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The Economic Effects of DACA and State Policy on Undocumented Students and Society

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THE ECONOMIC EFFECTS OF DACA AND STATE POLICY ON UNDOCUMENTED STUDENTS AND SOCIETY

By

Vanesa Del Socorro Lougheed

A DISSERTATION

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THE ECONOMIC EFFECTS OF DACA AND STATE POLICY ON
UNDOCUMENTED STUDENTS AND SOCIETY

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In 2012, President Obama signed the Deferred Action for Childhood Arrivals program (DACA) into effect, a policy that provided limited protections to approximately 800,000 immigrants brought to live in the United States by their parents at a tender age, but that did not address equitable access to higher education. States have since decided whether DACA recipients could attend public colleges and universities at a reduced, in-state tuition cost. Such a practice was controversial as many argued that the cost was not worth the investment. In 2017, President Trump initiated a repeal of DACA, which was put on hold by court challenges, leaving undocumented immigrants without a clear vision of the future. To establish evidence that may help inform policymakers whose decisions affect access to higher education, this study used aggregated data from the U.S. Census Bureau and National Center for Education Statistics to answer two research questions: 1) Does DACA policy affect states’ rate of return on investment from pre-DACA implementation to post-DACA? and 2) Are there state-level factors that explain differences in states’ rate of return on investment over time? The research questions were examined based on a series of mixed-effects models. Findings indicated a significant increase in tax revenue generation by foreign-born non-citizens with earned bachelor’s degrees. In addition, states with in-state tuition policies had significantly higher increases
over time in the college enrollment and vehicle ownership of foreign-born non-citizens
than did those states without such policies. Implications for practice also were discussed.
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Chapter 1: Introduction

Comprehensive immigration reform has been unachievable in the U.S. Congress for decades. Legislators’ inability to negotiate its complex human, economic, security, and other issues ultimately led to controversial actions by the executive and judicial branches of government. Specifically, in 2012, the Obama administration initiated the Deferred Action for Childhood Arrivals (DACA) program, which afforded the opportunity to apply for limited protections—namely, the right to work and protection from deportation in two-year, renewable periods—to undocumented immigrants whose parents brought them to the United States as children.

Supporters of DACA and its recipients, most of whom had grown up and been educated in the United States from kindergarten through 12th grade, proposed extending the program to provide a path to citizenship; they sought relief similar to what had been proposed in the Development, Relief, and Education for Alien Minors Act, called the DREAM Act, which was first introduced in Congress in 2001 and reintroduced a number of times since but never passed (Adams & Boyne, 2015). However, Donald Trump rode a wave of anti-immigrant sentiment to the White House in 2016 based on a promise “to take extraordinary actions to curb illegal immigration and prevent terrorism, including controversial plans to build out the border wall with Mexico, deport millions of undocumented immigrants, and temporarily ban Muslims” (Felter & Renwick, 2018, para. 2). In 2017, President Trump announced plans to end DACA but invoked a six-month delay to allow Congress time to pass legislative protection for the so-called “Dreamers” (Redden, 2017).
When the six-month period expired without Congress taking action, the Trump plan was delayed by a range of court challenges and appeals that have continued to date. DACA continued in the short term as “the only large-scale initiative that affirmatively offers relief from deportation to unauthorized immigrants” (Hipsman, Gómez-Agüiñaga, & Capps, 2016, p. 1). But the approximately 800,000 DACA recipients and their families—and the additional estimated 1.3 million individuals who could be eligible for DACA if it continued—remain in a state of uncertainty about educational and employment opportunities and, most worrisome, about the possibility of deportation to countries of origin about which they know little to nothing.

**Statement of the Problem**

The Trump administration characterized the DACA program as an unconstitutional overreach by the Obama administration, stating that “the executive branch through DACA deliberately sought to achieve what the legislative branch specifically refused to authorize on multiple occasions” and that it was an “open-ended circumvention of immigration laws” (Redden, 2017, p. 2). That argument was met with immediate opposition in the form of lawsuits, public protests, and condemnations from various leading lawmakers; organizations such as the ACLU, the Anti-Defamation League, and the U.S. Chamber of Commerce; and religious organizations such as the U.S. Conference of Catholic Bishops (Kelsey & Stracqualursi, 2017).

The attorneys general of 15 states and the District of Columbia—all Democrats—quickly filed a lawsuit to stop the administration’s move to end DACA. The lawsuit alleged that revoking DACA was motivated by anti-immigrant sentiment and violated due process rights under the Constitution. The states represented in the suit also
maintained that ending DACA would damage their state economies by reducing the tax base and creating disruptions in businesses and higher education institutions that employ and educate DACA recipients (Redden, 2017).

The academic community also pushed back against President Trump’s plan to rescind DACA, including dozens of the nation’s leading universities and scholars. For example, Columbia University issued statements in September 2017 and March 2018 that affirmed full support of DACA recipient students and pledged financial assistance to them (Goldberg, 2017, 2018). The University of California filed a lawsuit in the Northern District of California against the Department of Homeland Security (DHS) in September 2017; the UC president stated that the Trump administration acted wrongly and unconstitutionally, violating the rights of the university and its students by rescinding the DACA program on “nothing more than unreasoned executive whim” (University of California, 2017, para. 1). Similarly, the University of Notre Dame’s president issued a statement in support of DACA, noting the program had provided status to “young people who have done nothing wrong, most of whom have only known life in the United States and who will make important contributions to it” (Adams & Hoisington, 2017, para. 5). The program is viewed as benefiting colleges and universities by diversifying ideas and enriching the educational experience in higher education institutions nationwide (Loes, Pascarella & Umbach, 2012).

These and other actions in defense of DACA were based in large part on the nation’s history since the U.S. Supreme Court decision in *Plyler v. Doe* (1982), which ensured elementary and secondary school public education (K-12) for all undocumented immigrants, in effect extending the Equal Protection Clause of the 14th Amendment of
the U.S. Constitution. Thus, for the last 37 years, thousands of undocumented immigrants have grown up in the United States and received a K-12 education; it would be natural for them to seek further educational and other opportunities to advance themselves and their families.

As noted earlier, DACA opponents such as U.S. Senate Majority Leader Mitch McConnell have strongly objected to the use of an executive order to effect immigration policy and applauded Trump’s action to end the program (Kelsey & Stracqualursi, 2017). They also continue to maintain that the costs of the program—its potential economic burden on local, state, and federal governments—outweigh any benefits derived.

Therefore, the purpose of the current study was to examine the economic and educational effects of DACA and in-state resident tuition policies at the federal and state level from 2007 to 2016. This time period of 2007-2016 would allow for proper assessment of the five years prior to DACA and five years post DACA, affording a comparison and better understanding of the effects of the policy. One potential economic burden is the subsidizing of costs for education, i.e., the 18 states that allow DACA recipients to pay in-state tuition are subsidizing the difference between in-state and out-of-state tuition. In particular, the estimated average change in the economic and educational effects per state was compared within the 10-year period between the 18 states allowing in-state tuition and the other 32 states. State-level political party affiliation and in-state tuition policy were used to explain the variation in the economic and educational variables among the 18 states providing in-state tuition to undocumented students.
Undocumented Immigrants in the United States

Undocumented immigrants are defined as individuals who (a) are not United States citizens; (b) do not hold current permanent resident visas; and (c) have not been granted admission under rules for “longer-term residence and work permits” (Passel & Cohn, 2011, para. 23). Undocumented individuals often immigrate to the United States to escape harsh conditions such as armed conflicts, poverty, or political persecution. Many have witnessed or experienced violence and extreme hardship before immigrating (Zea, Diehl, & Porterfield, 1997; Zuniga, 2002).

The number of foreign-born individuals residing in the United States was reported as 37.5 million in 2006 and 43.1 million in 2015, a 15% increase in nine years (Passel & Cohn, 2017). Of those 43.1 million foreign-born U.S immigrants in 2015, 20.7 million were naturalized citizens; 22.4 million were non-citizens, an estimated 11.4 million of whom were lawful permanent residents or temporary lawful residents; and the estimated 11.1 million non-citizens remaining were undocumented, approximately 25.5% of all foreign-born immigrants (Passel & Cohn, 2017).

Mexico is the country of origin for most undocumented immigrants in the United States, about 6.9 million or 52% of those undocumented, though their numbers have decreased since 2009 (Passel & Cohn, 2017). Approximately 1.8 million undocumented immigrants are from Central America (16.6%), 1.5 million from Asia (13.8%), and 650,000 from South America (about 6%) (Passel & Cohn, 2017). Roughly 550,000 undocumented immigrants are from Europe and Canada (5%), and 425,000 from the Caribbean (3.9%) (Passel & Cohn, 2017). The fewest undocumented immigrants come from Africa (250,000, 2.3%) and the Middle East (130,000, 1.2%) (Passel & Cohn,
The largest concentration of undocumented immigrants is in California, approximately 3 million, followed by Texas (1.47 million), and then New York, Florida, Illinois, New Jersey, Georgia, North Carolina, Virginia and Maryland to complete the top 10 states with undocumented residents (Migration Policy Institute, 2016).

Undocumented immigrants often experience distress, fear, and isolation because of the risk of being apprehended by U.S. Customs and Border Patrol officials (Chavez, 2012). Fear of deportation may discourage undocumented immigrants from seeking aid for employment, health, and language-related difficulties, compounding their stress (Rodriguez & Hagan, 2004; Simich, 2006; Sullivan & Rehm, 2005). Gardner, Gee, Hill, and Wiehe (2017) found that immigrants developed more psychological symptoms with increased time in the United States and daily experiences of racial discrimination and unfair treatment. Additionally, a relationship has been found between higher rates of suicide and substance abuse among immigrant populations (Perez & Fortuna, 2005).

Undocumented immigrants lack a path to citizenship because U.S. immigration law has been based on a system of quotas and preferences since 1965 (Chomsky, 2014). If individuals do not happen to apply and fall within the tight quota restrictions for their particular country, there is essentially no way for them to receive authorization to enter legally into the United States (Chomsky, 2014). Furthermore, if they are already in the United States illegally, they will never be allowed to apply for citizenship (Chomsky, 2014). An exception occurred in 1986, when approximately 2.7 million undocumented immigrants became legalized through the Immigration Reform and Control Act (IRCA) signed by President Ronald Reagan (Chishti, Meissner, & Bergeron, 2011). IRCA allowed undocumented individuals to obtain legal status if they met certain conditions.
and had been continuously present in the United States since January 1, 1982 (Chishti, Meissner, & Bergeron, 2011).

**Undocumented students in the United States.** Most undocumented immigrant youths have been raised in the United States for a significant part of their lives and thus often identify with American society and culture more than that of their country of origin (Perez, 2009). Most undocumented immigrant youths prefer the English language and are accustomed to the American way of life. In particular, many DACA and potential DACA recipients were brought to the United States by their parents at a very young age and had no choice about living as an undocumented immigrant in this country. Most have attended kindergarten through 12th grade; approximately 65,000 undocumented immigrant students graduate from U.S. high schools each year (Adams & Boyne, 2015). According to the U.S. Citizenship & Immigration Services, there were 689,800 active DACA recipients as of late 2017; since 2012, the total number of individuals approved for the program was 798,980 (Robertson, 2018). The Migration Policy Institute has estimated that another 1.3 million undocumented individuals would be DACA eligible, i.e., would meet the program’s requirements, if the program continued (Hipsman, Gómez-Aguiñaga, & Capps, 2016).

As noted, although U.S. law provides access to K-12 education for undocumented students (*Plyler v. Doe*, 1982), federal laws bar these students from access to financial aid for postsecondary education, i.e., the Higher Education Act of 1965, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), and the 1996
Illegal Immigration Reform and Immigrant Responsibility Act (IIRAIRA). These laws are discussed in more depth in Chapter 2.

**Anti-Immigrant Sentiment in the United States**

The current political standoff over DACA has its roots in anti-immigrant sentiment that was propelled in the 1990s by such books as *The Immigration Invasion*, *America Balkanized* and *Alien Nation* (Fuchs, 1996), and by California’s Proposition 187. Approved by voters in 1994, the measure prohibited provision of publicly funded education and social services to undocumented immigrants and required public schools to verify the legal status of students and their parents (Alarcon, 1994).

To empirically support growing anti-immigration sentiment, two studies were conducted in San Diego and Los Angeles in the 1990s to show that immigrants were draining local fiscal resources. Rea and Parker (1992) aimed to assess the costs of law enforcement and providing social services to the undocumented population in the San Diego area; they reported that the cost associated with processing undocumented immigrants through the state and local criminal justice system and providing health services, education and social services for this population was significantly greater than the state and local government revenues derived from the employment and consumer spending of undocumented immigrants. According to Rea and Parker (1992), the excess of costs over revenues was approximately $146 million.

Similarly, a study by the Internal Services Divisions (ISD) of Los Angeles County (1992) aimed to link economic impact and resource depletion with immigrant populations. The Internal Services Divisions (as cited in Alarcon, 1994) reported that the net estimated county costs for services provided to recent legal immigrants, amnesty

The studies in California, publication of anti-immigrant books, and passage of Proposition 187 were met with criticism and contradictory evidence. For example, U.S. District Judge Mariana Pfaelzer declared Proposition 187 unconstitutional because it usurped the federal government’s jurisdiction. Advocates of Proposition 187 challenged Judge Pfaelzer’s decision, but the initiative was once again found unconstitutional. In July 1999, California Governor Gray Davis withdrew an appeal made by his predecessor, Pete Wilson, to the Ninth Circuit Court of Appeals of that ruling, which effectively ended the law; opponents of the proposition agreed to drop all future legal challenges (Magana, 2003). In addition, critics noted that the four books published in the 1990s offered little to no scholarship to substantiate their anti-immigrant claims (Fuchs, 1996). Two of the books—*The Immigration Invasion* and *America Balkanized*—pretended to discuss the impact of immigration on American society but lacked credible foundations and information from leading researchers on the subject (Fuchs, 1996).

Regarding the two studies in California, the results uniformly found that immigrants imposed fiscal burdens on governments and native-born taxpayers. However, the research findings likely overstated those negative impacts for the following reasons: 1) systematic understatement of tax collections from immigrants; 2) overstatement of immigrant population size, job displacement impacts, job displacement costs, and service costs for immigrants; 3) failure to include the impact of immigrant-owned businesses or the full economic benefits generated by consumer spending from immigrants; and 4)
failure to provide parallel computations for native-born taxpayers, who also are net tax
users (Alarcon, 1994).

For example, although the Los Angeles County study (ISD, 1992) appeared to use
better estimates of the number of undocumented immigrants, it understated revenues
from immigrants by as much as 30% because the income of recent legal immigrants was
underestimated (Alarcon, 1994). Additionally, the study omitted the contribution of
long-term legal immigrants, who represented 15% of the population and paid 18% of the
taxes, while overstating the costs of recent legal immigrants by 60%, or about $140
million. In particular, the study failed to include the fact that the county-level “deficit”
for native taxpayers was larger than that for immigrants (Alarcon, 1994). Similarly, two
San Diego County studies conducted by Rea and Parker (1992) employed methods that
resulted in overstating costs and underestimating revenues. For example, the authors of
the San Diego study assumed that there were far more undocumented immigrants in San
Diego County—over 200,000—than was plausible or supportable by data (Alarcon,
1994).

More recently, President Trump has attacked immigration with “statistics” that
seem to echo the 1990s study results. For example, the president has warned of a wave
of migrants coming over the U.S. border with Mexico to commit crimes and spread terror
and linked them to the violent gang MS-13, although evidence has been to the contrary
(Leutfert, 2018). Lamont, Park and Ayala-Hurtado (2017) conducted a qualitative
analysis of 73 formal speeches made by Trump during the 2016 electoral campaign and
found that his political rhetoric was devoid of empirical evidence and that immigrants
were the most-mentioned group, typically in negative terms, i.e., “they’re bringing
drugs,” “they’re bringing crime,” “they’re rapists,” and are dangerous criminals, drug dealers and people who want to steal jobs and sponge off the U.S. system (p. S168).

Lamont, Park, and Ayala-Hurtado (2017) concluded that the speeches were crafted to appeal to members of the White working class who were fearful and angry about their economic position and thus more receptive to a message that placed blame on immigrants, particularly Hispanics. Trump’s strategy was successful, as 67% of White voters without college degrees voted for him in the 2016 election (Tyson & Maniam, 2016).

**Theoretical Background**

The theoretical frameworks used in this study are centered on the ways race, class, and other intersectional aspects of identity are affected by oppressive structures that are manifested in the educational experiences of People of Color, specifically undocumented youth.

**Human capital theory (HCT).** Human capital theory was first introduced by Adam Smith in the *Wealth of Nations* published in 1776. Human capital theory demonstrates a reciprocal relationship between education and the economy as described by Becker (1993), who noted that investment in education raises the human capital of the individual, which in turn tends to support the individual’s contribution to the economic strength of the community. The theory was popularized by several economists, including Becker and Schultz (1961), who argued that skills and knowledge should be regarded as forms of capital and are essential for explaining the rapid economic growth that characterized Western societies after World War II. Human capital is now viewed as a combination of economic and social benefits that accrue to individuals and to society
(Garrison, 2012)—the knowledge, skills, and attributes acquired by investment in education and health throughout the life cycle of an individual (McMahon, 2009). In this view, investing in education generally increases individuals’ lifetime earnings and makes them more productive members of society. According to Paulsen (2001), the outcome of investment in education yields higher levels of output, income, and economic return at the local, state, and national levels. This study focused in particular on the benefits accrued to society when it invests in the education of undocumented immigrants.

While the U.S. Supreme Court supported the importance and value of providing K-12 education to undocumented youth (Plyler v. Doe, 1982), access to higher education has remained limited for this group. In particular, undocumented students educated in K-12 schools in the United States but facing difficulty in attaining higher education has been seen as detrimental not only to them but also to society (Fry, 2010). On average, according to the U.S. Census 2016 American Community Survey estimates (excluding Puerto Rico and the District of Columbia), an individual with a high school education would earn $29,796 annually, indicating a relatively small potential return on investment for the state that invested in the K-12 education of that individual. However, if the state were to invest in the higher education pursuit of such an individual, the potential earnings would be $49,564 (U.S Census, 2016).

**Human capital development and the economy.** Human capital development has been used to justify public funding of higher education, as it incorporates the idea of benefits to the public from an educated citizenry (McMahon, 2009; Pasque, 2010). Jones and Kelly (2007) stressed that few issues unite policymakers as does economic development. Policymakers understand that strong economies are characterized by an
abundance of well-paying jobs; overwhelmingly, individuals who hold well-paying jobs have knowledge and skills obtained through education beyond high school (Jones & Kelly, 2007). Research points to a strong correlation between the proportions of a state’s population enrolled in institutions of higher education and the state’s rate of economic development and growth (Zumeta, 2004).

The theoretical rationale for this study, then, is that if the United States were willing to invest in the education of undocumented students and afford them the opportunity to earn a bachelor’s degree at an in-state tuition rate, society could receive a return on investment that would be much greater than the initial investment. That return could exceed economic aspects: The social impact of educating immigrants would include new thoughts, ideas, and endeavors, contributing to the country’s advancement (Roksa et al., 2017). The so-called “Dreamers” could then be fast-tracked to U.S. citizenship, which is an ultimate goal—putting their education to good use as citizens who can vote. Although many undocumented workers do pay taxes in the United States, access to higher education, advanced knowledge and skills, and then citizenship, could yield much more, both to individuals and society (Rincon, 2008).

Critical race theory (CRT). Critical race theory is drawn from multiple disciplines, and it challenges such concepts as meritocracy and color blindness, which suggest that educational institutions are neutral institutions that function equitably for all students (DeCuir & Dixson, 2004). For the purposes of this study, CRT provides a lens for viewing the racial underpinnings of immigration law and policy, particularly the assertions that anti-immigration measures are not racially motivated. Critical race theory places legislation in a historical context, revealing the racist underpinnings of purportedly
race-neutral laws and how the United States has historically—and legally—oppressed immigrants. From the beginning of the nation, efforts have aimed to exclude certain racial/ethnic groups and reflected the evolving sense of “us” versus “them” (Motomura, 2006). For example, one of the first immigration laws, the Chinese Exclusion Act of 1882, created a moratorium on admitting immigrants from China, who were generally viewed as an unfavorable group because of their supposed peculiarity (Garcia, 1995). Immigrants from China were subjected to a form of indentured servitude by the railroad monopolies operating in the Western United States (Garcia, 1995). This and other laws, including the Alien Enemies Act (1798) and the Nationality Law of 1898 (immigrants had to prove their citizenship by having a free White person of good moral character testify to how long they had been in the country), made it difficult for immigrants to become citizens (Motomura, 2006).

Using critical race theory to see racism in education is a conscious move toward social and racial justice and empowerment among Communities of Color (Solorzano & Yosso, 2001a), and its use with human capital theory in this study is to help illuminate the intersection of immigration law and policy with racial prejudice.

The Current Study

The current study examined the economic impact over time of implementing DACA in the United States. That goal was accomplished by first comparing the estimated average change over 10 years (2007 to 2016) in economic and educational effects, between the 18 states providing in-state tuition and the other 32 states. In addition, changes in economic outcomes in the 18 states providing in-state tuition were compared before and after 2012, when DACA policy was implemented in those states. Then state-level factors were sought that might explain variation in the economic and
educational effects on investment among the 18 states providing in-state tuition to undocumented students. Potential factors included the political party in control in each state (whether it was considered a “red state” or “blue state”).

**Significance of the Current Study**

While researchers have used qualitative methods to examine undocumented students’ barriers to access and completion, it appears that no quantitative study has explored various economic factors related to the economic and educational effects to society since the implementation of DACA in June 2012. The current study was conducted to fill a quantitative gap in the predominantly qualitative literature, and it is hoped this study provides a better understanding of the DACA policy and its outcomes. Most important, the study can provide valuable empirical information to policymakers and others before they make decisions that can affect the lives of millions of people—in this case, the approximately 800,000 Dreamers and their families who have experienced great uncertainty and stress.

**Research Questions**

The purpose of this study was to explore the role existing DACA policy plays in helping undocumented students gain access to higher education, persist and ultimately attain degrees. To address the purpose of the current study, the following two research questions were examined.

1) Does DACA policy affect states’ rate of return on investment from pre-DACA implementation to post-DACA?

2) Are there state-level factors that explain differences in states’ rate of return on investment over time?
Chapter 2: Literature Review

This chapter provides a discussion of the literature regarding higher education access and undocumented immigrant students. Critical race theory and human capital theory are reviewed in relation to education, followed by an assessment of state and federal policies affecting access to education. Next, the legal status of undocumented immigrant students is addressed via examination of the Deferred Action for Childhood Arrivals program. Research on the immigrant experience in the United States is then discussed with a focus on undocumented students and the economic and psychosocial implications of a college education for them and for society.

Critical Race Theory and Education

During the mid-1970s, critical race theory (CRT) emerged from the early work of Derrick Bell and Alan Freeman, who expressed discontent with the slow pace of racial reform in the United States (Delgado, 1995; Ladson-Billings, 1998). According to Gordon (1990), CRT originated from the critical legal studies (CLS) movement (as cited in Ladson-Billings, 1998), which failed to address the “effects of race and racism in U.S. jurisprudence” (DeCuir & Dixson, 2004, p. 26). As a result, CRT analyzes the role of race and racism in perpetuating social disparities between dominant and marginalized racial groups (DeCuir & Dixson, 2004; Ladson-Billings, 1998; Ladson-Billings & Tate, 1995). CRT’s purpose is to unearth what is taken for granted when analyzing race and privilege, as well as the profound patterns of exclusion that exist in U.S. society (Parker & Villalpando, 2007).

Critical race theory operates under the assumption that racism is so deeply ingrained in the current social structure that it is invisible. Therefore, CRT aims to
understand the structure and content of legal thought so that the law may be used more effectively to bring about racial and other types of reform (Lawrence, 1987). For example, critical race theorists aim to deconstruct the cornerstones of liberal jurisprudence, such as color blindness and the rule of law, to show how they operate to disadvantage non-Whites and further solidify White supremacy. Solorzano and Yosso (2001b) described five principles of critical race theory: 1) the centrality and intersectionality of race, racism, and other forms of subordination; 2) the challenge to dominant ideology; 3) the commitment to social justice; 4) the importance of experiential knowledge; and 5) the use of interdisciplinary perspectives.

The first tenet of critical race theory, centrality of race and racism, means that critical race pedagogy starts from the premise that race and racism are endemic, permanent, and, in the words of Russell (1992), “a central rather than marginal factor in defining and explaining individual experiences of the law” (p. 762).

In the second tenet, the challenge to dominant ideology, critical race educators challenge traditional claims that the educational system and its institutions make about objectivity, meritocracy, color blindness, race neutrality, and equal opportunity. They argue that these traditional claims act as a camouflage for the self-interest, power, and privilege of dominant groups in U.S. society (Calmore, 1992, as cited in Solarzano & Yosso, 2001).

The third tenet in this theory, the commitment to social justice, offers a liberation or transformative response to racial, gender, and class oppression. Social justice education is envisioned as the curricular and pedagogical work that leads toward 1) the elimination of racism, sexism, and poverty, and 2) the empowering of underrepresented
minority groups. Critical race educators acknowledge that educational institutions operate in contradictory ways, possessing both the potential to oppress and marginalize as well as the potential to emancipate and empower (Matsuda, 1993, as cited in Solarzano & Yosso, 2001).

The fourth tenet, the centrality of experiential knowledge, is also known as counter-storytelling, a framework that legitimizes the racial and subordinate experiences of marginalized groups (DeCuir & Dixson, 2004; Ladson-Billings, Parker & Villalpando, 2007). DeCuir and Dixson (2004) stated that counter-stories both expose and critique the dominant (male, White, heterosexual) ideology that perpetuates racial stereotypes. Counter-stories are personal, composite stories or narratives of People of Color (Delgado Bernal & Villalpando, 2002); when used to analyze higher education’s climate, they provide faculty, staff, and Students of Color a voice to describe their marginalized experiences.

The fifth tenet, interdisciplinary perspective, analyzes racism, classism, sexism, and homophobia from a historical and interdisciplinary perspective (Yosso, 2006).

In summary, CRT-based research helps to illustrate how race and racism are central to policies and laws affecting undocumented students.

**Human Capital Theory and Education**

Human capital theory originated in 1776 with Adam Smith and was further developed and popularized by Becker and Schultz in the early 1960s (Little, 2003). Human capital theory basically states that an essential purpose of investing in an individual’s higher education is to increase economic productivity, teach skills that afford higher incomes, and ultimately boost the wealth and well-being of the nation (Flores-
Crespo, 2007). It is possible to apply cost benefit analysis to decisions about education expenditure and to measure the returns on investment in education (Woodhall, 2004). Research has quantified the non-monetary benefits of education, i.e., that education promotes health, reduces smoking, increases the desire to fulfill civic duties such as voting, and improves knowledge about birth control (Becker, 1993).

**Access to Higher Education**

The 1982 U.S. Supreme Court decision in *Plyler v. Doe* ensured free elementary and secondary school public education for all undocumented immigrants, in effect extending the Equal Protection Clause of the 14th Amendment of the U.S. Constitution. Writing for the Court, Justice Brennan noted that it was undocumented parents, not their children, who chose to come to the United States, and thus their children should not be punished for a decision beyond their control. He said that denying these children a basic education would also deny them the ability to live within the structure of U.S. civic institutions and “foreclose any realistic possibility that they will contribute in even the smallest way to the progress of our Nation” (*Plyler v. Doe*, 1982, p. 223).

As noted earlier, although *Plyler v. Doe* ensured education for K-12 students, postsecondary education rights were not provided. Therefore, once undocumented students receive a K-12 public education, their options abruptly become scarce. In addition to barriers that many low-income students face, these students also face navigating a higher education system that excludes them, either explicitly or de facto (McKeage, 2016). For example, undocumented students are ineligible for federal financial aid.
The 1965 Higher Education Act requires that applicants for federal financial aid be legal U.S. residents, and the 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) says that:

An alien not lawfully present in the United States shall not be eligible on the basis of residence within a State (or a political subdivision) for any postsecondary education benefit unless a citizen or national of the United States is eligible for such a benefit (in no less an amount, duration, and scope) without regard to whether the citizen or national is such a resident. (Frum, 2007, p. 84)

In addition, the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 states:

An alien who is not a qualified alien is not eligible for any Federal public benefit [including] any retirement, welfare, health, disability, public or assisted housing, postsecondary education, food assistance, unemployment benefit, or any other similar benefit for which payments or assistance are provided to an individual, household, or family eligibility unit by an agency of the United States or by appropriated funds of the United States. (Frum, 2007, p. 85)

At least 18 states now allow undocumented students to pay in-state tuition rates. Sixteen of those states provide this through state legislation—California, Colorado, Connecticut, Florida, Illinois, Kansas, Maryland, Minnesota, Nebraska, New Mexico, New Jersey, New York, Oregon, Texas, Utah, and Washington. Two states—Oklahoma and Rhode Island—provide this allowance through Board of Regents decisions. California and Texas were the first states to enact legislation, in 2001. In 2002, New York and Utah passed similar legislation. During the 2003 and 2004 legislative sessions,
Washington, Oklahoma, Illinois and Kansas all passed such laws. Oklahoma has since amended its law, leaving the granting of in-state tuition rates to undocumented students up to the Oklahoma Board of Regents. The Board of Regents currently still allows undocumented students who meet Oklahoma's original statutory requirements to receive in-state tuition. In 2005 and 2006, New Mexico and Nebraska signed undocumented student tuition legislation into law, and Wisconsin enacted a similar law in 2009, but then revoked that law in 2011. Maryland's governor signed a law in May 2011 that allowed undocumented students who met specific requirements to pay in-state tuition at community colleges only. Also in 2011, Connecticut enacted a law allowing in-state tuition for undocumented students. In 2013, four states, Colorado, New Jersey, Minnesota, and Oregon, enacted laws allowing in-state tuition for undocumented students. Florida passed its legislation in May 2014 and was signed by the governor in June 2014. The year in which each state made its in-state tuition allowance for undocumented students is important to the current study because timing affects the data collected and hence the findings.

As noted, states with laws to allow undocumented students to receive in-state tuition have eligibility requirements. In general, students must live in state and attend high school for a specified period (one to four years), and then graduate or receive their GED. Students must be accepted to a public college or university and must sign an affidavit stating their intention to file for legal immigration status. At least five states—California, Minnesota, New Mexico, Texas and Washington—currently allow undocumented students to receive state financial aid (National Conference of State Legislatures, 2014).
In addition, as noted, three laws severely restrict undocumented students’ pursuit of higher education in the United States. Title IV of the Higher Education Act of 1965 does not allow undocumented students to receive federal aid for postsecondary education (Cebulko, 2013); the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) also barred students from access to financial aid for a postsecondary education; and the 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRAIRA), in addition to increasing border control, and extending the citizenship application process and legal penalties, reaffirmed a no-access policy regarding any type of public financial aid for undocumented students in higher education. Although the IIRAIRA does not bar undocumented students from attending postsecondary institutions, policymakers are unclear if the law allows for in-state tuition charges for undocumented students. In-state tuition costs have a significant impact on whether undocumented students enroll in a postsecondary institution (Flores & Horn, 2010).

**State funding for higher education.** The education system in the United States is controlled by individual states rather than the federal government. Each state has “public” institutions operated by the state and funded by state residents in the form of taxes. In turn, state residents can attend public institutions at a lower cost (in-state tuition) than non-residents of the state (out-of-state tuition) (Heath Resource Center, 2015).

Because of the substantial difference between in-state and out-of-state tuition, states tend to be strict about who qualifies for in-state tuition, though some are more strict than others (Heath Resource Center, 2015). Residency requirements are often encoded in state statutes and can vary significantly from state to state. In general, the states typically
require graduation from a high school within the state, acceptance to a college or university within that state and the promise to apply for legal status as soon as eligible (National Conference of State Legislatures, 2019).

A parent can be the student’s source of financial support but need not have claimed the student as a dependent on income tax returns. If the student receives substantial financial support from out of state, the student’s state residency status may be questioned, e.g., the Parent Loan for Undergraduate Student (PLUS) loans borrowed by a parent who does not reside in the state. Also, if the student’s parents are divorced, residency is often based on the residency status of the custodial parent.

An independent student or the student’s spouse must have been a state resident for at least a year before the first day of classes. States such as Arizona and California require two years of residency and self-sufficiency for independent students. In addition, some states may have a minimum age requirement for independent students to qualify as in-state residents, e.g., 21 in New York, 22 in Colorado, 24 in Florida, but may allow legally emancipated minors to qualify if they satisfy durational requirements (Finaid.org, 2017). In another example, Nebraska does not have a minimum period of residency for parents of dependent students but uses the one-year standard for independent students (Finaid.org, 2017). Minnesota requires a full calendar year of residency and not just 12 months before the first day of classes (Finaid.org, 2017).

**DACA and the Immigrant Student Experience**

The Obama administration announced its Deferred Action for Childhood Arrivals policy in June 2012, issuing eligibility guidelines for those desiring coverage. “Deferred action” refers to use of prosecutorial discretion to defer removal action against an
individual for a certain period of time even though lawful status is not granted (USCIS, n.d.). To request participation in the DACA program, the individual needed to:

1. Be under age 31 as of June 15, 2012;
2. Have arrived in the United States before his 16th birthday;
3. Have continuously resided in the United States since June 15, 2007;
4. Have been physically present in the United States on June 15, 2012, and at the time of requesting consideration of deferred action with U.S. Citizenship and Immigration Services (USCIS);
5. Have no lawful status on June 15, 2012;
6. Be in school, have graduated or obtained a certificate of completion from high school, have obtained a General Education Development (GED) certificate, or be an honorably discharged veteran of the U.S. Coast Guard or Armed Forces;
7. Have not been convicted of a felony, significant misdemeanor, or three or more other misdemeanors, and to not otherwise pose a threat to national security or public safety. (USCIS, n.d.)

DACA stated that certain people who came to the United States as children and met these guidelines could request deferred action for a period of two years, subject to renewal. DACA recipients were also eligible for work authorization. The policy extended a lifeline to those seeking a college education and fearing deportation.

However, as noted, the policy was a stopgap measure and did not provide financial assistance or promise future legal status. Concerns about this tenuous situation grew exponentially as the Trump administration moved to end DACA, and they added to other stressors that research has identified. For example, immigrant students face the
effects of acculturation, acquiring English, social mirroring, negotiating ethnic identity, changing family roles, and adjusting to school (Lopez, 2010; Perez & Cortes, 2011).

Researchers highlight language in particular as an obstacle for undocumented students. Many undocumented students are placed into English-as-Second-Language classes (ESL). However, research has verified that ESL classes rarely provide discussions about college (Gonzalez, Stoner & Jovel, 2003). Children outside the mainstream culture often have difficulty accessing social networks to help them learn about the college application process (Gonzalez, Stoner & Jovel, 2003). In describing “subtractive” schooling, Valenzuela (1999) demonstrated that K-12 schools were in effect acting to subtract students’ Latino culture and replace it with a culture that viewed Latino culture and community as worthless. Immigrants often contend with social stigmas that are reinforced by media images and anti-immigrant rhetoric (Brettel & Sargent, 2006; Padilla & Perez, 2003; Perez, 2009), and early on in childhood learn about discrimination, fear, and hatred (Chavez, 2012). In addition, they are exposed to images and messages that portray undocumented immigrants as criminals and threats rather than contributing members of society (Chavez, 2012).

However, Trueba (2002) argued that particular students also have a unique capacity to live in different cultures, to master multiple languages, and to navigate multiple roles and relationships in American society. His research highlighted the strengths of transnational students, including their knowledge and fluency in both English and Spanish and their full participation in both American and Mexican culture. The stories included in Trueba’s qualitative work underline the argument that transnational capital is lost when such undocumented students are not given access to continue their
education beyond high school. States are losing out on an opportunity to capitalize on such transnational knowledge and capital that undocumented students possess from their experiences of living in two cultures (Lopez, 2010).

Most undocumented students view their birthplaces as a “geographic accident of birth,” as they were brought to the United States by their parents when they were very young, have lived in the country for all or much of their lives, and consider themselves Americans (Perez & Cortes, 2011, p. 130). Most students do not even become aware of their lack of legal status until their final years in high school, the time when college-going plans are being developed (Perez & Cortes, 2011).

**Implications of Undocumented Student College Attendance**

It can be in a state’s economic interest to increase higher education access for undocumented students. For example, the New York State Office of the State Comptroller estimated that the initial cost of providing tuition assistance, which goes beyond the current in-state tuition to undocumented students, would likely be offset by the additional taxes paid over the course of their working lifetimes because of their ability to obtain higher-paying jobs. Additionally, according to the American Association for State Colleges and Universities (AASCU, 2005), a “large portion of undocumented alien students are likely to remain in the United States, whether or not they have access to postsecondary education. Accordingly, it would seem to be in states’ economic and fiscal interests to promote at least a basic level of education beyond high school to alien students, to increase their contribution to economic growth while reducing the prospect of dependence on public/community assistance” (AASCU, 2005). Students with a college degree are more productive, less likely to need government assistance, and help to
maintain a strong state economy (National Immigration Law Center, 2005).

Several empirical studies have indicated that there would be positive changes in the economy if undocumented immigrants could attend postsecondary institutions with the aid of in-state tuition. Courtright and Fry (2007) examined the impact of educational investments by comparing the cost effects of citizens with a high school education and those with a college education. The researchers calculated the education costs per state and then measured the total differences in investments by using tax revenue, based on the view that individuals who gain postsecondary education are more likely to obtain higher salary points over the years than those with only a high school diploma (Courtright & Fry, 2007). They found that in most states, there was an increase in tax revenue from individuals who had completed postsecondary education, which suggests the economy is enhanced when more people become better educated and acquire higher earning potential (Courtright & Fry, 2007). For the purposes of the current study, the work of Courtright and Fry (2007) is used as a point of reference.

**DACA-specific implications.** Undocumented individuals who meet certain criteria and obtain DACA status then gain protection from deportation, which makes it easier to attend a higher education institution and work legally in the United States. Patler and Cabrera (2015) surveyed 502 young adults to examine how the DACA program had affected their lives; 452 were DACA recipients. Of the respondents, 57% identified as female, 43% as male, and their average age was 24. Over 97% identified as Latina/o, and most were from disadvantaged backgrounds (93% were eligible for free or reduced lunch while in elementary, middle and/or high school). Of the DACA recipients, 87% had enrolled in higher education since finishing high school, but 75% of current
students reported difficulty in paying for school. At the time of the survey, 35% had completed an associate or bachelor’s degree.

The authors found that more DACA recipients had jobs than those who were not in DACA, that they earned higher wages, that over 65% “reported that their household’s overall economic situation had improved since receiving DACA,” and that they felt equipped to pay bills, obtain bank accounts, driver licenses and credit cards (Patler & Cabrera, 2015, p. 5). These findings suggest that state and federal governments could collect more tax revenue from DACA recipients because they earn more than those without DACA. It also suggests that the individuals themselves recognize the value and importance of DACA and a postsecondary education and will continue to take advantage of opportunities to better themselves, which bodes well for society (Patler & Cabrera, 2015).

Martinez (2014), who interviewed 18 undocumented, 16- to 25-year-old Latin youths on their perceptions of DACA policy, concluded that because of the lack of financial aid and uncertain legal immigration status, the respondents had taken advantage of DACA to legally work rather than to attend college. Similarly, McCorkle and Cian (2018) interviewed three DACA recipients in South Carolina who said they were deterred from pursuing higher education because of the barriers and lack of access.

In a study that examined the economic effect of foreign-born individuals on the United States, Peri and Basso (2016) concluded that programs such as DACA do influence undocumented immigrants to try to pursue higher education, but that they are continuously shut out of the job market (Peri & Basso, 2016). However, immigrants have been a driving force in the growth of the U.S. economy and “are behind 25% of the
new high-tech companies founded between 2006 and 2012, generating $63 billion in sales” (Peri & Basso, 2016, p. 6). The authors also reported that immigrants were approximately three times more likely to file for patents on innovations than their peers born in the United States (Peri & Basso, 2016).

**Psychosocial implications.** Other implications of supporting higher education access for undocumented students is that educated individuals help enrich the community and society with new ideas and contributions, which may not occur otherwise (Frum, 2007). For example, educated immigrants who earn higher salaries and generate increased revenue are contributing to public welfare programs such as Medicare and Social Security (Vernez & Mizell, 2001).

Research also has indicated that with or without college educations, undocumented workers contribute to society—and with education, would contribute much more. For example, in 2012, undocumented workers nationwide contributed an estimated $11.74 billion in state and local tax revenues (Gardner et al., 2017). The tax contributions ranged from just over $550,000 in Montana to $3.2 billion in California; Montana’s estimated undocumented population was 1,000, California’s more than three million (Gardner et al., 2017). The authors also noted that approximately 50% of all undocumented workers filed taxes (Gardner et al., 2017).

**Cultural impact.** There are countless ways that immigrants have contributed to American culture. Griswold (2002) observed that in a nation composed mostly of immigrants, cycles of immigration bring new perspectives, cultural influences, traditions, and foods to the United States from all over the world. They also bring new ideas to the
forefront, especially in the field of technology, adding to the “productive capacity” of the nation and enhancing its influence internationally (Griswold, 2002, para. 2).

In appraising the artistic and scientific achievements of immigrants, Hirschman (2013) concluded that although “immigrants and their children are not born with more creative talents than native born citizens, their selectivity and marginality may have pushed and pulled those with ability into high-risk career paths that reward creative work” (Hirschman, 2013, para 1).
Chapter 3: Methods

The impact over time of implementing DACA in the United States was assessed using state-level aggregated data from the U.S. Census Bureau and the National Center for Education Statistics. The study sought to answer the following research questions: 1) Does DACA policy affect states’ rate of return on investment from pre-DACA implementation to post-DACA? and 2) Are there any state-level factors that explain differences in states’ rate of return on investment over time? In this chapter, population and sample, research design, data collection, variables and measures, and statistical analysis are presented in detail.

Target Population

The population of interest to the current study was undocumented students in the United States. The Pew Research Center estimates 51.13% of the foreign-born population in the United States comes from Mexico, 16.58% from Central America, 13.82% from Asia, 5.99% from South America, 5.07% from Europe and Canada, 3.92% from the Caribbean, 2.3% from Africa and 1.2% from the Middle East (Passel & Cohn, 2017). Although undocumented individuals live in each of the 50 states, greater numbers live in California, Texas, Florida and New York. More specifically, according to the Pew Research Center, three-quarters of DACA recipients live in 20 U.S metro areas, including Los Angeles, New York City, Dallas and Houston (Passel & Cohn, 2011). In addition, two-thirds of DACA recipients are age 25 or younger, a majority are women, and 83% were unmarried at the time of their most recent DACA application (Lopez & Krogstad, 2017).
Research Design

This research was based on the analysis of existing data collected from 2007 to 2016, which was aggregated at the state level. The most salient advantage of using existing data is the low cost. A fee is sometimes required to obtain access to such datasets, but it is usually a tiny portion of the cost to conduct an original study (Cheng & Phillips, 2014). A second advantage is the speed of data collection. A study that might otherwise require much time to investigate can be answered more rapidly with existing data collection. A disadvantage of using existing data is that the investigator has little or no control over what data have been collected and how. Therefore, the researcher could be unaware of study-specific nuances or glitches in the data collection process that may be important to the interpretation of specific variables in the dataset (Cheng & Phillips, 2014). However, because no government agency in the United States, including the Census Bureau, directly counts undocumented immigrants, their numerical presence cannot be measured with certainty (Passel, 2005; Passel & Cohn, 2018; Passel, Van Hook, & Bean, 2004).

The Current Population Survey (CPS) does include undocumented immigrants in its survey, thus making it a principal source of information for estimates of unauthorized immigration in the United States (U.S. Department of Labor, 2002). Undocumented individuals in the United States are counted as foreign-born noncitizens, although non-citizenship does not equate to undocumented status. Instead, current estimates indicate that of all foreign-born individuals in the United States, the undocumented account for approximately 29% (10.3 million). Legal permanent residents comprise 29% of all foreign-born residents (10.4 million); naturalized citizens comprise 32% (11.3 million);
refugee arrivals comprise 7% (2.5 million); and temporary legal residents comprise 3% (1.2 million) (Passel, 2005).

**Variables and Measures**

Various proxy variables related to economic and educational benefits were used in this study as dependent variables. These include: 1) college enrollment, 2) earned bachelor’s degrees, 3) earned graduate degrees, 4) vehicle ownership, 5) homeownership, 6) tax revenues generated by those with bachelor’s degrees, and 7) tax revenues generated by those with graduate degrees. The independent variables used in this study were: 1) whether DACA was in effect in that year, 2) state political control, and 3) whether states offered in-state tuition policy.

**Undocumented students educated in state.** This study uses Foreign Born Non-Citizens (FBNCs) as a proxy variable for the undocumented population because the category includes the following: only legal residents, residents without proper authorization to live in the United States, and refugees (humanitarian migrants), whom the Census counts in the percentage of the foreign-born population without U.S. citizenship (U.S. Census, 2009). While the inclusion of legal residents and refugees is not ideal, this category provides the closest level of detail on the presence of undocumented immigrants on a government survey (Passel, 2005; Passel & Cohn, 2018; Passel et al., 2004). Currently, the literature suggests that no alternative to quantifying undocumented immigrants exists to substantiate the number of immigrants on a national or state level (Passel, 2005; Passel & Cohn, 2018; Passel et al., 2004). Thus, this study relies on the number of FBNCs to calculate the number of undocumented immigrants.
The implication of using this proxy variable is that the information also includes populations not benefited or affected by the DACA program.

**Economic benefits.** Various proxies related to the economic and educational benefits are discussed below.

*Vehicle ownership of foreign-born citizens.* The American Community Survey collects data regarding how many foreign born non-citizens own 1 or more vehicles in each state per year.

*Homeownership of foreign-born citizens.* The American Community Survey collects data regarding the percentage of foreign-born who own homes as opposed to renting. The percentage of foreign-born homeownership was extracted per state for the years 2007 to 2016.

*Bachelor’s tax revenue generated.* This is an estimation of tax revenue collected per state from foreign-born non-citizens who earned a bachelor’s degree per state per year. The bachelor’s tax revenue (B) is calculated as follows:

\[ B = I \times (1 - W) \times T \times P \times 0.5 \]

where \( I \) was the income differential, \( W \) the wage penalty, \( T \) the total tax rate, \( P \) the foreign-born non-U.S citizen population.

**Income differential (I).** The overall income tax revenue that each state government collects over the years from foreign-born citizens is not publicly reported. Therefore, it must be computed from other variables. Mean income figures by educational attainment for each state were extracted from the U.S. Census. The monetary benefit was measured by calculating the additional tax revenue collected by states from graduates with a bachelor’s degree compared to non-college graduates. It was first
necessary to find income differentials between secondary and postsecondary school graduates. The calculation included was the mean income differentials between high school and bachelor’s degree graduates.

**Wage penalty (W).** Wage penalty is defined as the wage gap between observationally equivalent undocumented and legal immigrants. The wage penalty percentage was extracted from George Borjas’s 2017 “The Earnings of Undocumented Immigrants.” His study provided the wage penalty only through 2014. Therefore, the 2014 rate was used for years 2015 and 2016 in the study.

**Total tax rate (T).** The mean income differential was then multiplied by the state’s total tax rate to derive the monetary benefit. Total tax rates are computed as the sum of state tax collections (income, property, sales, and other taxes, including license fees) divided by aggregate personal income per state. Data on state tax collections by state was obtained from the U.S Census Annual Survey of State Government Tax Collections. The personal income per state data was obtained from the Bureau of Economic Analysis.

**Foreign-born non-U.S. citizen population educated in state (P).** The foreign-born non-U.S citizen population was a proxy of undocumented immigrants who are educated in state and was extracted from existing data from the American Community Survey, which contains the number of foreign-born undergraduate enrollment per state. This estimate is calculated by the survey administrators as a percentage of the total foreign-born per state who are 3 years old and over and enrolled in school. Finally, the estimate of undocumented immigrants educated in state was multiplied by these two previous calculations to arrive at the overall additional income tax revenue the state
governments collect over the years for undocumented immigrants educated in state.

The monetary benefit was measured by calculating the additional tax revenue
collected by states from undocumented undergraduate college graduates compared to
non-college graduates. First, income differentials between high school and
undergraduate college graduates per state had to be determined. Next, the income
differential was multiplied by 1 minus the wage penalty. This number was then
multiplied by the average total tax rate per state. The foreign-born non-U.S citizen
population of students enrolled in college was then multiplied by this number. That
product was then multiplied by .5 because, as previously explained, research shows that
undocumented individuals pay taxes 50% of the time when no legislation exists to
validate or legalize their presence in the United States (Gardner et al., 2017).

**Graduate tax revenue generated.** This is an estimation of tax revenue collected
per state from foreign-born non-citizens who earned a graduate degree per state per year.
The graduate tax revenue (G) is calculated as follows:

$$ G = I \times (1 - W) \times T \times P \times .5 $$

where $I$ was the income differential, $W$ the wage penalty, $T$ the total tax rate, $P$ the
foreign-born non-U.S citizen population. This formula is similar to the bachelor’s tax
revenue generated formula, but the income differential ($I$) and foreign-born non-U.S.
citizen population educated in state ($P$) will vary depending on whether tax revenue is
calculated for bachelor’s degree vs. graduate degree, as the following sections describe:

**Income differential ($I$).** The overall income tax revenue that each state
government collects over the years from foreign-born citizens is not publicly reported.
Therefore, it must be computed from other variables. Mean income figures by
educational attainment for each state were extracted from the U.S. Census. The monetary benefit was measured by calculating the additional tax revenue collected by states from college graduates with a graduate degree compared to non-college graduates. It was first necessary to find income differentials between secondary and graduate school graduates. The calculation included was the mean income differentials between high school and graduate degree graduates.

Wage penalty \( (W) \). Wage penalty is defined as the wage gap between observationally equivalent undocumented and legal immigrants. The wage penalty percentage was extracted from George Borjas’s 2017 “The Earnings of Undocumented Immigrants.” His study provided the wage penalty only through 2014. Therefore, the 2014 rate was used for years 2015 and 2016 in the study.

Total tax rate \( (T) \). The mean income differential was then multiplied by the state’s total tax rate to derive the monetary benefit. Total tax rates are computed as the sum of state tax collections (income, property, sales, and other taxes, including license fees) divided by aggregate personal income per state. Data on state tax collections by state was obtained from the U.S Census Annual Survey of State Government Tax Collections. The personal income per state data was obtained from the Bureau of Economic Analysis.

Foreign-born non-U.S. citizen population educated in state \( (P) \). The foreign-born non-U.S citizen population was a proxy of undocumented immigrants who are educated in state and was extracted from existing data from the American Community Survey, which contains the number of foreign-born graduate school enrollment per state. This estimate is calculated by the survey administrators as a percentage of the total
foreign-born per state who are 3 years old and over and enrolled in school. Finally, the estimate of undocumented immigrants educated in state was multiplied by these two previous calculations to arrive at the overall additional income tax revenue the state governments collect over the years for undocumented immigrants educated in state.

The monetary benefit was measured by calculating the additional tax revenue collected by states from undocumented graduate school graduates compared to non-college graduates. First, income differentials between high school and graduate degree graduates per state had to be determined. Next, the income differential was multiplied by 1 minus the wage penalty. This number was then multiplied by the average total tax rate per state. The foreign-born non-U.S citizen population of students enrolled in college or graduate school was then multiplied by this number. That product was then multiplied by .5 because, as previously explained, research shows that undocumented individuals pay taxes 50% of the time when no legislation exists to validate or legalize their presence in the United States (Gardner et al., 2017).

**Foreign-born population enrolled in college or graduate school.** The American Community Survey collects data regarding the population of foreign-born non-citizens enrolled in college or graduate school.

**Foreign-born population bachelor’s degrees earned.** The American Community Survey collects data regarding the population of foreign-born non-citizens who earned a bachelor’s degree in that year per state.

**Foreign-born population graduate degrees earned.** The American Community Survey collects data regarding the population of foreign-born non-citizens who earned a graduate degree in that year per state.
**State-level factors.** Three state-level factors were used to explain the variations in economic benefits: DACA, state political control and state policies to allow undocumented in-state tuition.

**DACA.** This variable shows whether DACA policy was in effect in that year per state. It was implemented in 2012 and continued in effect through 2016 for all states because it is a national policy.

**Political control.** Whether a state is categorized as Republican (red) or Democratic (blue) may make a difference in the significance of the research questions. Red states were denoted as 1 in the data, blue states as 0. This per-election year data was extracted from election results published in *The New York Times*, which is among the nation’s top 10 newspapers of record (Cision, 2019).

**State policies to allow undocumented in-state tuition.** Eighteen states allow in-state tuition for undocumented students at higher education institutions. The states that allow in-state tuition status for undocumented students were denoted by 1 in the data; those that do not allow in-state tuition status for undocumented students were coded as 0.

**Data Collection**

Two existing datasets used in the current study include The Statistical Abstract of The United States, The U.S Census, The Current Population Survey, and the Merged Outgoing Rotation Group. First, marginal state tax rates data was downloaded into Excel spreadsheets from the Statistical Abstract for the years 2007 to 2016. Second, mean income figures by educational attainment for each state were extracted from the U.S. Census and entered into Excel spreadsheets for the years 2007 to 2016. Third, average
in-state tuition and out-of-state tuition were extracted from The National Center for Education Statistics for the years 2007 to 2016.

Last, the nationally representative dataset of individuals aggregated at the state level, the Current Population Survey’s (CPS) Merged Outgoing Rotation Groups (MORG), was used to examine the college-enrollment rates of the estimated undocumented population. This measure includes students who are classified as FBNCs, an official citizenship category of the CPS. Citizenship status in the MORG is represented by the following categories: (a) native, born in the United States; (b) native, born in Puerto Rico or U.S. outlying areas; (c) native, born abroad of American parents; (d) foreign-born, U.S. citizen by naturalization; and (e) foreign-born and not a citizen of the United States, the primary category of interest for this study (Flores, 2010).

As explained previously, the study used FBNCs as a proxy for undocumented individuals because the category includes only legal residents, residents without proper authorization to live in the United States, and refugees (humanitarian migrants), whom the Census counts in the percentage of the foreign-born population without U.S. citizenship (U.S. Census, 2009). While the inclusion of legal residents and refugees is not ideal, this category provides the closest level of detail on the presence of undocumented immigrants of a government survey (Passel, 2005; Passel & Cohn, 2018; Passel et al., 2004).

**Statistical Analysis**

The SPSS Statistics version 25 (IBM Copr, 2017) was used to analyze the data and answer the research questions of this study. First, the descriptive statistics for slopes related to change of economic returns over time were reported, and cross-tabulations
summarizing change of economic returns over time by states were summarized. Second, for research question one, a series of the mixed-effects model were used to compare the post-DACA longitudinal trajectories of states’ rate of return on investment between states that allow in-state tuition and those states that do not allow it. For research question two, a series of the mixed-effects models were used to examine whether difference in post-DACA longitudinal trajectories of states’ rate of return on investment between states providing in-state tuition and political party control.
Chapter 4: Results

Using state-level data aggregated over time, this study sought answers for the following two research questions: 1) Does DACA policy affect states’ rate of return on investment compared against the initial state investments, from pre-DACA implementation to post-DACA? and 2) Are there state-level factors that explain differences in states’ rate of return on investment over time? This chapter summarizes the results of statistical analyses conducted with SPSS to examine these research questions. Descriptive statistics are presented, including mean and standard deviations for continuous variables and frequency tables for categorical variables. Then results from a series of mixed-effects models are presented to describe the relationship between the implementation of DACA at the state level and the economic and educational benefits.

Descriptive Statistics for Variables

This section summarizes the state-level aggregated data related to the economic and educational effects gathered from 50 states over 10 years: 1) college enrollment, 2) earned bachelor’s degrees, 3) earned graduate degrees, 4) vehicle ownership, 5) homeownership, 6) tax revenues generated by those with bachelor’s degrees, and 7) tax revenues generated by those with graduate degrees.

Rate of return on investment by state. Table 1 summarizes descriptive statistics for variables related to the rate of return on investment over 10 years by state.

Vehicle ownership. Mean vehicle ownership (individual number of households that own one or more cars) ranged from 2,406.27 (SD = 684.64, Min = 1,651.37, Max = 2,987.00) in Montana to 3,378,336.65 (SD = 9,712,720.36, Min = 298,408.01, Max = 31,021,219.50) in New York.
Homeownership. Mean homeownership (individual number of households that own a home) ranged from 1,068.67 (SD = 193.78, Min = 871.39, Max = 1,258.75) in North Dakota to 510,920.63 (SD = 40,731.99, Min = 480,935.43, Max = 605,513.85) in California.

College enrollment. The mean foreign college student enrollment ranged from 887.63 (SD = 199.46, Min = 658.08, Max = 1,018.60) in Wyoming to 355,003.26 (SD = 21,758.13, Min = 312,517.95, Max = 381,436.95) in California.

FBNCs with college degrees. The mean number of foreign-born non-citizens with earned bachelor’s degrees ranged from 876.26 (SD = 683.94, Min = 438.26, Max = 1,664.37) in Wyoming to 506,027.25 (SD = 27,347.05, Min = 475,909.25, Max = 554,323.47) in California. The mean number of foreign-born non-citizens with earned graduate degrees ranged from 505.99 (SD = 161.43, Min = 391.30, Max = 690.59) in Wyoming to 321,725.64 (SD = 39,949.72, Min = 283,392.72, Max = 390,752.61) in California.

Tax revenues. The mean tax revenue calculation for foreign-born individuals with an earned bachelor’s degree ranged from 227,855.10 (SD = 69,334.59, Min = 150,430.05, Max = 284,211.50) in South Dakota to 438,273,329.42 (SD = 69,544,516.65, Min = 368,418,339.82, Max = 563,753,521.98) in California. The mean tax revenue calculation for foreign-born individuals with an earned graduate degree ranged from 25,936.73 (SD = 3,717.50, Min = 23,061.46, Max = 30,134.69) in South Dakota to 23,436,257.20 (SD = 5,328,152.01, Min = 17,987,700.13, Max = 37,419,881.33) in California.

Rate of return on investment by year. Table 2 summarizes descriptive statistics for variables related to the rate of return on investment across 50 states by year.
**Vehicle ownership.** Mean vehicle ownership (individual number of households that own one or more cars) ranged from 124,154.22 (SD = 253,370.97, Min = 2,380.24, Max = 1,540,012.06) in 2008 to 160,461.74 (SD = 499,181.52, Min = 11,390.81, Max = 1,601,725.55) in 2016.

**Homeownership.** Mean homeownership ranged from 53,227.70 (SD = 98,946.96, Min = 1,006.39, Max = 517,984.36) in 2009 to 63,639.57 (SD = 106,343.32, Min = 4,435.82, Max = 512,245.90) in 2010.

**College enrollment.** The mean foreign college student enrollment ranged from 29,876.05 (SD = 54,491.34, Min = 658.08, Max = 328,605.63) in 2008 to 42,768.03 (SD = 66,835.59, Min = 4,207.68, Max = 381,436.95) in 2016.

**FBNCs with degrees.** The mean number of foreign-born non-citizens with earned bachelor’s degrees ranged from 42,863.81 (SD = 80,651.11, Min = 438.26, Max = 479,587.68) in 2009 to 60,359.59 (SD = 100,652.29, Min = 3,273.72, Max = 554,323.47) in 2016. The mean number of foreign-born non-citizens with earned graduate degrees ranged from 30,755.09 (SD = 50,020.27, Min = 403.87, Max = 284,380.74) in 2007 to 48,535.02 (SD = 71,691.09, Min = 3,610.73, Max = 390,752.61) in 2016.

**Tax revenues.** The mean tax revenue calculation for foreign-born individuals with earned bachelor’s degrees ranged from 26,316,602.58 (SD = 59,875,881.93, Min = 150,430.05, Max = 385,121,509.59) in 2008 to 43,117,191.88 (SD = 93,208,078.52, Min = 1,431,540.35, Max = 563,753,521.98) 2016. The mean tax revenue calculation for foreign-born individuals with earned graduate degrees ranged from 32,104,690.48 (SD = 64,305,918.29, Min = 248,249.85, Max = 402,814,016.60) in 2007 to 59,226,574.30 (SD = 115,186,466.80, Min = 3,607,769.92, Max = 691,893,517.30) in 2016.
Tuition policy and political control by year. Data was collected from all 50 states regarding 1) whether or not they offered in-state tuition for undocumented students and 2) whether they were designated Republican or Democratic in terms of the prevailing political party during the years 2007 to 2016. Table 3 shows the frequency of in-state tuition policy and political party in control by year.

In 2007, 10 of the 50 states (20%) offered in-state tuition to undocumented students and the other 40 (80%) did not allow in-state tuition to undocumented students. Thirty states (60%) were designated as being predominantly Republican, while 20 (40%) were predominantly Democratic. As previously stated, states were designated blue or red only in election years. It is assumed that the years in between were the same as the most recent election year, but the in-state tuition policy could fluctuate each year. In the years 2008 to 2011, there were 21 (42%) Republican states and 29 (58%) Democratic states.

Similarly, the frequency remained steady from 2008 to 2010 of states allowing in-state tuition (10, 20%) and of states not allowing in-state tuition (40, 80%). In 2011, three more states began allowing in-state tuition for undocumented students, which brought the total to 13 (26%); 37 (74%) did not permit in-state tuition, and that frequency remained in 2012. In 2012, 24 states (48%) were designated Republican and 26 (52%) Democratic. This remained the case until after 2015, when Republican states increased to 30 (60%) and Democratic states decreased to 20 (40%). Finally, 16 (32%) states allowed in-state tuition for undocumented students in 2013, a number that increased to 18 (36%) in 2014 and then remained the same through 2016.
Effects of DACA Implementation

Table 4 displays results from a series of the mixed-effects model, in which the effect of DACA implementation is evaluated on each dependent variable (i.e., vehicle ownership, homeownership, FNBC college enrollment, FNBCs with earned bachelor’s degrees, and tax revenue generated from FNBCs with earned bachelor’s degrees). Of all dependent variables, the implementation of DACA was found to be statistically significant in the change over time in the following outcome variables: 1) Vehicle ownership ($b = -.04, SE = .02, p < .05$); 2) FNBC college enrollment ($b = -.014, SE = .0043, p < .01$); 3) FNBCs with earned bachelor’s degrees ($b = .0097, SE = .004, p < .05$); and 4) tax revenue generated from FNBCs with bachelor’s degrees ($b = .018, SE = .004, p < .01$). These results indicated that after DACA was implemented in 2012, significant increases occurred in the number of foreign-born non-citizens with earned bachelor’s degrees and in the tax revenue generated from foreign-born non-citizens with bachelor’s degrees. However, overall vehicle ownership and FNBC college enrollment appeared to decrease after the implementation of DACA in 2012.

Effects of Tuition Policy and Political Control Over Time

Table 5 summarizes results from the mixed-effects model that explain the effect of in-state tuition policy over the years on the following outcome variables: 1) college enrollment, 2) earned bachelor’s degrees, 3) earned graduate degrees, 4) vehicle ownership, 5) homeownership, 6) tax revenues generated by those with bachelor’s degrees, and 7) tax revenues generated by those with graduate degrees. Of all the models tested, only a full model with all the predictors included is discussed below.
**Vehicle ownership.** Results showed that no change occurred in vehicle ownership over time ($b = .09, SE = .07$). Overall, differences in vehicle ownership depended on the state’s political party in control ($p < .01$) and in-state tuition policy ($p < .01$). In particular, vehicle ownership was significantly greater in blue states than red states ($b = -.68, SE = .21$). In addition, vehicle ownership was significantly larger in states with an in-state tuition policy for undocumented students than in those without an in-state tuition policy ($b = 1.33, SE = .29$).

**Homeownership.** Results showed no change in homeownership over time, but a difference in homeownership was indicated depending on the state’s political party in control ($p < .01$). In particular, homeownership was significantly greater in blue states than red states ($b = -.69, SE = .21$).

**FBNC college enrollment.** Results indicated no change in FBNC college enrollment over time, but a difference in FBNC enrollment was indicated depending on the state’s political party in control ($p < .01$) and in-state tuition policy ($p < .01$). In particular, FBNC college enrollment was significantly larger in blue states than red states ($b = -.51, SE = .18$), and it was significantly larger in states with an in-state tuition policy for undocumented students than in those without an in-state tuition policy ($b = .76, SE = .22$).

**FBNCs with bachelor’s degrees.** Results indicated no change over time in FBNCs with earned bachelor’s degrees. A difference found in FBNCs with bachelor’s degrees depended on the state’s political party in control ($p < .05$). In particular, the number of foreign-born non-citizens with earned bachelor’s degrees was significantly greater in blue states than red states ($b = -.54, SE = .21$).
**FBNCs with graduate degrees.** Results showed no change in FBNCs with earned graduate degrees over time, but a difference found in FBNCs with earned graduate degrees depended on the state’s political party in control ($p < .01$). In particular, there were significantly more FBNCs with earned graduate degrees in blue states than red states ($b = -0.68, SE = .22$).

**Tax revenues.** Results indicated no change over time in the tax revenue generation of FBNCs with earned bachelor’s degrees, but a difference was found in this category’s tax revenue generation depending on the state’s political party in control ($p < .01$). In particular, FBNCs with earned bachelor’s degrees’ tax revenue generation was significantly greater in blue states than in red states ($b = -0.68, SE = .23$). Similarly, results indicated no change over time in the tax revenue generation of FBNCs with earned graduate degrees, but a difference was found in this category’s tax revenue generation depending on the state’s political party in control ($p < .05$). In particular, FNBCs with earned graduate degrees’ tax revenue generation was significantly greater in blue states than in red states ($b = -0.52, SE = .22$).
Chapter 5: Discussion

The current study focused on the effect of Deferred Action for Childhood Arrivals (DACA) implementation, in-state tuition policies and political control on various state-level economic outcomes. This chapter summarizes study findings in relation to current literature and practice, followed by a summary of practical implications and recommendations for various stakeholders. Finally, limitations of the current research and future research are discussed.

The Current Study

The DACA immigration policy aimed to provide renewable, two-year periods for certain undocumented youth in the United States so that they could seek employment and education without fear of deportation. The purpose of this study was to explore the role of existing DACA policy in helping undocumented students gain access to higher education, persist in college, and attain degrees. While researchers have used qualitative methods to examine undocumented students’ barriers to access and completion, it appears that no quantitative study has explored various economic factors related to the rate of return on investment to society since the implementation of DACA in June 2012. The current study was conducted to fill a quantitative gap in the predominantly qualitative literature and to provide empirical data on the undocumented student population affected by DACA in higher education. The Trump administration’s move to terminate DACA, followed by court challenges and a temporary injunction that allowed recipients to continue applying for renewals, has deepened divisions among policymakers and voters and created great uncertainty and stress in the lives of approximately 800,000 undocumented students. The need for empirically guided decision-making is clear,
particularly in terms of the ramifications of immigration policy to society. Notably, this study provides significant data on the economic benefits and pitfalls of subsidizing education costs for undocumented students.

To address these aims, the study was guided by two research questions:

1) Does DACA policy affect states’ rate of return on investment from pre-DACA implementation to post-DACA?

2) Are there state-level factors that explain differences in states’ rate of return over time?

The current study focused on data from 2007 to 2016 (five years before and five years post DACA implementation). The outcomes examined in the study were: 1) foreign-born non-citizen (FBNC) college enrollment, 2) earned bachelor’s degrees, 3) earned graduate degrees, 4) vehicle ownership, 5) homeownership, 6) tax revenues generated by those with bachelor’s degrees, and 7) tax revenues generated by those with graduate degrees. It was conjectured that economic dependent variables, such as vehicle ownership, homeownership, and tax revenue generation by FBNCs with bachelor’s degrees and graduate degrees, would show significant positive change as compared to the pre-DACA period. A second conjecture was that these same seven dependent variables would also show significant positive change depending on the states’ political control and in-state tuition policy.

Summary of Findings

This study’s findings were somewhat mixed in terms of DACA policy effects on economic outcomes, and they are summarized below. The most important finding overall was that states that subsidized education costs post-DACA by allowing in-state tuition for
undocumented students saw a larger increase over time in the college enrollment and vehicle ownership of foreign-born non-citizens. In addition, significant increases were found post-DACA in the number of FBNCs with earned bachelor’s degrees and in the tax revenue generated by FBNCs with bachelor’s degrees.

**Research question 1.** Findings revealed a significant increase in tax revenue generation by FBNCs with earned bachelor’s degrees, suggesting that the DACA policy had a positive economic impact, as increased tax revenues outweighed the initial investment by various states. This finding is consistent with human capital theory, which posits that investment in human capital, such as the education of individuals, yields economic and social benefits to both them and to society (Garrison, 2012). Investments in education result in higher levels of output, income, and economic returns at the local, state, and national levels (Paulsen, 2001).

However, when in-state tuition policies were not taken into account, enrollment in higher education institutions and vehicle ownership were significantly decreased among FBNCs following DACA implementation. These findings seem counterintuitive and inconsistent with human capital theory precepts and research findings on DACA that suggest investment in education leads to more access and greater economic benefits. One explanation is based in the limited benefits afforded by DACA: Individuals could have opted to work for the two-year period granted by DACA in lieu of attending college. Jobs available to such individuals often are low-paying, which may explain the decrease in vehicle ownership. Having a temporary work permit via DACA led many undocumented youth to reduce their educational investments as two-year permits lend themselves to short-term planning (Hsin & Ortega (2017). As Martinez (2014) has
pointed out, while DACA presented opportunities for the incorporation into society of immigrant youth and addressed concerns about deportation, the policy’s limitations forced many to defer their educational and occupational goals and, consequently, their prospects for upward mobility.

**Research question 2.** The outstanding finding was that states with an in-state tuition policy showed a significantly higher increase over time in FBNC college enrollment and vehicle ownership than those states without an in-state tuition policy. Vehicle ownership increases mean communities reap the benefits of property tax revenue growth, just as college enrollment growth can strengthen and sustain the economy. For example, college graduates typically earn higher wages than non-graduates, which results in their contributing more in taxes and support to social programs such as Social Security and Medicare (Carroll & Erkut, 2009). Additionally, all seven dependent variables were greater in Democratic (blue) controlled states.

The first hypothesis of the study was partially supported in that four relevant dependent variable categories—tax revenue generation among FBNCs with bachelor’s degrees, vehicle ownership, FBNCs with earned bachelor’s degrees, and FBNC college enrollment—did increase significantly post DACA; homeownership did not show significant positive change, nor did tax revenue generation by FBNCs with graduate degrees. Similarly, the second hypothesis was partially supported in that two dependent variable categories—college enrollment of FNBCs and vehicle ownership—increased in states that extended in-state policy tuition to undocumented youth. In addition, the seven dependent variables were greater in Democratic states.
Linking Study Findings to Literature

This section discusses the theoretical framework that provided a lens through which to view the study findings. It then considers the consistencies and inconsistencies of the current findings with existing relevant literature on the impact of U.S. immigration policy on higher education and society.

**Critical race theory.** Research based in critical race theory considers educational institutions as being part of societal mechanisms that “reproduce” inequities (Carr, 2016) and therefore complicit in the systemic and systematic oppression of marginalized populations (Hiraldo, 2010). Proponents of critical race theory maintain that policy makers, educational institutions, and stakeholders must act to provide opportunities for all. The findings of the current study indicated that the provision of in-state tuition for undocumented students created an opportunity for members of a marginalized population who otherwise could not have afforded to attend college and ultimately earn degrees. In addition, both the individuals and the states providing them such policies realized benefits, which reflects the tenets of human capital theory, discussed next.

**Human capital theory.** The National Bureau of Economic Research (NBER) reported that in the wake of DACA implementation, college attendance increased by 25% among undocumented women, high school graduation rates increased by 15%, and teenage births declined by 45% (Kuka, Shenhav, & Shih, 2018). Similarly, current study findings indicated enrollment increases among undocumented students, but only in those states post-DACA that allowed in-state tuition for undocumented students. However, when looking solely at enrollments post-DACA without accounting for in-state tuition benefits, current study findings indicated decreases in undocumented student enrollment,
which was inconsistent with the NBER study. The difference may be attributed to different sources of data, the dissection of the data, and the years of data observed. For example, the NBER study determined enrollment by gender, whereas the current study used data in which that distinction was not available. Additionally, proxy variables used in both studies incorporated inherent limitations that can skew the data. The NBER (2018) report notes that “prior studies found zero or negative effects of DACA on college attendance” (p. 17). The earlier studies were limited to individuals who had graduated from high school, whereas the NBER (2018) study also examined “the total effect of DACA on college attendance—on increased college eligibility from high school graduation, enrollment conditional on high school graduation, and dropping out” (p. 18).

Current study findings suggest that the existence of a DACA policy by itself may not be sufficient to spur significant change in economic and key performance education indicators. DACA in conjunction with in-state tuition for undocumented students produced the most positive outcomes in this study, which in turn underlines the value of considering critical race theory and human capital theory in the development and implementation of education policy.

**DACA impact on students.** Current study findings indicated an overall decrease in college enrollment after DACA implementation, and possible explanations appear in the literature. In his qualitative study of undocumented young Latinos, Martinez (2014) found participants who had taken advantage of DACA to go to work, saying DACA provided a chance to obtain a legal work permit; participants indicated the lack of financial aid for undocumented students deterred them from seeking higher education. Similarly, McCorkle and Cian (2018) interviewed three undocumented youth in South
Carolina who told of their experiences crossing the U.S. border illegally as children and remained unsure of their futures after the implementation of DACA. The authors concluded that the concerns were based in barriers to higher education access not resolved by DACA, such as the lack of an in-state tuition policy in South Carolina and absence of federal financial aid. As noted in the current study findings, college enrollment increased post-DACA among undocumented individuals in those states that offered them in-state tuition.

**Implications for Practice**

Current study findings suggesting that DACA policy and in-state tuition together have great potential to effect positive outcomes for both undocumented students and society have implications for state and federal policymakers, educational institutions, students, and families.

**Policymakers.** Since *Plyler v. Doe* in 1982, undocumented students have had the right to a K-12 education in the United States. Despite ongoing concerns about the negative impact on state economies from the costs of educating these children, research has indicated little to no such impact. For example, Cardenas and Cortez (1986) found that the state of Texas, even with a substantial number of poorer school districts, ultimately had no trouble financially in handling the influx of undocumented students into K-12 schools. However, other challenges presented themselves to the states, including providing sufficient bilingual personnel, facilities, and support services and personnel, all of which undocumented students sorely need. Similarly, in the case of DACA, the financial impact on the states may have been minimal so far, but that is partly because it has also been a limited policy. DACA only provided access to education,
temporary protection from deportation, and legal permission to seek employment in the
United States. For such an immigration policy to truly have an impact on higher
education and society in general, it would need to include access to federal funding in the
form of loans and grants—and potentially access to state financial aid. This implication
is further developed in the following sections.

State government. Cardenas and Cortez (1986) conducted research on K-12
educational impacts, and their argument still holds for why the success of these students
matters. They suggested that the preliminary costs of education are much lower than the
long-term costs of denying students the right to financial aid and other support, which
limits their access. Citing the Immigration and Naturalization Service, Cardenas and
Cortez (1986) asserted that most undocumented children have younger siblings born in
this country, making them U.S. citizens and thereby qualifying the family for preferential
citizenship status under the immigration and naturalization laws. The authors said most
of these undocumented students would spend their lives in the United States, underlining
the importance of their access to higher education, as the states would benefit from their
financial and personal contributions.

The state-level impacts of the current study were significant when compared to
federal-level impacts: States that did not subsidize the cost of higher education by
allowing in-state tuition for undocumented students also did not see a positive economic
impact. Conversely, states that subsidized the cost of higher education by allowing in-
state tuition for undocumented students who met their requirements did see a positive
economic impact. However, in essence, additional state resources were used in these
states to investigate and qualify student claims to in-state tuition rates. Therefore, to
realize an even more positive impact of their in-state tuition policy for undocumented students, states could consider opening up the means for such students to access financial aid from the state. For example, undocumented students in New Mexico may qualify for both in-state tuition and state-level financial aid: The New Mexico Legislative Lottery Scholarship Program pays a portion of tuition (up to an undergraduate degree) for students who meet the eligibility criteria and a flat award based on the type of institution attended, i.e., research university, comprehensive university, community college (New Mexico Higher Education Department, 2019). Access to state-level funds would increase the population’s overall earning potential and lead to higher state and federal benefits through economic participation in the form of the seven variables assessed in this study. Additionally, increased income leads to increased tax generation, which in turn provides a return on investment in education for undocumented students.

**K-12 policies.** As discussed previously, Cardenas and Cortez (1986) found that in Texas the impact of the policy affording undocumented students the right to a public K-12 education was minimal. However, they did cite concerns, including the need for schools to provide bilingual personnel, support services, and other resources to promote the success of disadvantaged populations. In addition, smaller, rural schools and poorer inner-city schools may especially need support to be able to serve these students. Therefore, policymakers must pay particular attention to the policies and standards set at the state level for elementary and secondary schools, to the resources available to those schools, and to what incentives are needed to secure the right teachers, staff, and other resources to achieve better equity among schools.
\textit{K-12 educators.} McCorkle and Cian (2018) concluded that K-12 teachers and counselors were not sharing the reality of higher education access with undocumented students and were providing incomplete descriptions of their situations and options for educational advancement. The students the authors interviewed were surprised at the restrictive policies that made access to higher education beyond high school difficult and complicated; study respondents expressed frustration and a reduced willingness to engage in school after learning about such restrictions (McCorkle & Cian, 2018). The current study finding of overall decreased enrollment post-DACA and the possible explanations suggest that K-12 educators and counselors should actively engage undocumented students in discussions regarding their status and assist them in securing financial resources for higher education. In particular, they should provide outreach on applying to colleges and universities, not only to the students but also their families, as well as psychological and social support (Perez, 2010).

\textit{Federal government.} DACA provided only limited access to education, temporary protection from deportation and legal permission to seek employment in the United States. An implication of the current study is that for an immigration policy to truly impact higher education and greater society, it not only would need to provide all the benefits of DACA but also access to federal funding in the form of loans and grants.

Congress should investigate a reform of immigration policy such as the DREAM Act that would allow federal financial aid for higher education for undocumented youth and a path to citizenship upon their earning of a college degree. While such reform could be expensive, taxing both finances and resources, research has indicated the long-term benefits of such an investment in people. Regarding a 2016 study by the Institute for
Immigration, Globalization, & Education at UCLA that found that 85% of survey participants said DACA had a positive impact on their education, Venegas et al. (2017) noted their reported higher rates of employment, better financial support, better access to transportation, and more stable housing. “Now is the time to develop a long-term pathway to citizenship such as the DREAM Act that allows these individuals to stay in the United States, contribute to the country’s tax base, and further develop the knowledge economy” (Venegas et al., 2017, p. 6).

**Colleges and universities.** While the missions of many higher education institutions include commitments to diversity, it’s important that these values are recognizable in daily practice. Schools can develop admission and financial strategies to broaden access and to be inclusive of diverse students. In particular, colleges can capitalize on the cultural strengths these students bring to campus. For example, Perez (2010) found that undocumented students exhibited higher academic achievement and higher civic engagement patterns than their native-born counterparts. The great majority of study participants exhibited resilience, perseverance, and optimism; 90% participated in volunteer work, 95% in extracurricular activities (Perez, 2010). In addition, colleges can develop communications early on with the families of undocumented students to ensure they understand the academic demands on their children and to help them feel more comfortable in asking questions.

**Students and families.** Tseng (2004) found that immigrant youth are more family interdependent than their non-immigrant peers, which suggests the possibility of both support and challenge for their college adjustment. On one hand, immigrant youth may be motivated to succeed in college so they can repay their parents for the many
investments and sacrifices associated with immigrating to a new country. Alternatively, immigrant youth spend an average of 15 more hours each week on family responsibilities than their non-immigrant peers, which can detract from their achievement (Tseng, 2004). It is important for these families to support their high school and college-age children by relieving them of some demands while still maintaining the family’s closeness.

**Higher education advocates and think tanks.** The National Bureau of Economic Research, Migration Policy Institute, Pew Research Center and other highly regarded organizations have been studying the various economic, social and political impacts of immigration policies, including DACA and in-state resident tuition. The current study used research findings from these organizations to better understand the challenges undocumented youth face, the policies affecting their daily lives, and the social and economic impact on communities. Such organizations are instrumental in providing credible empirical evidence so that the public and policymakers can grasp the positive and negative effects of national, state and local immigration and education policies. It is critical that they continue to research and provide both quantitative and qualitative material and insight into the effects of immigration and education policies.

**Limitations**

The current study’s major limitation is that direct statistics on undocumented students are not available. Proxy variables were selected and extracted from the data sets used in the study. For example, “foreign-born non-citizen” was used in lieu of “undocumented.” Also, because actual salaries of undocumented individuals are not available with which to calculate taxation, U.S. citizen salaries were adjusted by wage penalty to approximate taxation of undocumented salaries. The benefit of using proxy
variables is that they are the closest approximation to actuals and are available for all states. Additional study limitations follow.

**Data sets.** The data sets used for this study have limitations that hinder the assessment of effects of the DACA policy. In particular, the data sets were not limited to the population that either received or was eligible for DACA status in the United States. As a result, the data could have skewed results to provide evidence that DACA did not have a positive effect. Three major limitations that existed in the data were: 1) sample size, 2) source, and 3) results or methodology. To fully understand the limitations and how they might be addressed in future research, it is important to assess them individually for their role in this study.

**Sample size.** The sample size in this study was far too broad to properly ascertain the effect of DACA policy on return on investment for the states for their initial investment that subsidized the cost of education for the population in question. This issue was manifested in both research questions. In the variables where the impact was null, one could conclude that DACA was neither effective in increasing positive outcomes nor useful in producing a return on investment for the states that were subsidizing the costs of education for foreign-born non-citizens. For Research Question 2, the time period selected was far too limiting to suggest economic impact that could pay back the initial investment. In other words, to assess the impact of DACA, one must be able to calculate the initial investment in order to fully see the ROI. Regarding the third limitation, methodology, the study used five years pre-DACA and five years post-DACA to assess the effect of the policy. However, that could not be effectively calculated: Even if the initial investment were available for assessment, the ROI would remain
negative unless the study followed DACA recipients’ economic contributions over the
course of their lifetimes. This presented a direct limitation that would prevent
determining a positive impact of this policy during the time period selected. If these
limitations were addressed, it would be possible to adequately assess the true impact of
the DACA policy and its economic contributions to the states that subsidize education
costs for undocumented students.

**Future Research**

Researchers could include other social and economic variables to examine the
impact of DACA on individuals and on society, such as country of origin of foreign-born
non-citizens, and differences based on gender. In addition, a significant benefit of higher
education to society is its role in decreased crime and incarceration rates. It would be
interesting to see if crime and incarceration rates decreased within traditional college-age,
undocumented individuals post-DACA implementation with the availability to them of
in-state tuition. Finally, qualitative studies should continue to gain direct personal
responses from undocumented students. Qualitative research would provide more insight
into this population and—with much-needed quantitative inquiries—could contribute a
great deal to the development of more meaningful education policies.

**Conclusion**

With more comprehensive policies, data collection, and useful analysis to inform
decision-makers, it is possible that higher education access will improve and that more
people will value the opportunities higher education affords immigrant students and fully
appreciate the societal benefits that can follow. If financial growth and stability are
achieved, the return on investment through tax revenue generation and economic
participation can outweigh the costs of a DACA policy. More importantly, greater support of such policy and recognition of its benefits could lead to comprehensive immigration reform laws that include access to higher education and a path to citizenship for FBNCs with college degrees.
References


Mean income. (2019). *In U.S Census Bureau online.* Retrieve from https://www.census.gov/glossary/#term_Meanincome


Table 2 Mean and Standard Deviation Per Dependent Variable Per Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Vehicle</th>
<th>Homeowner</th>
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<th>FBNC BA</th>
<th>FBNC Grad</th>
<th>BA Tax</th>
<th>Grad Tax</th>
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<tbody>
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<td>259,837.23</td>
<td>57,032.11</td>
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Table 3 Frequency Tables summarizing states by Instate Tuition Policy, Political View by Year

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<th>%</th>
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<th>%</th>
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<td>2010</td>
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Table 4 Effect of DACA on Rate of Return on Investment

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<th>Homeownership</th>
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<table>
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<th>Grad Tax</th>
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Note: DACA = Deferred Action for Childhood Arrivals, Vehicle Ownership = individual number of foreign-born non-citizen households that own 1 or more cars, Homeownership = individual number of foreign-born non-citizen households that own their home, Foreign College Student = foreign born non-citizens enrolled in college, FBNC BA = foreign born non-citizens with an earned bachelor’s degree, FBNC Grad= foreign born non-citizen with an earned graduate degree, BA Tax = estimation of tax generated by foreign born non-citizen with a bachelor’s degree, Grad Tax= estimation of tax generated by foreign born non-citizen with a graduate degree. * p < .05; ** p < .01
Table 5 Effect of Year, Political View and In-state Tuition Policy on Rate of Return on Investment

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</table>

Note: Vehicle Ownership = individual number of foreign-born non-citizen households that own 1 or more cars, Homeownership = individual number of foreign-born non-citizen households that own their home, Foreign College Student = foreign born non-citizens enrolled in college, FBNC BA = foreign born non-citizens with an earned bachelor’s degree, FBNC Grad = foreign born non-citizen with an earned graduate degree, BA Tax = estimation of tax generated by foreign born non-citizen with a bachelor’s degree, Grad Tax = estimation of tax generated by foreign born non-citizen with a graduate degree. * $p < .05$, ** $p < .01$