, reduced federal student loans awarded cannot be connected exclusively to the NC Promise. The second finding, related to research question two, is that the cost of fees does not increase faster after the implementation of the NC Promise. This section will review the significant findings in further detail and offer possible explanations.

***Finding Related to Student Loans***

The results of this study show that while the average amount of student loans awarded decreased after the implementation of the NC Promise, the decrease was evident in both the treatment and comparison groups and therefore not attributed to the NC Promise. Some other policy force or factor is occurring that would account for the decrease.

As displayed in Chapter 4, the DID analysis was not statistically significant for both the narrow and broad comparison groups using the average federal student loans awarded to undergraduates. As a result, the null hypothesis for Research Question 1 is not rejected. In other words, a reduction in federal student loans awarded to undergraduates at ECSU, UNCP, and WCU cannot be attributed to the NC Promise program. There are three reasons for this finding: (a) the amount of fees continues to increase at a rate that outpaces any meaningful reduction in tuition, (b) the most significant savings are for out-of-state students, and (c) students use loans to cover living expenses.

Fees represent a large portion of what a student pays to attend college. These fees include books and supplies, room and board, meal plans, and other mandatory fees. Table 17 in Chapter 4 displays the combined fee amount used for each school included in the study and for the study period. It is important to note that this combined fee applies to both in-state and out-of-state students. In the 2021-22 year, the last year of the study, the combined fees for ECSU were $13,425, for UNCP it was $15,915, and for WCU it was $18,018. Since 2018-19, when the NC Promise was implemented, ECSU had an increase of $1,465, UNCP decreased by $173, and WCU increased by $1,592. It is worth noting that in the 2020-21 year, UNCP had combined fees of $17,862 or $1,774 higher than when the NC Promise was implemented. It is unknown exactly why the recent decrease in the combined fees occurred for UNCP. The fees students are required to pay are still significant and the largest mitigator to any potential savings from a reduction in tuition from the NC Promise.

**Table 18**

*Estimated Savings for Students Over 4 Years*

| School | In-State Savings | Out-of-State Savings |
|---|---|---|
| Elizabeth City State University | $7,400 | $44,000 |
| Fayetteville State University | $3,700 | $18,800 |
| UNC Pembroke | $10,400 | $40,000 |
| Western Carolina University | $12,000 | $37, 456* |

*Note.* Compiled from ECSU, FSU, and UNCP promise program websites on October 25, 2022. WCU in-state savings information is based on the 2022-23 Student Body Profile information. Values are in U.S. dollars. ECSU= Elizabeth City State University; FSU= Fayetteville State University; UNC= University of North Carolina; UNCP- University of North Carolina Pembroke.
*based on pre-NC Promise tuition for the 2016-17 academic year

However, there are some cost savings for NC Promise school students. The exact amount of those savings is challenging to determine because there are many individual variables, such as eligibility for certain types of aid, external scholarships, or the published tuition rate if the NC Promise was not implemented. Despite this, the most significant savings would be for out-of-state students. Table 18, initially shown in Chapter 2, displays the estimated savings for students over 4 years.

North Carolina sets a different tuition rate for out-of-state students and even caps the number of out-of-state students at each school in the UNC System, as shown in Table 4 in Chapter 2 (Dean, 2023b; Killian, 2022; UNC System, 2022c). Unfortunately, the data on student loan amounts and the number of students taking out federal student loans are not delineated between in-state and out-of-state students. Therefore, the data analysis for this study included both groups of students together, meaning determining if there is a statistically significant reduction in student loans for out-of-state students because the NC Promise is not possible.

Cost of attendance is, as defined by IPEDS, "the amount of tuition and fees, room and board, books and supplies, and other expenses that a full-time, first-time degree/certificate-seeking student can expect to pay to go to college for an academic year" (NCES, 2022, p. 11). Determining what other expenses include is up to each institution since each institution sets the cost of attendance. This cost is part of determining a student's financial need and the limit of federal student loans a student can borrow (Federal Student Aid, 2023c). This system can be complicated, and because of the wide variability, it is challenging to know if students are having their total financial needs met. This also indicates that as costs related to food, living, transportation, and so forth continue to increase, the student borrowing limit will also continue to increase.

Overall, these reasons contribute to mitigating any savings caused by the reduction in tuition from the NC Promise program. While there may be savings related to an individual student, in the aggregate the NC Promise cannot be linked to a reduction in federal student loans awarded to undergraduates.

***Finding Related to Fees***

As shown in Chapter 4, the DID analysis was not statistically significant for the combined fee variable with both the narrow and broad comparison groups. Therefore, the hypothesis for Research Question 2 is accepted. In other words, the fees at the NC Promise schools do not increase faster following the implementation of the NC Promise. This is positive news for policymakers and students in that the NC Promise schools are not trying to recoup lost revenue passed on to students in other ways.

There are a few reasons that contribute to this finding: (a) the policy environment in which the UNC System exists, (b) the buydown model of the NC Promise, and (c) fees are designated for specific services or uses. These reasons all contribute to the finding; however, fees still make up a large portion of the cost of attendance for students.

Factors that also influence a student financial need is the cost of living. This includes the cost of housing, either on or off campus, transportation, and food. Kelchen (2018) noted this in their statement that real household income had only increased 5% during a time where tuition and fees had increased 140% at private institutions. What this looks like at the individual level is that student use loan debt to pay for basic needs while attending college. The degree to which is scenario applies to students attending NC Promise schools in unclear. However, policymakers who want to decrease federal student loan debt must also be ready to address the cost of attendance and not just the price of tuition. Tuition represents a small portion of the total cost of attendance and the NC Promise only reduces tuition.

The UNC Policy Manual outlines all the policies governing the system, and when it comes to setting tuition and fees, the final approval rests with the UNC Board of Governors. In the case of the NC Promise program, which is codified into state law, any changes would need to be passed by the state legislator (NC Promise Tuition Plan, 2022; UNC System, 2022c). This structure creates a policy environment in which multiple entities would sign off on any increase in tuition and fees. Especially since there is a policy mechanism, in the form of a cap, in place to ensure significant increases do not occur or are limited. This structure also means that any fee increases to offset lost tuition revenue would likely not have occurred.

Specifically with the NC Promise, the buydown model is in place to provide funding directly to the NC Promise schools to make up for any lost tuition revenue. This buydown process also ensures that schools are not trying to increase fees to recoup lost tuition revenue. The outcome of this, and the central point, is that schools in the NC Promise did not change what they were doing because of the program. On the one hand there is not additional compensation for lowered tuition and fees. On the other hand, the rate of increase in fees has also not changed either positively or negatively. The efficacy of the buydown and whether the buydown rates are sufficient are covered in the following section.

The last reason contributing to the finding on fees is that fees are earmarked explicitly for services or programs at that campus. For example, a debt service fee is assessed to students to specifically pay down debt the campus has taken on, generally to fund capital building projects. The amount of debt and the projects this fee is allocated to differs for each campus, but the overall concept is the same. Other services or programs with a designated fee include information technology, athletics, campus recreation, student activities, etc. These fee-based services would not be allowed to increase significantly, and the additional funds would be diverted to another part of the university budget. However, despite a robust policy environment, some changes can be made to strengthen the NC Promise program.

The recommended changes will help the NC Promise solidify itself as a model for states to target their increased responsibility for paying for higher education. Research shows that going back to 1980 funding levels requires billions of dollars (Goldrick-Rab, 2016). In the interim, states can increase their funding in a targeted way that can help students and families lower their loan burden and their collective responsibility for paying for higher education. This program also correlates with the public perception that the government should be primarily responsible for paying for higher education (Quadlin & Powell, 2022).

In summary, the answer to research question one on does the average amount of student loans changes compared to non-promise schools is no, the change in average student loan award does not occur compared to non-promise schools. The answer to research question two, does the cost of mandatory fees, meal plans, etc. increase at a higher rate comparted to non-promise schools is no, fees increase at a similar rate as non-promise schools.

**Recommended Policy Changes**

The NC Promise is unique in that the program has yet to be replicated elsewhere in the U.S. regarding the funding model or level of availability. While this study's findings do not link a change in the average amount of federal student loans awarded to the implementation of the NC Promise, that does not mean the program is unsuccessful. In fact, the data show that the overall trend for all schools in this study is downward. This means the program was successful and that other forces influenced the overall downward trend of all UNC system schools. This section outlines four recommendations for policy changes intended to strengthen the NC Promise and reduce the burden of paying for higher education students face.

***Recommendation 1: Continue the NC Promise Program***

The first recommendation is to continue to the NC Promise as the program is currently designed. A significant change to the program or its discontinuance would lead to a sudden and drastic increase in the cost of higher education passed on to the students attending or about to attend the NC Promise schools. This would lead to massive disruptions in the finances of individuals and families, and the impact would be far-reaching. There are also other benefits the NC Promise is having on schools. For example, enrollment has increased, applications are growing, and new degree programs are being launched (Anderson, 2016; Brown, 2022; Murphy, 2021; Stancill, 2018a, 2018b). These other effects indicate that significant changes to the NC Promise as designed may have significant and damaging consequences on the NC Promise campuses.

Additionally, the benefit to students and families having to bear less of the cost of higher education is reason enough to continue the program. Quadlin and Powell (2022) showed the changing public perception that a federal government should bear more responsibility for paying for higher education. The NC Promise is a practical manifestation of that public perception, and the practical benefit is that students and families, especially low- and middle-income families, pay less for a degree. As previously shown in Table 18, an out-of-state student attending an NC Promise school could save up to $44,000 over 4 years. That amount is a significant game changer for some families. If the policy goal is to reduce student loans, the state government will have to put more funds behind this program and in other areas to reduce the total cost of attendance. The funding levels for tuition are not enough to counter the continued increase in fees.

***Recommendation 2: Increase the Full-Time Equivalent Buy-Down Rate***

The second recommendation is to increase the full-time equivalent (FTE) buydown rate for both in-state and out-of-state students. The NC Promise is set up where the North Carolina General Assembly sets a rate for FTE in-state students and FTE out-of-state students. That rate is multiplied by the number of FTE students and used to determine the total amount of funds each NC Promise school receives in the form of a buydown. This buydown represents the lost tuition revenue from the low tuition rate of the NC Promise. Table 19 shows the buydown rate for the treatment group schools from 2020 to 2024. Figure 5 in Chapter 2 displays this data in graph form. The buy-down rate for in-state students has remained constant for 4 years, even though each school has a different rate. During this same time, the buy-down rate for out-of-state students has increased apart from a slight decrease in 2023-24 for UNCP. By keeping the in-state buydown rate consistent and only increasing the buydown rate for out-of-state students, the North Carolina General Assembly is attempting to reduce the cost of the NC Promise program by limiting the funding available to participating schools.

**Table 19**

*Buydown Rates for NC Promise Schools 2020-2024*

| Year | Elizabeth City State | | UNC Pembroke | | Western Carolina | |
|---|---|---|---|---|---|---|
| | In-State | Out-of-State | In-State | Out-of-State | In-State | Out-of-State |
| 2020-21 | $1,856 | $11,000 | $2,602 | $10,193 | $2,971 | $9,364 |
| 2021-22 | $1,856 | $11,400 | $2,602 | $10,573 | $2,971 | $9,723 |
| 2022-23 | $1,856 | $11,523 | $2,602 | $10,960 | $2,971 | $9,833 |
| 2023-24 | $1,856 | $11,755 | $2,602 | $10,910 | $2,971 | $10,041 |

*Note*. Values are in U.S. dollars. Adapted from the NC Promise Tuition Plan annual reports 2020-2024 (UNC System, 2020; 2021; 2022f, 2023). NC= North Carolina; UNC= University of North Carolina.

However, the unintended consequence is that the participating schools cannot keep up with inflation, so the unmet funding gap increases. Expenses like faculty and staff salaries, employee benefits, utilities, and other costs associated with keeping a campus operating still need to be funded. When not funded by the state, these expenses are passed on to students, which is against the program's intent.

Policymakers should adjust the funding model by incorporating proportional increases in the buydown rate for in-state students and ensuring a steady increase in this rate each year. They could make this change by completing a funding assessment to grasp how much funding each campus needs, then, create funding models based on various simulations. These funding simulations should also include the fees students must pay. This would ensure that the student burden is not impacted. Once the participating schools, the UNC Board of Governors, and the North Carolina General Assembly agree upon an ideal funding model, a bill to update the statute must navigate the legislative process successfully. The impact of inaction on the buydown rate might not be felt for another year or so; however, inaction may also lead to a sudden change needed during that time.

***Recommendation 3: Limit Increases in Student Fees***

The third recommendation for policy change is to reign in student fees. The NC Promise program only pertains to tuition and does not cover all the higher education costs. As mentioned in the findings related to student loans, the steady increase in fees over time undercuts any cost savings from a reduction in tuition. Outlined in Table 3 in Chapter 2, for the 2022-2023 academic year, the total general fee for a public university in North Carolina ranged from $1,585.61 at UNC Chapel Hill to $2,491 at UNC Charlotte. The debt service fee went from $0.00 at ECSU to $720 at UNC Charlotte. These fees must be paid for by each full-time student and contribute to the cost of attendance. However, the UNC System has a policy mechanism that caps mandatory fees to increases at 3% annually, with exceptions being approved by the UNC Board of Governors (UNC System, 2022c). Given that most of the funding for each UNC System campus comes from the state legislator, if state appropriations increased to the point where a fee would either not need to increase or even exit, the cost of attendance could be reduced. Therefore, this leads to a decrease in federal student aid.

It is also important to point out that when reviewing Figures 11 and 12 in Chapter 4, the treatment group overall has a higher fee amount that both comparison groups. This means that fees were already higher than most schools in the UNC System and this continues during the entire study timeframe. The schools in the NC Promise were already reliant on fees as a source of revenue that a drastic reduction in tuition did not change how much student take out in loans on average.

First, the steps that should be taken are a complete account of all mandatory and optional student fees. This accounting should include their purpose and projected increase over the next five years. This step would give policymakers a complete picture of the funding landscape to make informed decisions. Then, use this research to propose funding legislation, in addition to the NC Promise funding, that would provide funding at a level that would at least keep fees at the current amount. The infrastructure to monitor these funding systems would also need to be created. This would allow for proposed updates to the funding model to ensure the effect of inflation or changes in enrollment are considered and to monitor the efficacy of the funding model. The overall goal of this recommendation is to consistently fund the schools at a level where fee increases are unnecessary or where fees do not need to exist. Funding campuses at the level needed is the only way for the state to truly fulfill its responsibility for funding higher education.

***Recommendation 4: Increase Institutional Aid***

The fourth recommendation for policy change is to increase institutional grant aid and scholarships. The financial aid from the institution is typically considered first-dollar, meaning it is applied to a student’s account before loans (Billings et al., 2023). It can effectively reduce the amount of student loans a student needs to take on. An increase in this aid can also be applied to fees and, in the case of grants and scholarships, are not meant to be paid back like loans. Institutions also have more flexibility to distribute aid to students with the highest needs, effectively forwarding the institution's access and equity mission. As Kelchen (2018) said, there are only two ways to reduce student loans: lowering costs and increasing aid. NC Promise does lower the price but does not increase student aid.

The state and the institutions can increase this type of aid in two ways. First, by investing in their development efforts to increase each school's endowment. These endowment funds can be used for student financial aid in the form of a grant, which would not need to be repaid by the student. The second is that the North Carolina General Assembly can appropriate additional annual funds that can only be used for student financial aid in the form of grants. This aid can be targeted to specific populations of students, like low-income students or students who meet other scholastic requirements. However, these changes would be in addition to earmarked funding for the NC Promise buydown.

**Recommendations for Future Research**

Because this study is the first of its kind on the NC Promise and one of the few that link student loan outcomes to a promise program, the landscape for future research is wide open. These recommendations can be grouped by (a) continuing the current study with future years and including Fayetteville State University (FSU), (b) replicating this study with other variables, (c) focusing the research study on individual students, (d) replicating other studies with students benefiting from NC Promise, and (e) exploring other impacts the NC Promise has on the participating campuses.

This study did not include FSU in the treatment group because the data for the time series aligned with the comparison groups. FSU could be included in the treatment group in future years, and a differences-in-differences-in-differences method would be used. This method would be appropriate for different time series within the treatment group.

If a researcher were to replicate this study, several IPEDS variables other than the average amount of federal student loans awarded to undergraduates could be used. The UNC System cites the decrease in the amount of debt students have when they graduate as a measure of success (UNC System, 2023), which is one variable that could be used. Another variable that could be studied is net price. The College Board trend reports cited in Chapters 1 and 2 point out the reduction in net price across the U.S. (Ma & Pender, 2023). Isolating this variable to North Carolina and the NC Promise schools would provide better insight into students' costs when attending a UNC public university. In addition to net price, a redesigned study could use the cost of attendance. The UNC Board of Governors passed a policy to standardize the determination of cost of attendance across the UNC System beginning with the 2024-2025 academic year. This could provide some validity in the creation of that data. Ultimately, future studies should focus on lowering the student's burden of paying for higher education.

The policy recommendations in the previous section are focused on providing additional funding to the NC Promise schools that will be used to offset further the cost of higher education that is passed on to students and their families. If any or all the policy recommendations are implemented, infrastructure to research and monitor these changes should be implemented. This would allow policymakers and researchers to understand these policy changes' practical actions and efficacy.

Due to privacy laws and research standards, it is very challenging to access individual student data on what their financial aid package is. A mixed methods study could be designed where students are interviewed and share the details of their financial aid package. These qualitative interviews would complement aggregate data from the financial aid office using income data or other variables better to understand NC Promise's policy implications on individual students. Replicating these studies with student perceptions of NC Promise and how it affected their intention to attend or not attend NC Promise school would be an exciting line of research. Given the uniqueness and high discount rate, replicating another study with an NC Promise population would provide a new perspective on the research.

Finally, there are a few other impacts the NC Promise has had on the participating schools. The effects stem from increased applications, lower yield rates, construction spending, and enrollment (Brown, 2022; UNC System, 2023). These impacts should be investigated to fully understand the policy implications of the NC Promise beyond student loan debt. The results and findings from these studies can provide a complete picture of the NC Promise program's impact.

**Chapter Summary**

The findings of this study do not represent a negative view of the NC Promise. While a reduction in student loan debt cannot be linked to the NC Promise due to this study, that does not mean that students do not save money when attending an NC Promise school, as shown in Table 18. At a minimum, the UNC System and the NC General Assembly should continue the program as it is currently structured. Eventually, though, some changes will need to be made considering inflationary cost and enrollment changes. These recommendations should be focused on adjusting the buydown rate for in-state and out-of-state students annually to adjust for inflation; further, increase the funding for each NC Promise school to keep the amount of fees under control or reduce fees and increase institutional grant aid for students to help decrease students need to take out federal student loans.

Since the NC Promise is a uniquely designed promise program, further research is needed on its effects and impact on the students and the participating schools. This research can take the form of continuing this study design as the program continues, making changes to the measured variables to investigate further if fewer student loans are awarded, researching other impacts the

NC Promise has had on admission and enrollment metrics, and possibly a case study to see how the NC Promise influences a student's financial aid package. These research options can provide a complete picture of the practical implications of the NC Promise.

In the end, the NC Promise represents the beginning of a return to when the UNC System was the crown jewel of North Carolina and where the state invested in higher education significantly. It is a uniquely designed program that has benefits beyond saving students money. With a few policy adjustments and continued research, the NC Promise could be a new model for a publicly funded statewide promise program that significantly shifts the cost of higher education back to the state.

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# VITA

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**Education**

| | |
|---|---|
| 2024 | Doctor of Philosophy<br>Education Policy, Planning, & Leadership<br>Higher Education<br>William & Mary, Williamsburg, VA |
| 2006 | Master of Education<br>College Student Personnel<br>Western Carolina University, Cullowhee, NC |
| 2004 | Bachelor of Arts<br>Broadcasting<br>Western Carolina University, Cullowhee, NC |

**Professional Experience**

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|---|---|
| 2021-2024 | Assistant Dean and Director of Fraternity & Sorority Life<br>Virginia Commonwealth University, Richmond, VA |
| 2016-2021 | Assistant Director, Student Leadership Development<br>William & Mary, Williamsburg, VA |
| 2013-2016 | Coordinator for Fraternity & Sorority Life<br>William & Mary, Williamsburg, VA |
| 2012-2013 | Assistant Director of Student Life<br>High Point University, High Point, NC |
| 2010-2012 | Assistant Greek Life Coordinator and Resident Director<br>High Point University, High Point, NC |
| 2009-2010 | Graduate Assistant<br>Greek Life Office<br>Western Carolina University, Cullowhee, NC |
| 2008-2009 | Assistant Resident Director<br>Department of Residential Living<br>Western Carolina University, Cullowhee, NC |